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An Examination of Two-Year College Student-Athletes' Perceived Engagement in
Academic Advising, Supplemental Instruction, and Academic Alert Systems

by Michael Kiefer

This dissertation has been read and approved as fulfilling the partial requirement for the
Degree of Doctor of Education in Curriculum and Leadership.

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AN EXAMINATION OF TWO-YEAR COLLEGE STUDENT-ATHLETES'
PERCEIVED ENGAGEMENT IN ACADEMIC ADVISING, SUPPLEMENTAL
INSTRUCTION, AND ACADEMIC ALERT SYSTEMS

By
Michael Kiefer

A Dissertation
Submitted in Partial Fulfillment of
the Requirements for
the Degree of Doctor of Education
in Curriculum and Leadership
(HIGHER EDUCATION ADMINISTRATION)

Columbus State University
Columbus, GA

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ABSTRACT

Institutions of higher education face challenges to improve the student success measures of retention, progression, and graduation, which are metrics used to evaluate colleges and universities. One way in which many institutions have sought to increase accessibility to higher education and student engagement is through athletics; however, limited research exists regarding the lack of academic success of student-athletes at two-year colleges. Drawing upon a student engagement theoretical framework presented by Coates, the purpose of the causal-comparative research study was to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes in Florida. The data were collected from 42 student-athletes, 13 athletic department personnel, and 13 academic support services personnel at three selected colleges in Florida who participated in the National Junior College Athletic Association using an online survey. The data were analyzed using descriptive statistics and ANOVAs to determine if statistically significant differences existed between the groups. The study did not yield any statistically significant differences regarding the groups' beliefs in usage and impact of various academic support services. The results indicated that academic support services may not be as widely or as frequently used to have the greatest impact on the academic success of two-year college student-athletes. The findings of this study may assist institutions with developing academic support resources to improve the academic success of two-year college student-athletes.

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CHAPTER I

INTRODUCTION

Background of the Problem

Leaders in higher education face increased demands to admit, retain, and graduate students with greater efficiency than in any other educational era (Kinser & Hill, 2011). Higher education leaders face scrutiny from students, parents, accreditors, taxpayers, and governmental officials (Altbach, Gumport, & Berdahl, 2011; ASHE Higher Education Report, 2013; Bailey, Jaggars, & Jenkins, 2015). In response to the pressure, higher education leaders continue to seek improved performance in their ability to admit, retain, and graduate larger numbers of students. Efforts to retain students through the utilization of academic support services and fostering their progression through the educational pipeline is an area of focus for most institutions of higher education (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; Kuh, Kinzie, Schuh, & Whitt, 2010).

Higher education leaders are responsible to educate a larger population and greater variety of students (Kinser & Hill, 2011). Students from previously underserved populations and with non-traditional enrollment patterns, coupled with college officials facing scrutiny for greater accountability and outcomes, have higher education leaders focused on ways to improve educational processes (Quaye & Harper, 2015). Additionally, the interest of stakeholders remains on providing students access to academic support services to ensure students are on track to degree attainment (Kinser & Hill, 2011).

Kuh (2009) suggested that officials at institutions of higher education place increased emphasis on student engagement initiatives to improve measures of retention and graduation. Student engagement, defined as time and effort in meaningful educational activities inside and outside of the classroom, leads to improved desired outcomes. The desired outcomes are measured by student learning, retention, progression, and graduation (Kuh, 2009).

Community college students often have the most at stake when accessing higher education (Bailey et al., 2015). For various reasons, whether academic underpreparedness, location, cost, or otherwise, community colleges often are the only option for access to higher education and degree attainment for many students. The Community College Survey on Student Engagement (CCSSE) found that students who were engaged with peers, faculty, and staff were more likely to persist through college and achieve their academic goals (McClenney, Marti, & Adkins, 2012). The CCSSE results consistently have shown that community college student's self-reported behaviors regarding engagement were related to college success outcomes (CCSSE, 2014, 2018).

Student engagement promotes connectedness to the institution of higher education and influences student learning and retention (Kuh et al., 2010). Krause (2005) reported that students with the greatest risk factors, who are not engaged in other available opportunities, should receive targeted assistance in advising, tutoring, supplemental instruction, and intervention. According to Coates (2007), the students with the greatest risk factors include part-time students, older students, economically disadvantaged students, academically underprepared students, minorities, and students with disabilities. Kuh (2009) suggested that engaging students from diverse backgrounds provided greater

opportunities for success. As demands for accountability increase, efforts to promote student engagement for at-risk students becomes a measure of institutional quality and places a positive light on institutions engaged in these practices (Kuh et al., 2010).

Students from low socio-economic status, minority students, and students with disabilities continue to fall behind other demographics of students academically (Kuh et al., 2006). Community colleges and other institutions of higher education with an open-access mission have historically been among the institutions with the poorest retention, progression, and graduation rates (Pruett & Absher, 2015). Nearly 60% of students who enrolled in community colleges required remediation of at least one year. As the number of remedial courses increases, the likelihood of student dropout increases (Adelman, 2005). Only about one-half of students who starts at a community college will earn a degree or certificate within 6 years (Adelman, 2005).

One way in which many institutions have sought to increase accessibility to higher education and student engagement is through intercollegiate athletics. Intercollegiate athletics serves as an additional college access point for many students (Horton, 2010). Community colleges, also known as two-year colleges or junior colleges, began offering opportunities for engagement via athletics as early as 1937 (National Junior College Athletic Association, 2018). As the popularity of two-year college athletics programs rises, institutions are faced with meeting the needs of a growing number of student-athletes. Xu, Jaggars, and Fletcher (2016) found that, similar to open-access institutions, two-year college athletic programs often attract students who are ill prepared for college life. The academic underpreparedness of student-athletes, combined with the other challenges of being a student-athlete (i.e., balancing athletics, academics,

and social activities; additional time constraints; and eligibility requirements) are unique to student-athletes and differ from the challenges faced by the general student population (Apaak & Sarpong, 2015).

Two-year college student-athletes face many of the same challenges that other at-risk students face. For example, two-year college student-athletes are frequently minorities, academically underprepared, and economically disadvantaged (Horton, 2010). Student-athletes are required to maintain their full-time student status to remain eligible to compete in intercollegiate athletics but also face additional physical and mental demands (i.e., mandatory practices, physical conditioning and rehabilitation, travel requirements, and required course loads) that more traditional students do not experience (Apaak & Sarpong, 2015; Horton, 2010). Providing the appropriate opportunities for engagement and support is critical to the academic success of two-year college student-athletes.

Statement of the Problem

A problem exists in higher education. That problem, specifically, is the lack of academic success of student-athletes as measured by their retention, progression, and graduation. For the 2016-2017 academic year, the retention rate at four-year public institutions was 81% while the retention rate at two-year public institutions was 62%. The graduation rate at 150% time for four-year public colleges was 60% while the graduation rate at two-year public colleges was 25% (McFarland et.al., 2019).

Two-year college student-athletes are a subset of the general student population who have not been widely studied. By addressing issues that concern the student success of subsets of the general student population (i.e., student-athletes), institutions of higher

education could improve student success efforts for the overall student population. Many factors contribute to the lack of academic success of student-athletes, including the availability of academic support services, the usage of academic support services, and the impact of academic support services on improving academic success of two-year college student-athletes. This study contributes to the body of knowledge needed to address this problem by examining the perceived usage and impact of academic support services on the academic success of two-year college student-athletes.

Purpose of the Study

The purpose of the study was to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes. The independent variable was defined as the groups of survey participants (i.e., student-athletes, academic support services personnel, and athletic department personnel). The dependent variables was defined as the perceived frequency of usage and perceived greatest impact on the academic success of two-year college student-athletes.

Research Questions and Hypotheses

This study sought to answer the following research questions:

1. What are the differences in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel?

H_o: There is not a statistically significant difference in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel.

H_a: There is a statistically significant difference in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel.

2. What academic support service has the greatest perceived impact on the academic success of two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel?

Theoretical Framework

Student engagement occurs in both social and academic environments (Coates, 2007). Numerous high impact strategies for student engagement have been correlated to student success. The practices include academic advising, supplemental instruction, tutoring, and early alert intervention programs (Kuh et al., 2006). Coates (2007) labeled engagement activity as intense, passive, collaborative, or independent. Students frequently engage in various levels of engagement activity during their time of enrollment as seen in Figure 1. Figure 1 displays student engagement based on academic and social factors. Students may be placed in any given quadrant or move between the quadrants based on their levels of engagement academically and socially.

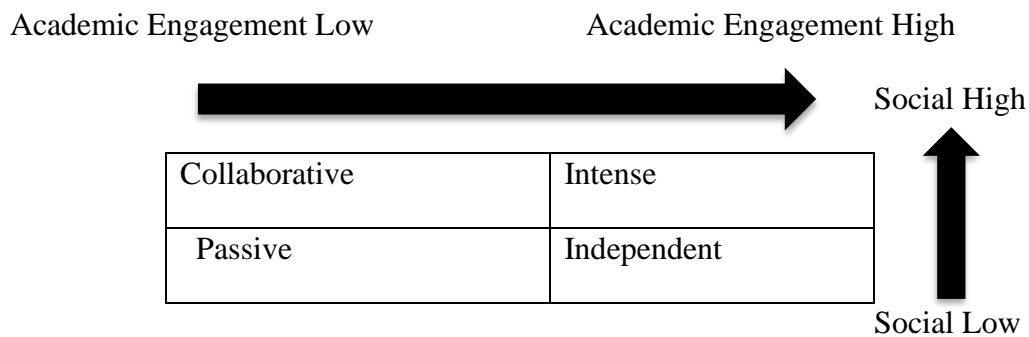


Figure 1. Student engagement based on academic and social factors.

Just as a student's level of engagement ranges from intense, passive, collaborative, and independent (Coates, 2007), the levels of student engagement varies within colleges and universities (Pike & Kuh, 2005). Pike and Kuh (2005) identified types of institutional engagement. One type of institutional engagement is an environment where students feel as though their academic needs are not met by the institution (Pike & Kuh, 2005). Another type of engagement is when students are engaged in an atmosphere that is homogenous and cohesive. Yet another type of engagement includes an environment that values diversity and in which students feel supported (Pike & Kuh, 2005). A final type of institutional engagement includes an environment in which the institutional culture is engaging intellectually and collaboratively for students (Pike & Kuh, 2005).

Kahu (2013) found that effective engagement efforts influenced student achievement and learning. Kuh, Palmer, and Kish (2003) suggested that student engagement has a greater influence on student success in higher education than a student's collegiate choice or prior preparation. The best engagement efforts positively influence student success as measured by retention, progression, and graduation metrics (Kuh et al., 2003). During economic times of reduced resources in many sectors of higher education, successful college and university leaders critically invest in student engagement initiatives and create conditions to impact student academic success (Hatch, 2012).

Two-year college student-athlete academic achievement can be represented by a combination of attributes that they have acquired prior to college plus the experiences that student-athletes engage in while in college. The pre-college experiences are

influenced by academic preparation, college readiness, family support, and various demographic factors. These pre-college experiences are key contributors to a student-athlete being able to achieve academically (Hein & Smerdon, 2013). The student-athlete experiences prior to college were not the focus of this study. This study focused on the student-athlete experiences while attending two-year colleges. Student-athlete engagement was narrowed to include only those engagement activities related to the perceived usage and impact of academic support services.



Figure 2. Student engagement influenced by student behavior and institutional conditions.

Methodology Overview

The researcher conducted a causal-comparative research design via an online survey at three selected two-year colleges in Florida that offered intercollegiate athletics and participated in the National Junior College Athletic Association (NJCAA). The researcher sent a recruitment email to three participant groups (i.e., student-athletes, academic support services personnel, and athletic department personnel) at each institution. The recruitment email included an introduction of the study, a request for participation, survey instructions, and the survey link. Participants received two electronic reminders to complete the survey.

The survey asked participants to provide responses pertaining to various categories of academic support services, including academic advising by faculty and

professional staff, academic alert systems, and tutoring. Each of these categories provided participants an opportunity to respond to the perceived usage of the service and perceived impact of the service on the academic success of student-athletes. The survey data were compiled into a database for statistical analysis. The quantitative statistical analysis included descriptive statistics and an analysis of variance (ANOVA). Follow-up post hoc tests between groups were conducted if a statistically significant difference was found.

Delimitations and Limitations

A delimitation of the study was selecting only two-year colleges in Florida where the researcher resided and had current professional relationships. An additional delimitation was selecting student-athletes who competed in the NJCAA. A potential limitation, which may have negatively affected the generalizability of the findings, was the access to the study participants. The participants could have been located at any two-year college in the state of Florida that offered intercollegiate athletic opportunities and participated in the NJCAA. Another potential limitation occurred if institutions lacked comprehensive academic support services for students, their responses may not have been applicable, and thus reduced the quantity of data that could be collected for comparison for a particular category of academic support services. Those institutions that had well-developed academic support service systems may have been able to provide the most comprehensive data. Although, there may have been a limitation if an institution had a predisposition or overreliance on a certain type of academic support resource or service.

Assumptions

The researcher assumed prior to the survey that each institution that offered two-year college athletics and participated in the NJCAA had a variety of academic support services in place and available for their student population. The researcher assumed that all participants had a general understanding of academic support services and how they were defined and described in the survey. The researcher assumed that the participants were willing to provide accurate and honest responses to the survey questions and were not predisposed to any ulterior motive.

Definition of Terms

Academic achievement – performance in course or program of study and measured by grades, grade point average (GPA), graduation, or other appropriate metric (York, Gibson, & Rankin, 2015).

Academic advising – process where a student may set and review academic goals, develop plans for achieving those goals, such as through course selection to meet degree requirements and obtain information and services that support their academic pursuits (National Academic Advising Association, 2018).

Academic intervention – strategy used to teach a new skill, build fluency in a skill, or encourage application of skill to new situation and settings. The strategy is an intentional and meaningful interaction aimed at addressing and ultimately improving a student's area of weakness. The intervention is usually specific and formal act (Wright, 2012).

Academic preparedness – the degree of readiness for engaging in college level coursework with the knowledge, skills, and preparation needed to enroll and succeed (Florida Department of Education, 2018).

Academic success – achievement of an academic related goal as measured by grades, GPA, credits earned, or degree attainment (York et al., 2015).

Academic support services – refers to a wide range of methods and educational services that aids students in their learning efforts (The Great Schools Partnership, 2018).

Academic support services personnel – the staff who may be involved in deploying a wide range of methods and educational services that aid students in their learning efforts, such as advisors, counselors, and tutors (The Great Schools Partnership, 2018).

Athletic department personnel – consist of employees in the athletic department who have regular interactions with student-athletes in the capacity of coach, assistant coach, or athletic administrator.

Early academic alert system – system designed to alert students and college officials of concerns related to academic progress and achievement. The system is generally deployed in a manner to provide an alert and subsequent intervention strategies to foster the student's academic success (Jungblut, 2015).

Faculty mentor – a faculty member who has an additional relationship with a student and serves as a resource and a role model to provide direction and leadership to the student (McCormick & Yung-Hwa, 2016).

Graduation rate – Graduation rate is the percentage of the entering freshman class who graduate within 3 years with an associate degree and within 6 years with a bachelor's degree (National Center for Education Statistics, 2015).

Learning support labs – designated area or location at a college where students can receive academic support or services (The Great Schools Partnership, 2018).

National Junior College Athletic Association (NJCAA) - national governing body of two-year college intercollegiate athletic programs (NJCAA, 2018).

Open-access institution – an institutional mission found in the network of community and junior colleges that allows for nearly all students to access post-secondary education regardless of academic preparation. These institutions deliver a variety of courses and programs ranging from developmental/remedial, college credit, and enrichment/continuing education (Shannon & Smith, 2006).

Peer tutoring – academic support service where students serve as tutors for other students (National Education Association, 2018).

Retention –measure of students who continue enrollment into the next academic year at a particular institution (Hagedorn, 2006).

Student engagement – participation in educationally meaningful activities that may occur inside or outside of the classroom (Kuh et al., 2003).

Supplemental instruction – instruction that occurs outside of normal class time to support a student's academic pursuits. The supplemental instruction often occurs in an academic support lab, and instruction may come from lab assistant or tutorial assistant (Arendale, 2007).

Tutoring – individualized or small group instruction to support learning whereas an individual with content expertise provides help and instruction to one or more individuals who do not yet possess the content expertise. Usually, it occurs outside of normal class time (Chandler Gilbert Community College, 2018).

Two-year college – a college that primarily offers associate degrees and certificates. Two-year college is synonymous with community college or junior college (American Association of Community Colleges, 2018).

Significance of the Study

Society stands to benefit from a better educated citizenry (Hill, Hoffman, & Rex, 2005). Two-year colleges face the same scrutiny that four-year college and university counterparts face regarding retention and graduation rates of student-athlete populations (Woods, McNiff, & Coleman, 2018). Two-year colleges face an additional challenge that many four-year colleges and universities do not face, specifically access and the underpreparedness of student-athletes. Two-year college student-athletes are frequently a population who enroll at two-year colleges as a result of underpreparedness and not being academically eligible to enroll at universities and compete in intercollegiate athletics. Student-athletes face distinct challenges, such as balancing athletics and academics, that may not be encountered by other students (Apaak & Sarpong, 2015; Levine, Etchison, & Oppenheimer, 2014). Additionally, college and university athletic departments often face scrutiny of graduation rates, particularly when the graduation rates for the student-athlete population fall significantly below the rates of the general student population or their peer institutions (Ferris, Finster, & McDonald, 2004).

Prior research regarding student-athletes' academic success has focused primarily on four-year college and university student-athletes, often at the National Collegiate Athletic Association (NCAA) Division 1 organizational levels. Student-athletes competing in the NCAA are required to meet certain incoming eligibility standards and therefore frequently have a higher level of academic preparedness than student-athletes at the two-year colleges. The NCAA athletic organization generates approximately \$1 billion dollars in revenue each year and, therefore, receives great attention. NCAA athletics provide opportunities for approximately 450,000 student-athletes each year while the two-year college athletic organizations provide athletic opportunities for nearly 85,000 two-year college student-athletes each year. Very little research literature is available concerning two-year college student-athletes even though they account for nearly 20% of the student-athlete population in higher education. This research study was unique because it focused on two-year college student-athletes competing at the NJCAA level.

The findings from this study provided valuable information to those colleges for improving the impact of academic support services on two-year college student-athletes' academic success. Frequently, two-year college student-athletes are underprepared for college compared to their counterparts at four-year colleges and universities. Due to underpreparedness, the perceived usage and impact of academic support services for two-year college student-athletes is of great importance to the academic success of student-athletes (Storch & Ohlson, 2009). Focusing on the academic support services with the greatest perceived usage may improve the retention, progression, and graduation metrics of the institution using efficient strategies, which may inform practices to improve

academic success of two-year college student-athletes. This research could inform and improve academic support service practices to foster improved academic success levels of two-year college student-athletes, ultimately impacting the retention and graduation rates at two-year colleges.

Summary

Requirements to admit, retain, and graduate students with greater efficiency than in any other educational era remains at the forefront (ASHE Higher Education Report, 2013). Officials at institutions of higher education place increased emphasis on student engagement initiatives to improve measures of retention and graduation. Efforts to promote student engagement for at-risk student populations, such as student-athletes, has become a measure of institutional quality and effectiveness, placing a positive light on those institutions that engage in these practices as demands for accountability increase. Results of the study provided college officials with information regarding the perceived usage and impact of academic support services by two-year college student-athletes, which could improve retention and graduation for student-athletes at two-year colleges.

CHAPTER II

REVIEW OF LITERATURE

Two-year college leaders meet the demand to provide opportunity for students to access affordable higher education in the United States. State funding formula models reward institutions that admit, retain, and graduate students with greater success more than in previous educational eras (Kinser & Hill, 2011). As a result, two-year college administrators seek improved performance in their ability to recruit, retain, and graduate students. The focus on retaining students and enabling their progression through college to graduation has become a priority of effective institutions of higher education (Kuh et al., 2006).

Students from underserved populations who traditionally have not performed well in higher education, combined with the emphasis on institutions for greater accountability for desired outcomes, have higher education leaders focused on ways to improve educational processes and support. The support frequently focuses on academic support services and flexible modes of educational delivery to ensure students are remaining on track to degree attainment (Kinser & Hill, 2011). Student-athletes in general, and specifically student-athletes at two-year colleges, are often from the underserved populations who exhibit the greatest risk factors of any sub-population in higher education (Horton, 2010).

College officials place emphasis on student engagement initiatives to improve measures of retention and graduation. Effective engagement efforts have been well-

documented to influence student achievement and learning (Kahu, 2013). Student engagement, defined as participation in meaningful educational activities inside and outside of the classroom, results in desired performance outcomes in both social and academic environments (Coates, 2007; Kuh, 2007). The best engagement efforts positively influence student success as measured by increased retention, progression, and graduation metrics. To best serve at-risk populations, such as two-year college student-athletes, higher education officials at successful institutions critically invest in creating student engagement opportunities and conditions to have the greatest influence on student academic success (Hatch, 2012).

Students with risk factors, such as two-year college student-athletes, should receive targeted assistance in advising, tutoring, supplemental instruction, and intervention (Krause, 2005). According to Coates (2007), the students with the greatest risk factors include economically disadvantaged students, academically underprepared students, minorities, and students with disabilities. Two-year college student-athletes exhibit many of these same risk factors. Engaging students with risk factors from these backgrounds has been documented to improve retention, persistence, student learning, and achievement (Kuh, 2009). The CCCSE identified strategies that correlates with student academic success. These strategies included orientations, first-year programs, academic advising, student success courses, learning outside the classroom, supplemental instruction, tutoring, early alert, and intervention programs (CCCSE, 2014).

In an effort to increase access to higher education, two-year colleges have added intercollegiate athletics as an additional access point for many students to have an opportunity to seek a college education. By the nature of less restrictive academic

eligibility rules, two-year college intercollegiate athletic programs often attract student-athletes who are underprepared for college, similar to the general student population at other open-access institutions of higher education (NJCAA, 2018). Additionally, student-athletes face distinct challenges, such as balancing athletics, academics, and social activities. The successes and failures that student-athletes encounter are frequently not faced by other traditional students (Kissinger & Miller, 2009). Student-athletes face additional time constraints, and the requirement to remain a full-time student to remain eligible for athletic competition has been well-documented as challenges faced by student-athletes that differ from the general student population (Apaak & Sarpong, 2015). Providing the appropriate opportunities for student engagement and academic support is critical for the academic success of two-year college student-athletes during their higher education endeavors.

Theoretical Framework

Student Engagement

Student engagement is defined as student participation in meaningful educational activities, both inside and outside the classroom, which leads to a range of desired outcomes (Kuh, 2007). Data from the National Survey of Student Engagement (NSSE) were categorized into five areas that represented student behaviors or institutional aspects that reportedly led to student success in college (Pascarella & Terenzini, 2006). The five areas were academic challenge, active/collaborative learning, student-faculty interaction, supportive college environment, and meaningful educational experiences. Many effective educational practices may cross multiple aspects of these five identified areas.

Chickering and Gamson (1987) authored *Seven Principles for Good Practice in Undergraduate Education*, and their work identified the importance of student-faculty interaction, active learning pedagogy, time spent in educationally purposeful activities, respect for diversity, importance of quality feedback, high educational standards, and interaction among students (Chickering & Gamson, 1987). Kuh (2009) followed and coupled student responsibility with higher education leaders' responsibility by stating that student engagement is the time and effort associated with actions that are linked to desired outcomes of college and what institutions do to promote student participation in those activities. The Higher Education Academy added, in 2010, that student engagement includes participation in effective practices that leads to measurable outcomes. The variety of effective practices in which students engage can occur inside and outside the classroom (Trowler, 2010).

Coates (2007) established a framework of student engagement. Coates assumed that identified activities could be linked to student learning. The framework aligns with NSSE research and recognizes engagement as fostering in active and collaborative learning environments, student interaction with academic personnel, meaningful participation in educational activities, and sense of a supportive campus environment. Coates's framework depicts engagement styles along two axis, social engagement and academic engagement. The quadrants of engagement are labeled as intense, independent, collaborative, and passive. The research by Coates (2007) led to the establishment of a continuum between academic and social engagement. Additionally, the characterization of student engagement as intense, collaborative, passive, or independent should refer to a state of engagement and not as a student type or as a permanent trait. The styles of

engagement established by Coates allows students to flow through the various quadrants over time based on the situation and environment.

Students identifying an intense form of engagement tend to be very active in their learning, regularly collaborating with other students, and interacting consistently and proactively with academic staff. Students with independent engagement styles tend to be active in their learning, but less engaged in social aspects. For example, independently engaged students are less likely to collaborate with other students or interact with academic personnel. Collaborative styles of student engagement include students who preferred the social opportunities that were available. For example, these students tend to be readily interacting and collaborating with other students and academic personnel (Coates, 2007).

Pike and Kuh (2005) identified seven types of engaging institutions. The first type is those institutions that are diverse but interpersonally fragmented. At this type of institution, students experience diversity but do not view the institution as supporting their individual academic needs. The second type is those institutions that are homogenous and student experience is cohesive interpersonally. These institutions lack diversity, but students feel supported from the institution for themselves and their classmates. The third type of institutions have students who are stimulated and engaged intellectually. This type includes campus environments where students have great interaction with faculty, as well as peers, inside and outside of the classroom in meaningful educational activities. The fourth type includes institutions whose students are supported individually and provide diverse experiences simultaneously. The fifth type are those institutions where student engagement is considered impacted or impeded

by technology. Rules or policies regarding technology limit meaningful student engagement, interactions, and collaborations. The sixth type are those institutions whose students are challenged academically and supported to succeed. Faculty and student expectations are high, collaborative learning is abundant, and students feel genuine support from the institution. The final type is institutions whose students are fostered to be collaborative. Students rely on each other and support each other in learning. Faculty are responsible for promoting these collaborations in their courses (Pike & Kuh, 2005).

Student Academic Success

Higher education leaders face demands to engage students on their campuses. Student engagement at institutions of higher education is a formidable influence on student achievement and learning (Kahu, 2013). Student engagement during college matters more to student academic success than what students bring into higher education or which institution they attend (Kuh et al., 2003). Researchers on student engagement indicated best engagement practices positively influence student retention, progression, and graduation. Effective educators are strategic in creating conditions for students to be engaged at the institution (Harper & Quaye, 2015). Higher education leaders continue to seek student engagement initiatives to improve student success on their campuses. During times of diminished resources and increased demands for access to higher education, institutions tend to develop programs that have the greatest influence on engagement and student success (Hatch, 2012).

CCSSE researchers consistently found through over 20 years of research that students who engaged with peers, faculty, and staff were more likely to achieve academically, persist, and reach their academic goals (McClenney et al., 2012). Student

engagement, or the time that a student spends in educationally related activities, has impacted retention, progression, and graduation. CCSSE results indicated that community college students' self-reported behaviors regarding engagement were related to better outcomes.

Coates (2005) stated that student engagement in educational activities promotes student learning. Krause (2005) went a step further and stated that students who are of the greatest risk should receive targeted assistance and support that includes advising, support, and intervention. Additionally, engaging non-traditional and at-risk students, such as part-time students, older students, economically disadvantaged, underprepared, minorities, and student with disabilities, is critical to ensure their academic success (Krause, 2005). As Kuh (2009) stated, engaged students from diverse backgrounds level the playing field. Engagement compensates for academic underpreparedness. Engagement enables opportunities for academic success, particularly for students of lower socioeconomic status and students who have been historically underserved (Kuh, 2009). Kuh (2009) added that institutional initiatives that promote student engagement could serve as a measure of educational quality and could add value.

The CCCSE identified 13 high impact strategies and studied the correlations between these practices and student engagement (CCCSE, 2014). The high impact practices that promote student engagement include orientations, first-year experience programs, student success courses, goal setting and academic planning, learning outside the classroom, tutoring, supplemental instruction, early registration, mandatory class attendance, early alert, and early intervention. Student engagement not only improves student academic success but also improves institutional success. An example of

improved institutional success would be alumni engagement with the institution post-graduation (Henning, 2012).

A student success task force was assembled in California to study how student support improved college completion rates of their students. Students were surveyed to identify factors that they believed most influenced their success. The intent of the study was to identify opportunities for institutional change by improving student support to foster completion rates (Booth et al., 2013). Student perspectives provided important insight into the areas that most support their completion efforts. The researchers identified six success areas of support that most contributed to college completion. The most effective support mechanisms were part of the daily student experience and were integrated into the curriculum. The most effective support strategies encouraged students to become directed, focused, engaged, and connected (Booth et al., 2013).

Students identified support that resulted in being directed and focused on their educational plan and goals. Directed support assisted students to clarify goals and use tools and resources to develop their educational plans. The most effective resources fostered the student's ability to identify an endpoint and work backwards to identify and track which classes to take to attain goals. The most successful practices included interventions to keep students focused and on track. Researchers identified strategies to keep students focused by improved motivation, improved time management, and required class attendance. Tools and resources that monitored student progress and provided feedback throughout the course of the semester were most important. Researchers also noted that, in addition to student intrinsic motivation, much progress toward goal

attainment was a result of faculty, counselors, and other student support staff acting to facilitate student movement toward goal attainment (Booth et al., 2013).

Students reported that engagement and connection to their college were integral in supporting their college completion efforts. Engaged students participated in meaningful experiences both inside and outside the classroom. The researchers determined student engagement was fostered when students understood the value of engagement, faculty promoted engaged relationships, and support programs provided engaging experiences (Booth et al., 2013).

Key themes that emerged from the study redefined student support in ways to better align with students' perceived needs. The emerged themes included the need to cultivate student motivation, teach students how to navigate the college environment successfully, build the institutional structure to support student success factors, provide support for underserved students, and foster an atmosphere in which everyone at the institution supports student achievement (Booth et al., 2013). The findings of Booth et al. (2013) supported the summation that two integral aspects of student engagement that may lead to student achievement include the time and effort students spend in educationally purposeful activities and the resources a college or university provides for these learning opportunities to occur. The development and activation of the services and resources to support students in their educational endeavors is another integral aspect that leads to student achievement (Kuh et al., 2010).

Robinson and Gahagan (2010) reported that academic coaching was an important step to aid a student's transition into college. Effective academic coaches worked with students to establish and achieve academic goals and to become engaged on campus.

Effective academic coaching occurred one-on-one with focus on strengths, goals, study skills, academic planning, student engagement, and academic performance. Effective coaching techniques included students reflecting on strengths and working on new study skills. The most effective coaching practices included the coach serving as a constant resource. Academic plans allowed students to identify motivation and goal setting and developed steps needed to achieve academic goals (Robinson & Gahagan, 2010).

Robinson and Gahagan (2010) found that students who participated in academic planning were more likely to report satisfaction, be retained, and progress towards degree attainment.

Many institutions of higher education with an open-access enrollment mission added intercollegiate athletic opportunities for their student populations. Intercollegiate athletics has served as an opportunity to attract and engage students with the institution; however, at the community college level, intercollegiate athletic programs often attract student-athletes who are underprepared for college, much like the general student body at many open-access institutions (CCCSE, 2016). Additionally, according to Kissinger and Miller (2009), the unique challenges faced by student-athletes include balancing athletics, academics, social activities, success, failures, emotions, and other relationships, which may differ from other student populations. Apaak and Sarpong (2015) concluded that student-athlete academic performance was seriously challenged by time constraints from these unique factors.

Students reaching their educational goals is the key indicator of student academic success and institutional success (Voigt & Hundriser, 2008). Two common statistics used to document success include first- to second-year retention rates and graduation

rates. The first to second-year retention rate is the percentage of students entering in the fall term who are still enrolled the subsequent fall term. Graduation rate is the percentage of the entering freshman class who graduate within 3 years with an associate degree and within 6 years with a bachelor's degree (National Center for Education Statistics, 2015).

Student persistence to completion of an educational goal is an essential measure of student success (Voigt & Hundriser, 2008). Statistics to gauge student success of two-year college students include freshman to sophomore retention rates, graduation rates, and successful transfer rates. Successful transfer rates include those students who have progressed to earn the prerequisite credits to transfer to a four-year college or university to fulfill their academic aspirations. These student success statistics are generally viewed as the primary measures of institutional performance and student academic success (National Center for Education Statistics, 2015).

As reported by the National Center for Educational Statistics, student academic success is a product of institutional commitment as opposed to selectivity of standardized test scores and socioeconomic status. The measures of student success have not only drawn the interest of accreditors but also politicians at the local, state, and federal levels. Additionally, taxpayers, students, and their families seek accountability and performance from institutions of higher education in terms of student success measures. As reported by Ruffalo Noel Levitz (2017), the success of a college or university and the success of students are inseparable. Colleges and universities put resources into place that promote students' academic achievement and success and provide the data that demonstrate student success (Kuh, 2005).

Lotkowski, Robbins, and Noeth (2004) reported that student academic success requires commitment and responsibility from an entire campus. Everyone's participation is necessary in meaningful campus initiatives, such as participation in early alert systems that identify, monitor, and intervene in response to students who are at-risk. The Noel Levitz National Center for Enrollment Management added a series of principles in support of student success (Ruffalo Noel Levitz, 2017). The principles included focused effort on certain targeted groups of students, such as student-athletes. The principles sought improved programs and services that supported student success, including academic advising and academic support programs. Examples of academic support programs included tutoring, supplemental instruction, and academic alert systems.

In a National Post-Secondary Educational Cooperative report, a conceptual framework for student success was established (Kuh et al., 2006). The framework mapped the varied route of educational passage and included detours, turns, and dead-ends. The framework included a section of students' pre-college experiences that may impact their higher education pathway. Examples of the pre-college experiences include academic preparation and demographic background.

The next part of the framework included the influences of the college experience with a focus on student behavior and institutional condition. Student behaviors include time that a student studies, peer interaction, motivation, and faculty interaction. Institutional conditions are influenced by first-year experience programs, academic support services, and campus environment. Of great importance is the intersection of student behavior and institutional condition, which yields the output, student academic success. Institutions of higher education can influence these conditions.

Researchers have documented that student-athletes lack academic motivation and underperform academically. Additionally, researchers have found that student-athletes are caught in the social phenomenon of pluralistic ignorance (Levine, Etchison, & Oppenheimer, 2014). Levine et al. (2014) found that the majority of student-athletes held different private attitudes regarding academics from what they perceived to be the group norm. As a result, student-athletes individually valued academics much higher than they perceived their teammates and peers to value academics. The pluralistic ignorance was found across student-athletes ranging from middle school to college, and it was equally strong across gender and socioeconomic class.

Kulics, Kornspan, and Kretovics (2015) analyzed academic behaviors of student-athletes related to academic decision making because of eligibility requirements. The researchers reported that the majority of student-athletes selected their majors based on interest; however, some student-athletes chose their academic majors based on the concern to maintain the progress towards degree requirements and maintain athletic participation eligibility. Significantly more male student-athletes made the decision based on eligibility concerns than female student-athletes. Additionally, female student-athletes reported meeting with academic advisors or counselors more often than their male counterparts (Kulics et al., 2015). Also, the researchers reported that the criteria of progress towards degree requirements had influenced student-athletes to choose majors for athletic eligibility purposes as opposed to their career aspiration.

Researchers have confirmed that many student-athletes choose majors that have a disproportionate number of student-athletes majoring in the discipline than the at-large student population (Fountain & Finley, 2011). Student-athletes describe student-athlete

friendly majors as academic degree programs that have interesting courses led by helpful and understanding faculty. The degree program and courses contain flexible scheduling options to limit practice and game conflicts (Kulics et al., 2015).

University student-athletes were surveyed on the challenges affecting their academic performance (Apaak & Sarpong, 2015). Apaak and Sarpong (2015) found that time constraints as well as physical and emotional stress were perceived to impact academic performance. The researchers concluded that campus officials should provide support for students to manage their time and to limit athletic programs from overworking student-athletes. Godfrey (2010) stated that student-athletes were hurt academically by the time challenge created by intercollegiate athletics, particularly as it related to being able to devote time to studying outside of the classroom. The demands of collegiate athletics placed a physical and emotional burden on the student-athletes with little time for recovery, thus negatively impacting the student's ability to study and achieve academically. A comprehensive intercollegiate athletic program should provide services for student-athletes to increase engagement opportunities and ultimately improve retention, progression, and graduation rates. High impact strategies fostering engagement, such as advising, tutoring, mentoring, and academic eligibility monitoring, have shown to improve success rates (Storch & Ohlson, 2009). Table 1 displays the relevant student engagement and student academic success studies.

Table 1

Concept Analysis Chart for Student Engagement and Student Academic Success

STUDY	PURPOSE	PARTICIPANTS	DESIGN/ ANALYSIS	OUTCOMES
Apaak & Sarpong (2015)	Examined internal challenges affecting academic performance of student-athletes at universities.	322 university student-athletes	Survey questionnaire in which data were collected and analyzed using chi-square statistical methods.	Time constraints and strain (physical and mental) were significant challenges affecting academic performance.
Booth et al. (2013)	Examined student beliefs of factors most important to their success and engage practitioners if their supports aligned with student beliefs.	900 students from 13 California community colleges	Mixed methods phone survey of 785 students and a focus group of 115 students from a stratified random sample of 10,918.	Five themes emerged in this study. The themes were to foster student motivation, teach students how to succeed in college, structure support to address the six success factors, provide supports for underrepresented students, and everyone has role in supporting students, but faculty must take the lead role.
Coates (2007)	Developed a model of student engagement.	1,051 full time early undergraduate students from four universities	Survey using The Student Engagement Questionnaire with cluster analysis and discriminant analysis to validate results of the cluster analysis.	Model developed to enhance campus based and online student engagement.
Kulics et al. (2015)	Assessed academic decision making of student-athletes and determine if variables of gender and sport	1,027 student-athletes from midwestern universities	Student-athlete survey data used ANOVA segmented by sport and gender.	Some student-athletes chose academic majors based on interest. Some student-athletes chose major based on athletic eligibility

STUDY	PURPOSE	PARTICIPANTS	DESIGN/ ANALYSIS	OUTCOMES
	type were related to academic decision making.			requirements. Gender and sport type were related to academic decision making.
Levine et al. (2014)	Examined whether student-athletes accurately perceived how much teammates valued academic success.	98 male student-athletes	Survey results provided mean self-reported judgments of academic achievement versus how much their teammates valued academic achievement using a paired-sample <i>t</i> test. Analysis compared achievement in academic domain versus achievement in athletic domain.	Student-athletes' perceptions of group norms were different than actual privately held beliefs. Pluralistic ignorance regarding academic achievement was widespread.
Pascarella & Terenzini (2006)	Reviewed 2,400 studies on how college affected students.	College students participating in 2,400 studies conducted in 1990s	Varied	Provide reference on how colleges can influence student success.
Pike & Kuh (2005)	Classified institutions by educational effectiveness represented by student engagement.	177,103 freshman and senior students from 321 colleges and universities	NSSE College Student Report Survey using Q factor analysis.	Six types of institutions were identified by type of student engagement.

Accountability and Student Academic Success

Approximately 80% of high school graduates will need some type of education beyond high school in order to live an economically self-sufficient lifestyle (Kuh et al., 2006). In addition, these students will need higher education to transverse the variety of social, political, and cultural issues that they face. The bachelor's degree is the most critical attainment for climbing the financial ladder as students who have earned this

degree will yield approximately 1 million more dollars over their lifetime than individuals without the degree (Pascarella & Terenzini, 2006). Trends have indicated that, based on degree attainment rates, there will be a shortfall of college-educated workforce by over 10 million people in 2020 (Kuh et al., 2006).

Students, politicians, and the public have demanded value of education. Limited research exists on fiscal expenditures on student engagement activities and student success. Ryan (2005) reported in a limited study that increased administrative expenses negatively impacted student engagement. Pike, Smart, Kuh, and Hayek (2006) found that a complex relationship existed between expense and student engagement. The factors included type of institution (i.e., public and private), type of student, and type of engagement practice. Academic expenditures, such as library, academic services, curriculum and faculty development, were most impactful in student engagement measures. Institutional support expenditures followed as the next most impactful (Pike et al., 2006).

The economics of student engagement and student academic success have become heightened. As stated by Ryan (2005), as awareness of the impact of student engagement increased so did the scrutiny for institutions to be good financial stewards and to use their resources most efficiently to promote student success. These scrutinizing demands came from lawmakers, the public, as well as higher education administrators and officials. Data analyzed and reported by Ryan indicated that increased expenditures were overwhelming administrative in nature and the increased administrative expenses created great concern and heightened scrutiny regarding access and college costs. A review of

expenses should occur to correlate expenditures to initiatives to support student engagement and student academic success (Ryan, 2005).

Trends in higher education policy place increased focus on access and degree completion. While degree completion is an end goal, retention is often the focus of institutions as an interim measure of institutional progress. The focus on interim and outcome measures intensify as availability of funding for higher education remains at the forefront. Funding for U.S. higher education comes from a diverse set of sources, including state and federal appropriations, student tuition and fees, gifts, and grants (National Center for Education Statistics, 2015). Stakeholders, including elected and government officials as well as students and their parents, continue to express interest, and even concern, regarding how their money is spent and whether institutions are meeting their desired outcomes. The interest in costs, access, and meeting outcomes are scrutinized similar to key measures of retention and graduation on how colleges and universities perform (Millea, Wills, Elder, & Molina, 2018).

The U.S. Department of Education has explored rating systems for higher education institutions in an effort to provide information to students and parents regarding various factors associated with colleges and universities. Key features of rating systems focus on access, affordability, and performance outcomes. Frequently used measures include average cost of attendance, retention rates, graduation rates, initial employment salary following graduation, and student debt (Roksa, 2015). Other ranking systems, as noted by U.S. News and World Report rankings, focus on factors of academic reputation, retention, resources, admission classes and selectivity, graduation rates, and alumni (Walker, 2016). A federal rating system would focus accountability on whether

institutions to meet accessibility demands in an affordable manner that leads to desired performance outcomes of degree completion and employability.

As scrutiny increases, higher education institutions are focused on preparing students for careers in the workforce. Graduation is one of the measures within rating systems along with career placement and earnings upon graduation (Walker, 2016). State government and state higher education systems are using performance funding models to improve performance of higher education institutions. The performance funding formulas are focused on retention, progression towards degree attainment, graduation, successful transfer, employment, and wage earnings (ASHE Higher Education Report, 2013). Several state studies reported improvements in the number of graduates following the implementation of state performance funding models. For example, in Florida, associate degrees and one-year certificates rose nearly 20% in a 6-year period compared to the year prior to the implementation of the performance funding model. Similar increases occurred in the states of Ohio and Washington (ASHE Higher Education Report, 2013). Additional studies noted that attributing increases in the number of graduates cannot solely be attributed to decisions for states to implement performance funding models. For example, Dougherty and Hong (2006) reported that increases in number of graduates was just as easily attributed to increases in enrollments. Other studies found a weak relationship existed between increases in performance metrics and the implementation of the performance funding models. One study gained awareness because increases in performance funding metrics did not mean that real improvement was occurring at the institutional level but that degrees were just easier to obtain due to less rigorous degree and graduation requirements (Tandberg, Hillman, & Barakat, 2014).

Academic Advising

Students arrive at colleges without career goals, undecided as to which degree or academic discipline to pursue, and oblivious to academic support services that are available, resulting in selection of inappropriate courses leading to excess credit hours not counting towards a degree program and increased time and money (Bailey et al., 2015). Historical approaches to academic advising primarily focused on assisting students in the selection of classes that progressed them towards their degree (DiMaria, 2015). At two-year colleges, new students with a vast array of goals usually experience a brief orientation and quick advising session to select first-semester courses (Bailey et al., 2015). Brief advising sessions tend to focus on course registration, not allowing for discussion of a student's long-range plan as it relates to their goals. Additionally, two-year college students frequently do not receive close supervision of their academic progress towards degree completion as they move from semester to semester, and they tend to deviate from the most efficient path to degree attainment (Bailey et al., 2015).

Academic advisors are challenged to redesign their approach in search of better ways to advise. Effective redesigns include interaction with students that more closely resembles mentoring than what has historically been considered as advising. Academic advisors are the most important resource to aid students' identification and revision of goals and development of academic plans to reach those goals. Using the guided pathways approach, advisors help students select an area of interest and degree program, develop an academic plan or use a prescribed plan, monitor academic progress through the plan, and provide feedback and intervention as needed (Bailey et al., 2015). At Morningside College, academic advisor's first interaction with students occurs during

summer orientation and registration. The interactions are future oriented, and academic advisors assist students with career choices, declaration of major, and selection of classes. Morningside's advisors primarily assist first-year students as second-year students transition to faculty advisors.

Effective academic advisors provide opportunities for students to develop goals in a multifaceted process. This process includes inquiry into the student's abilities and skillset, inquiry into various career fields, and developing academic and career plans based on the student's prior inquiry into his or her own skills and career interests (Bailey et al., 2015). The multifaceted process and consistent interaction between student and advisor foster student learning, ultimately allowing students to build the skill set to self-advise. This development occurs gradually over a student's academic career and results from sustained interaction with the advisor (Campbell & Nutt, 2008).

Students consistently rate academic advising as one of the most important areas of the student experience; however, students also consistently rate academic advising as an area of the student experience that they are least satisfied (Ruffalo Noel Levitz, 2017). Various academic advising models exist. Examples of advising structures and models include centralized, decentralized, shared, faculty only, supplementary, and self-contained (Kot, 2013). The most effective institutions commit faculty and staff to fulfilling this important aspect of the student experience. Best practices include incorporating academic advising in new student orientation and imbedding academic advising activities in first-year experience programs (Kuh et al., 2010). Research by Williamson, Goosen, and Gonzalez (2014) revealed that academic advising was a mechanism that established a connection between the student and the advisor/institution

that improved the measures of retention, persistence, and success. In their research, advising occurred in the classroom and was a collaborative effort between student services and faculty (Williamson, Goosen, & Gonzalez, 2014). Academic advisors have a role responsibility to infuse students into the experience of college. The infusion of students into the experience of college is of particular importance for at-risk student populations (Starling & Miller, 2011). The student and faculty academic advising interaction provided opportunities for the student-institution connection to be fostered (Tinto, 2012). Repetitive encounters with individuals, such as faculty and advisors, who have an interest in the students' achievement is a critical component to fostering the student connection to the institution and his or her academic success.

Faculty cultivate classroom environments that aid student motivation. Grubb (2013) reported that community college students' low motivation, illustrated by attending class late, being underprepared, and not completing coursework, benefitted from classroom environments that cultivated motivation. Faculty create an environment that supports motivation and persistence by building relationships with their students and between students, fostering student opportunity into academic inquiry and exploration that aligns with student interests, and developing student's sense of academic achievement through high standards with directed support (Grubb, 2013).

Types of Advising

Student participation is a key consideration of advising in addition to the actual knowledge and availability of the advisor (Braun & Zolfagharian, 2016). Advising is categorized as prescriptive or developmental. Prescriptive advising occurs when an advisor directs students with little input and participation from the student.

Developmental advising occurs when the advisor teaches the student in a manner that requires the student's participation and fosters the growth and development of the student. Students may prefer one advising approach over another; therefore, college advisors should be prepared to determine student advising needs and preferences quickly during the advising process (Braun & Zolfagharian, 2016).

Many institutions of higher education use a split model for providing academic advising services. Faculty advisors provide academic program information, and centralized advisors provide guidance to special populations, such as undecided students and first-time in college students (National Academic Advising Association, 2011). Academic advising services occur in partnership with academic departments as well as other student services units, thus providing opportunities for collaboration to further student achievement (Gordon, 2006). Historically, faculty advising has consisted of faculty advising assignments based on a student's major. The interactions between students and faculty advisors involved little more than selecting courses from a designated list.

Student and faculty interactions in an academic advising setting resulted in higher than predicted scores of effective educational practices (Kuh et al., 2010). Faculty-student advising sessions that discussed academic progress, career aspirations, career plans, shared educationally purposeful activities that were not classroom related, and provided feedback were considered best practices for faculty-led academic advising to further student success. Impactful conversations focused on academic and career planning, support systems and services, financial aid, and combatting life issues. Most

two-year college students with risk characteristics benefited from the engagement and support of a significant advising experience (Williamson, Goosen, & Gonzalez, 2014).

Many colleges and universities make efforts to improve access and quality of advising services. Centralized academic advising units are an example of these efforts (Baum & Payea, 2005). In these models, academic staff are designated to advise specific cohorts of students. Advising assignment to non-faculty advisors is particularly impactful at institutions when faculty members receive little or no compensation or recognition for advising duties (Baum & Payea, 2005). Kot (2013) studied the impact of centralized advising models on students' first-year GPA and second-year retention. Data were collected from two student cohorts in which one cohort used centralized advising and one cohort did not. Students who used the centralized advising resources had higher first-year GPAs and were more likely to be retained (Kot, 2013).

Student Satisfaction

Academic advising is identified as an aspect of college that impacted a student's satisfaction (Appleton-Knapp & Krentler, 2006). Student satisfaction with academic advising services has been linked with student achievement measures of retention and graduation (Braun & Zolfagharian, 2016). The greatest long-term benefit occurred from ongoing one-on-one interactions between student and advisor throughout the duration of a student's academic path (Bailey et al., 2015).

Harrison (2009) suggested that knowledge was the most important characteristic of an effective advisor. The knowledge characteristic included an understanding of general education curriculum, specific program curriculum, various college procedures, and campus resources. Availability was identified as an important characteristic of a

good advisor by Harrison. This important characteristic included time availability for individual meeting as well as timeliness in communications via phone and email. Other responses from participants, although less commonly reported than knowledge and availability, included effectiveness in communication, moral virtue (e.g., honesty, empathy, and patience), advocacy, authenticity, accountability, and approachability (Harrison, 2009).

Two-year community college students receiving academic advising had higher success rates in developmental courses and improved their likelihood of transferring to a four-year college or university. The influence of advising was more impactful with the students in developmental courses than the better prepared students (Bahr, 2008). Bahr's (2008) framework has three components that includes student inputs, environmental characteristics of the institution, and student outputs. Student inputs include demographic information as well as academic preparedness level. The primary environmental characteristic is academic advising, and the output measures include academic performance and retention. Bahr collected data on 2,745 first-time full-time students and their use of academic advising from a centralized advising center during fall and spring terms of their freshman year. Advisors provided comprehensive services, which informed students of catalog requirements, clarified academic regulations, assisted with degree program applications, counseled students on degrees/majors, assisted with registration, and directed students to academic and student service resources. Bahr's findings indicated that students who used the advising services during their first semester had GPAs 35% higher than those students who did not use the advising services.

Students who used advising services during their second term had GPAs 22% higher than those students who did not use the advising services (Bahr, 2008).

Of concern is the increased demands that academic advisors face. Most recently, advisors will facilitate new student orientations, advise individuals and student cohorts, monitor academic progress, connect students to resources, facilitate transfer planning, coordinate career counseling, and collect and analyze student achievement data (CCCSE, 2018). Despite the volume of duties advisors face, students regularly reported advising services as a critical service that community colleges provide. CCCSE (2018) reported that 22% of students did not meet with an advisor in their first academic year. High student-advisor ratios coupled with time constraints and demands influenced students' ability to meet with advisors as well as student satisfaction with their advising experience.

Delivery of advising traditionally occurs in one-on-one in-person sessions. Group advising or cohort advising has increased in popularity due to large volume of students who need advisement. The advising cohorts are established based on students being connected due to similar attributes. For example, students would be grouped based on degree program, athletic participation, participation in a special program (e.g., learning community), first-year seminar, or other cohort attributes (Robbins, 2012). Effective advising is strategically scheduled. Advising encompasses course selection at a designated interval prior to registration points. More comprehensive advising practices, such as developmental advising and career planning, are available at times other than prescriptive advising and registration time periods, thus disconnecting career planning from academic planning (Robbins, 2012).

Career Advising

Effective initial academic advising sessions assist students to identify goals. Exploring and identifying goals occur through a process and include examining interest and abilities, exploring appropriate career areas based on interest, and assisting students with connecting interest, ability, careers, and academic programs (Gordon, 2006). This approach provides an opportunity for students to engage in critical thinking, decision making, problem solving, and strategizing, which is generally considered effective teaching (Hagen & Jordan, 2008).

Career advising and career services have become greater emphasized in academic advising as colleges have shifted based on output demands of various stakeholders, including employers, parents, boards, and governmental entities (Ledwith, 2014). Academic advising and career advising should be intertwined to provide students with relevant job and career prospect information in order to best identify degree programs and prepare a student's academic pathway plan. Effective academic advising should include aspects of career advising and academic planning. Academic planning changes are completed with a knowledge of how they will impact career goals (Ledwith, 2014). Career services staff and academic advisor's collaborative partnerships create effective structures for serving students resulting in key outcomes in which career goals and academic goals are inter-related (Gordon, 2006). Focusing on student goals provides the mechanism for career advising and academic advising units to intertwine services and practice (Bullock, Reardon, & Lenz, 2007).

Community colleges reported that 60% of their career service centers had academic advising services available. The availability of advising services in career

centers at community colleges has been rated highest compared to other higher education sectors (Bullock et al., 2007). Career services staff who were assigned to specific academic disciplines built effective synergy between academic advising and career advising (Ledwith, 2014). Effective academic advising was reported as including career components and the integration of career goals into academic advising processes (Gordon, 2006). These practices included internship coordination, referral systems with intervention and follow ups, career courses, job fairs, and other resources (Ledwith, 2014). Additionally, assessment of student readiness for academic and career goal setting impacted career and academic advising (Bullock et al., 2007). Guided resources deployed based on student readiness level assisted students in accessing appropriate services to further career and academic goal setting.

Academic Coaching

Academic coaching, like many student success initiatives, originally focused on providing support and services to underprepared students, at-risk students, or students in developmental coursework (Newman & Dickinson, 2017). Similar to other initiatives in higher education, academic coaching has expanded to larger populations of students in an effort to improve goal attainment, skill development, and access to services and support resources. Academic coaches, or student success coaches, linked traditional academic and student affairs roles at University of Minnesota Rochester (Neuhauser & Weber, 2011). Student success coaches worked closely with students, faculty, and various support services to foster student success. Coaches provided support and intervention on academic and personal related items to further student engagement, learning, and development. Student success coaches approached their work holistically, emphasized

academic engagement outside of the classroom, and connected students to support resources. Like a traditional athletic coach, the academic coach, or student success coach, was considered part encourager and part enforcer (Neuhauser & Weber, 2011).

Neuhauser and Weber (2011) emphasized that a successful student success coach model required close interactions between coach and faculty in addition to interactions between coach and student; however, these interactions should complement and not replace the interactions between student and faculty. University of Minnesota at Rochester developed a software solution to aid effectiveness in communication between faculty and academic coaches by using a series of flags and notes to communicate student concerns and achievements (Neuhauser & Weber, 2011).

The academic coaching model supports best practices in undergraduate education by providing a mechanism for prompt feedback to students. The prompt feedback provided by the academic coaching model should occur prior to the traditional midterm grade when historically students first receive feedback regarding their academic struggles. Academic coaches emphasized engagement in educationally purposeful activities and goals prior to the traditional midterm. Additionally, the coach served as an interventionist and connected students to resources to assist them with navigating through educational and personal challenges (Neuhauser & Weber, 2011).

Academic hope, defined as identifying goals in conjunction with motivation to further progress towards those goals in an attempt to follow a path to goal achievement, is an aspect academic coaching fostered and supported (Feldman, Rand, & Kahle-Wroblewski, 2009). Academic coaches foster increased levels of academic hope as students with higher levels have clear academic goals, strategies for reaching those goals,

and motivation to apply those strategies. Academic hope level is a factor influencing student achievement of goals by applying appropriate strategies despite challenges students may face (Hanson, Trujillo, & MacKinnon, 2014). Hanson, Trujillo, and MacKinnon (2014) studied two groups of students using an admission prediction model for student success. The model considered high school grade achievement with standardized test scores. One group of students was not predicted to succeed based on the quantitative admission criteria model; however, this group earned academic success in their first year with GPAs between 3.2 and 4.0. The other group of students was predicted to be successful academically in their first year based on the admission criteria model, but they were placed on academic probation after their first semester. This group of students did indeed persist into their sophomore year in good academic standing. Researchers surveyed the students using a Likert-type scale with 1 representing *Strongly Disagree* and 5 representing *Strongly Agree* to measure survey characteristics related to academic hope. Results of the surveys identified four emerging areas, which were (a) specific paths to reach academic goals and developing alternatives as necessary, (b) goal setting and planning, (c) perseverance and seeking necessary support, and (d) institutional atmosphere and utilizing academic support services (Hansen et al., 2014). Table 2 presents the relevant student engagement studies focused on academic support services.

Table 2

Concept Analysis Chart for Academic Advising

STUDY	PURPOSE	PARTICIPANTS	DESIGN/ ANALYSIS	OUTCOMES
Bahr (2008)	Examined the effect of academic advising on student attaining goals.	Cohort of 30,118 first-time freshman from California community colleges	Three level hierarchal discrete time event logistic regression.	Advising was beneficial to student success and most important for those students who were academically underprepared.
Braun & Zolfagharian (2016)	Examined student participation – satisfaction relationship in academic advising.	89 undergraduate sophomores from a public university in the southwest	Survey assessed using 12-item scale. Multiple item scales subject to exploratory factor analysis using principal component techniques and polling all data	Student satisfaction with advising related to higher levels of retention and completion.
Feldman et al. (2009)	Determined whether academic hope predicted goal attainment in college students.	162 college students	Students surveyed the first and last week of term to identify goals. ANOVA and Pearson correlation coefficient across seven goals and gender.	Participants with higher academic hope displayed higher levels of self-reported goal attainment.
Hanson et al. (2014)	Explored institutional factors that allow students to attain academic success and persist despite obstacles.	30 students at a midwestern university	Constant comparative approach to analysis of results.	Successful students were able to generate alternative pathways when encounter obstacles, utilize goal setting and planning, actively used support services, and had positive

STUDY	PURPOSE	PARTICIPANTS	DESIGN/ ANALYSIS	OUTCOMES
Harrison (2009)	Explored faculty perceptions of characteristics and function of an effective academic advisor.	27 faculty from a midwestern university	Content analysis from interviews regarding faculty perceptions of characteristics and qualities of effective advisor. Characteristics transcribed and placed in categories with number of categorical responses tallied	instructional context. Advisor knowledge and availability were the two most important characteristics of an effective advisor.

Early Academic Alert Systems

ACT recommends colleges and universities develop intervention programs that focused on four aspects to improve student achievement. First, a robust set of support services is necessary. Second, the college environment is developed with the academic and non-academic needs of the student in mind. Third, an alert or monitoring system should focus on at-risk characteristics as they impact a student's likelihood of success. Lastly, institutions should assess the cost-benefit of various student support and intervention activities (ACT, 2004). This approach allows for emphasis on support activities that are impactful, necessary, institutionalized, and sustainable.

Software solutions aid effectiveness in communication between students, faculty and academic support services personnel by using a series of alerts and notes to communicate student concerns, issues, and achievements (Neuhauser & Weber, 2011). Use of software solutions and academic alert systems is an effective higher education

practice by providing a mechanism for prompt feedback to students and those individuals who support students. Effective use of these systems allows for improved allocation and deployment of student support services, improved communication between instructors and academic support services personnel, and improved student success metrics (Neuhauser & Weber, 2011).

Several colleges and universities involved in Project DEEP (Documenting Effective Educational Practice) utilized an early academic alert or early warning system to flag and support students who are at-risk. The most effective systems incorporated progress reports and provided faculty the ability to identify students at-risk through the alert system. Additionally, faculty with advisees would receive progress surveys and could intervene or activate needed support services. Other academic/student support units would receive progress surveys or early alert information for students and could deploy their services as well. The most successful of the early alert systems at DEEP schools provided a mechanism for continuous communication, data collection, and documentation (Kuh et al., 2010).

Some institutions hire academic support coordinators as part of their academic support system to provide proactive and directed support to students, particularly students with identified risk factors. At Laidlaw College, academic support coordinators contacted students who were not performing satisfactorily and served as the liaison or intervention specialist to connect students to tutors or other resources deemed necessary (Nichols, 2010). Students completed a survey at the beginning of the term alerting academic support coordinators early to those students who needed early support. Students participated in orientation programs with supplemental instruction aspects prior

to the term to develop skills that fostered their preparation for the term. The orientations and associated activities provided another opportunity for early identification of students who may need the services of the academic support coordinators. The academic support coordinators provided regular communications to students that include reminders of the availability of services, advice, or particular events and services that may benefit a particular student (Nichols, 2010).

In summary, Booth et al. (2014) suggested that academic alert systems that used innovations enhanced communication among students, faculty, and academic support services personnel. In addition, academic alert systems that monitored academic progress of students and identified or included risk factors as part of the system allowed for effective interventions and services to be deployed to aid the students (Booth et al., 2014).

Supplemental Instruction

Supplemental instruction historically was developed to target developmental courses with poor success rates. The focus was on additional study sessions, instruction, and often contained specific course guidelines for cohorts of students in the respective course (Dawson, Van derMeer, Skalicky, & Cowley, 2014). Supplemental instruction gave students the opportunity to engage in course content outside of traditional classroom instruction and setting.

Academic resource centers, or learning assistance centers, appear on most campuses, and they were originally created to support students in developmental education through supplemental instruction; however, they now deliver services and support for all students in an effort to improve student success (Truschel & Reedy, 2009).

Academic resource centers provide students with foundational skills, connected students with services, and foster collaboration with other students, faculty, and campus partners (Newman & Dickinson, 2017). Additionally, the supplemental instruction that academic resource centers provide has been linked to improved success of students in developmental coursework (Booth et al., 2014). Best practices identified by Newman and Dickinson (2017) emphasized providing students with foundational support for their classes, connecting students, and providing support and common spaces to meet students' needs in a collaborative environment.

Foundational skills that are usually delivered by academic resource centers focus on reading, English, and mathematics traditionally. These skills are developed and supported through workshops, tutoring, and developmental course labs or other forms of supplemental instruction. The most comprehensive academic resource centers expand well beyond the traditional delivery of foundational skills to students and now provide support for courses across a multitude of disciplines beyond the traditional reading, English, and mathematics. Academic resource centers also provided technology support, testing services, career resources, academic coaching, and various cohort specific activities (Newman & Dickinson, 2017). Cohort specific activities include first-year experience programs, activities for first-generation students, military veteran programs or activities, and services for other special populations (Newman & Dickinson, 2017).

Academic resource centers frequently provide services and resources across all student populations, regardless of academic preparedness, degree program, or other characteristics. Students are expected to be able to access resources and services no matter discipline, course, or delivery mode. Modality of delivery has become an issue of

heightened awareness for many academic resource centers as student population trends have shifted from traditional face-to-face settings to online and hybrid delivery environments (Newman & Dickinson, 2017). As a result of increased usage of academic resource centers by a growing student population, many academic resource centers have embraced strategies to stretch their reach and impact. Recent evolutions of centers have responded to the shifts in delivery mode from traditional face-to-face formats to hybrid and online modes by providing technological assistance and delivering services using online and video-conferencing tools, such as webcams and other software solutions. Examples include offering group tutoring and study sessions instead of the traditional one-on-one delivery. Group supplemental instruction for high risk courses to student cohorts at prearranged times is more impactful than delivering the same content in an individualized appointment (Newman & Dickinson, 2017). Group supplemental instruction is another example of an innovative approach that builds student connections in addition to academic skill development (Booth et al., 2014).

Developmental Students

At community colleges, or two-year colleges, a large percentage of the student populations take classes below the college level and are considered developmental students (Wurtz, 2015). Developmental students are least likely to reach their educational goals. In an effort to improve the success rates of developmental students, Wurtz (2015) conducted a study of the effectiveness of learning assistance centers on course success and next-term persistence. Learning assistance centers are defined by Arendale (2007) as a location on the campus that provides organized academic enhancement activities, such as tutoring and skills assistance, over a wide arrange of

academic disciplines. These centers provide opportunities for students to engage in meaningful educational activities outside of the classroom. Meaningful activities include tutoring, study skill workshops, and specific support activities for classroom instruction (Arendale, 2007).

In Wurtz's (2015) study, the researcher was able to control for instructor, day and times of classes, and prior GPA. Only 44% of students utilized the learning assistance centers. Of those students who did utilize the centers, 65% were female, and those students over the age of 20 were less likely to use the facility than their younger counterparts. Students who utilized the learning assistance centers were three times more likely to be successful in their respective course and two times more likely to persist to the next term than students who did not utilize the learning assistance centers in the same courses. Wurtz noted that prior skill level (e.g., GPA) and motivation had an impact on student success rates; however, the utilization of learning assistance centers had a larger effect on persistence and success than both prior skill level and motivation. Wurtz concluded that requiring developmental students to use learning resource centers was essential to improving student persistence and success rates.

In a study by Bremer et al. (2013), students taking developmental coursework revealed that those students who engaged in the use of tutoring were more likely to persist successfully into the second term and to be retained into the second year. In the study, the usage of tutoring services resulted in higher term GPAs, cumulative GPAs, and retention rates. Additional examination indicated that students using tutoring services had better retention rates into the second term and second year if they were enrolled in additional coursework that was non-developmental (Bremer et al., 2013).

Incentive programs used to engage students, particularly at-risk students, in academic support services improved their academic success (Potacco, Chen, Desroches, Chisholm, & De Young, 2013). Rewards and motivation research support the notion that rewards for performance of an activity enhance the likelihood of the student engaging in the activity and increase positive motivation and performance. The theoretical framework established by Potacco et al. (2013) suggested that rewards foster motivation, which can lead to improved performance and a competency that resulted in a self-efficacy that was looped back to fostering motivation. Students were issued a coupon for exam points for attending and participating in the supplemental instruction activities of study groups and tutoring. Coupons were good for one exam point with no more than six total points (up to 6% for a total exam value of 106%) were ever awarded for an exam. Each study group tutorial session was over one-hour in length. Potacco et al. concluded that reward programs successfully motivated students, improved their use of academic support services, and improved their academic outcomes. The reward system was effective for at-risk students in courses that were considered high risk (Potacco et al., 2013).

In summary, academic resource centers that provide supplemental instruction have become increasingly vital to institutions as they bridge the preparedness gap of students between high school and their college level coursework (Adams, Hayes, Dekkers, Elliot, & Atherton, 2012). The centers provide dedicated study space, skill development, practice sessions, workshops, tutoring, and learning opportunity to students attempting to bridge the gaps of their prior learning. Additionally, centers aid students with extending their knowledge to more complex concepts. Students can experience

growth through directed, guided, or self-paced formats. Support services tend to be technology enhanced and utilize assessments to identify background knowledge that students possess and their preferred learning styles. Effective learning centers connect students to their services either by faculty referral or student self-referral and use individual or group modes for delivering services to students (Adams et al., 2012).

Student-Athletes

Studies of student engagement have been widely published for nearly two decades. Definitions of student engagement focus on the time and effort students spend in meaningful educational activities that are connected to the desired goals of higher education, and what colleges and universities do to foster students' participation in meaningful activities (Kuh et al., 2010). The interest in student engagement occurred as significant connections between student learning and student engagement levels were published (Pascarella & Terenzini, 2006). Additional research activity concluded student engagement in meaningful educational activities both inside and outside of the classroom was a predictor of student learning. Engagement by students in activities, such as academic advising, faculty mentoring, academic alert systems, and supplemental instruction activities, can influence academic success measures of retention and graduation (Kuh et al., 2006).

One qualitative study by Levine, Etchison, and Oppenheimer (2014) identified the time demands of sport as significant barriers to student-athlete engagement in meaningful educational activities and perceptions regarding academic support services available to student-athletes (Levine et al., 2014). Additional findings regarding faculty perceptions

included student-athletes lacked academic preparation and had lower expectations for academic success (Levine et al., 2014).

A study conducted by Woods et al. (2018) examined student-athletes' engagement, challenge academically, learning preferences, and faculty interactions. The study focused on African American male student-athletes enrolled at four-year colleges participating in intercollegiate athletics governed by the NCAA and the National Association of Intercollegiate Athletics (NAIA) organizations. The researchers reported that student-athletes experienced differences in academic challenge depending on their level of athletic participation whether it be Division 1, Division 2, or Division 3. Differences between support resources and support systems for student-athletes were significant between divisions as well with NCAA Division 3 student-athletes experiencing greater academic challenge along with the most academic support resources and systems available (Woods et al., 2018).

Student-athletes' experiences in higher education, and particularly their academic outcomes, has concerned researchers. Gayles and Hu (2009) examined the influence of student engagement and sport participation in college outcomes among Division 1 student-athletes. The researchers assessed student engagement in meaningful educational activities inside and outside of the classroom, student-athlete perceptions of their educational atmosphere, as well as relationships and connections with students and faculty. In this study, background, demographics, and characteristics were not significant influences on the student-athletes' academic outcome; however, engagement in meaningful educational activities, both inside and outside the classroom, had a positive impact on student-athlete learning outcomes. Lastly, student-athlete academic outcomes

were influenced by which sport the student-athlete participated (Gayles & Hu, 2009).

Table 3 displays the relevant engagement studies focused on student-athletes.

Table 3

Concept Analysis Chart for Student Engagement with Student-Athletes

STUDY	PURPOSE	PARTICIPANTS	DESIGN/ANALYSIS	OUTCOMES
Gayles & Huh (2009)	Examined impact of sport participation on student engagement and learning outcomes.	410 Freshman student-athletes from NCAA institutions	Survey using exploratory factor analysis and multiple regression analysis for background characteristics and engagement variables.	High profile sports had lower engagement levels. Gender and profile of sport were significant factors related to engagement levels.
Woods et al. (2018)	Examined whether a significant difference exists in three levels of student engagement of male African-American student-athletes by level of athletic competition organization.	1,339 male African American student-athletes from NCAA Division 1, 2, 3, and NAIA institutions	Quantitative analysis methods of means and standard deviations for each variable and correlations calculated to determine relationships between variables using a MANOVA.	A significant difference existed in academic challenge with NCAA Division 3 having best support mechanisms to support student success.

Summary

Higher education institutions are charged to recruit, retain, and graduate students at higher rates compared to previous years (Kinser & Hill, 2011). Effective engagement efforts have been found to influence student achievement and learning, which could

impact student academic success metrics positively (Kuh, 2007). Engaging students who are at-risk provides opportunities for academic success. These opportunities include academic advising, supplemental instruction, and early alert programs (Bailey et al., 2015). Intercollegiate athletics were added to community colleges to further engage their students. Two-year intercollegiate athletic programs attract student-athletes who are underprepared for college (CCCSE, 2016) and have to balance athletics and academics (Kulics et al., 2015). Two-year college student-athletes should be provided with opportunities for engagement and support, which are critical to academic success. The purpose of the study was to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes in Florida.

CHAPTER III

METHODOLOGY

A problem exists with the lack of academic success of student-athletes at two-year colleges as measured by their retention, progression, and graduation. Many factors contribute to the lack of academic success of student-athletes, including the availability of academic support services, the usage of academic support services, and the perceived impact of academic support services. The purpose of the study was to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes in Florida. The independent variable was defined as the groups of survey participants (i.e., student-athletes, academic support services personnel, and athletic department personnel). The dependent variables were defined as the perceived frequency of usage and perceived greatest impact on the academic success of two-year college student-athletes. This chapter outlines the research design, participants, instrumentation, data collection, and data analysis for the proposed study.

Research Design

In order to address the research questions of the study, a causal-comparative, or ex post facto, research design was conducted via an online survey of selected Florida colleges that offer two-year college intercollegiate athletics and participated in the NJCAA. The causal-comparative design is advantageous for studying research relationships in situations where manipulation of variables is not possible. The research design is advantageous in research scenarios where the causes are studied after the event

has occurred. In this study, the data were gathered from group participants regarding their beliefs about usage and impact of academic support services by two-year college student-athletes, and the independent variable (i.e., participant group) was not manipulated. A disadvantage of this research design is the difficulty in establishing causality (Gravetter & Wallnau, 2017). The following research questions were answered during this study.

1. What are the differences in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel?

H_o: There is not a statistically significant difference in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel.

H_a: There is a statistically significant difference in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel.

2. What academic support service has the greatest perceived impact on the academic success of two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel?

The survey method is deemed appropriate to measure behaviors, opinions, and beliefs of a sample target population regarding the particular topic. A survey provides the researcher with the opportunity to describe the characteristics of a research population

broadly and accurately in an effort to analyze the results and to inform future research (Dillman, Smyth, & Christian, 2014). Additionally, accessing the selected participants of the study is more efficient via the survey method as opposed to a qualitative interview method, particularly when administering the survey electronically. A survey can use a tailored design method to reduce survey error by using a customized survey based on the knowledge of the survey sponsor, survey topic, survey participants, and other factors (e.g., time) to complete survey (Dillman et al., 2014). The survey measure for this study was customized based on the literature, characteristics of the target population, and possible academic support services available at two-year colleges.

Role of the Researcher

The researcher had established professional relationships with potential participants for the study by working at the same college or within the same Florida College System; however, the researcher did not have an immediate supervisory position over any of the potential participants. The study was important to the researcher, who is a former two-year college student-athlete, a former two-year college coach, a former two-year college faculty member, a former two-year college athletic director, and a current two-year college academic administrator. The beliefs of the researcher that may have impacted the study include the researcher's perceived value of intercollegiate athletic opportunities at two-year colleges. The researcher believes two-year college athletics provides an access point to higher education for students who may not otherwise seek out the opportunity or have adequate access for a college education. Additionally, the researcher believes that comprehensive academic support services are essential aspects

that are needed to provide students with the resources and services that they may need to be successful academically.

Participants

The target population for this study was student-athletes, athletic department personnel, and academic support services personnel at 36 two-year colleges in Florida that had intercollegiate athletic programs governed by the NJCAA. The NJCAA was selected because it serves as the largest governing organization of two-year college athletics, which ensured consistent academic eligibility standards for student-athletes. The sample participants were student-athletes, athletic department personnel, and academic support services personnel at three selected two-year colleges in Florida that had their intercollegiate athletic program governed by the NJCAA (i.e., College A, College B, and College C). These colleges were selected because of professional relationships that had been established with these institutions that allowed for effective access to the survey participants.

College A was established in 1957 and served approximately 11,000 college credit students annually and another 14,000 students in non-credit classes. Originally established as a junior college, College A received state college status in 2009 as it began to offer bachelor's degrees. Athletically, College A was a member of the NJCAA and competed in five sports (i.e., men's basketball, baseball, softball, women's tennis, and volleyball; About SCF, 2020).

College B, originally established in 1961, served over 22,000 students per year. Established as a junior college, College B received state college status in 2005 with the initial offering of bachelor's degrees. College B student-athletes competed in the

NJCAA in five sports (i.e., men's basketball, women's basketball, baseball, softball, and volleyball; Florida Southwestern State College Quick Facts, 2020).

College C was established in 1957. Originally a junior college by name, it transitioned to a community college and then finally to a state college in 2008 to reflect the transition with the awarding of bachelor's degrees. College C athletics team participated in the NJCAA competitions and offered ten sports (i.e., men's basketball, women's basketball, baseball, softball, women's tennis, volleyball, men's soccer, women's soccer, cross country, and women's golf; Discover Daytona State College, 2020).

The student-athletes were eligible to be on a team roster according to NJCAA eligibility guidelines and had completed at least one semester at the two-year college (NJCAA, 2018). Athletic department personnel consisted of employees in the athletic department who had regular interactions with student-athletes in the capacity of coach, assistant coach, or athletic administrator. Academic support services personnel were institutional employees serving in the capacity as tutor, academic advisor, student success coordinator, supplemental instruction staff, academic lab support staff, or staff from a similar academic support service area. Any student-athlete who was under the age of 18 years was excluded from participating in the study.

Convenience sampling was used to recruit participants (Hays & Singh, 2012). To recruit participants, the researcher contacted a lead administrator by email in the athletic department and academic support services at the selected two-year colleges using their online directory information. Once contact was made, the purpose of the study was explained, and participation was requested. After obtaining permission from the lead

administrator, the researcher requested access to the student-athletes, athletic department personnel, and academic support services personnel at each institution to administer the survey.

Instrumentation

The measure for this study was administered using a web-based survey tool. The instrument was developed by the researcher based on the literature, characteristics of the target population, and possible academic support services available at two-year colleges. The initial draft of the measure was developed following conferences with athletic department personnel, faculty, and academic support services personnel at a two-year college, which was part of the target population. Three versions of the measures were created for each of the participant groups, which included student-athletes (see Appendix A), athletic department personnel (see Appendix B), and academic support services personnel (see Appendix C).

Face validity was established to ensure the survey assessed perceived frequency of use of academic support services used by two-year college student-athletes (Gravetter & Wallnau, 2017). To determine face validity, the researcher provided a copy of the survey to an academic advisor, an academic department staff member, and a staff member who worked at a tutoring center from a two-year college where student-athletes competed in NJCAA competitions. In August 2019, the three practitioners were asked to review the individual items independently. After their independent reviews, feedback was given to the researcher regarding how to improve the measure. The primary area of concern was the lack of definitions within the measures. The reviewers felt the student-athletes would need definitions for key terms to ensure understanding. The terms

suggested to be further explained or defined in the student-athlete survey were “academic progress surveys/early alert systems” as well as “professional staff”. The reviewers suggested that student-athletes may best understand “academic progress surveys/early alert systems” to be also known as grade/attendance checks. Another suggestion was the term, “professional staff” under advising to be described as staff who are located in an advising center and not staff who may be found in an academic department.

The 11-item survey allowed participants to provide responses pertaining to various categories of academic support services, specifically academic advising with faculty, academic advising with professional staff, academic alert systems, tutoring, and other academic support services. The following descriptions defined the four major categories.

- *Academic Advising with Faculty* – Participants responded to the availability of academic advising with faculty, the frequency of use of academic advising with faculty, and the perceived impact of academic advising with faculty on student-athlete academic success.
- *Academic Advising with Professional Staff* – Participants responded to the availability of academic advising with professional staff, the frequency of use of academic advising with professional staff, and the perceived impact of academic advising with professional staff on student-athlete academic success.
- *Academic Progress Survey/Academic Alert System* – Participants responded to the availability of an academic alert system or academic progress survey, the frequency of use of the academic alert system or academic progress survey, and

the perceived impact of academic alert system or academic progress survey on student-athlete academic success.

- *Tutoring* - Participants responded to the availability of tutoring, the frequency of use of tutoring, and the perceived impact of tutoring on student-athlete academic success.

Each of these categories provided participants an opportunity to respond to the availability of services, frequency of service use, most used service, and perceived greatest impact of the service on student-athlete academic success with eight items. Frequency was measured using a six-point response scale (i.e., daily, weekly, every 2 to 3 weeks, every 4 to 6 weeks, once or twice per semester, and not at all). Availability of services, most used service, and perceived greatest impact was measured using a list of five specific services (i.e., academic advising with faculty, academic advising with professional staff, academic alert systems, tutoring, and other academic support services). Reliability analyses was not conducted given the variables were not grouped into scales (Nunnally, 1978). Three open-ended items were added for participants to list 1) other academic support services that were utilized, 2) other academic support services that were not utilized, and 3) academic support services that were missing from the institution but could be beneficial for the academic success of two-year college student-athletes.

Data Collection

Each survey measure was created using a web-based survey tool. Prior to administering the survey, the researcher obtained Institutional Review Board (IRB) approval from Columbus State University (see Appendix D). Following IRB approval, the researcher contacted lead administrators in the athletic department, academic support

services, and academic affairs at the selected two-year colleges using their online directory information. Once contact was made, the purpose of the study was explained, and participation was requested. After obtaining permission from the lead administrator, the researcher requested access to the student-athletes, athletic department personnel, and academic support services personnel at each institution to complete the survey.

The researcher sent a recruitment email to the potential participants (i.e., student-athletes, athletic department personnel, and academic support services personnel). The communication introduced the study, included a request for participation, and the anonymous survey link. See Appendix E for the recruitment email. The first page of the web-based survey included the informed consent found in Appendix F. The participants were not able to move forward in the survey without agreeing to participate in the study. After the participants agreed to participate in the survey, they were to complete the 11-item survey. Upon completion of the survey, participants received an acknowledgement indicating their survey results had been recorded. The duration of survey completion was less than 10 minutes. A follow-up recruitment email was sent to potential participants approximately two weeks after the initial recruitment email was sent, which is located in Appendix G. A third recruitment email was sent to potential participants approximately two weeks after the follow-up recruitment email was sent, which is located in Appendix H. The participants were not given any compensation or incentives to participate in this study.

The researcher ensured the participants' confidentiality by using a password-protected computer in the researcher's office to store the electronic files. The raw data will be stored on the researcher's office computer for 5 years after the publishing of the

dissertation. After that date, all electronic files will be deleted permanently from the researcher's computer hard drive.

Data Analysis

The data from each survey were downloaded into an Excel file, and the three datasets were merged into one dataset that was uploaded into SPSS Standard GradPack 25 Statistics software for data analysis. Prior to merging, the individual cases from the three datasets (i.e., student-athletes, athletic department personnel, and academic support services personnel) were coded to indicate the participant group category with 1 representing *academic support services personnel*, 2 representing *athletic department personnel*, and 3 representing *student-athletes*.

The downloaded data were screened for any missing data. If more than 20% of the values were missing, the case was removed from the data analysis (Enders, 2003). After cleaning the data, the researcher removed any identifying information from the dataset, such as IP addresses. The variables within the de-identified dataset were dummy coded. Dummy coding is a series of numbers to transform nominal data into numeric data for data analysis (Salkind, 2010). Table 4 presents the dummy coding for each closed-ended survey item.

Table 4

Dummy Coding for Closed-Ended Survey Items

Item	Responses	Dummy Coding
What activities or academic support services are available to student-athletes at your institution? (Check all that apply.)	a) Academic advising with faculty b) Academic advising with professional staff c) Academic progress survey/early alert system d) Tutoring	Yes = 1 No = 0
How frequently do student-athletes at your institution use academic advising with faculty?	a) Daily b) Weekly c) Every 2 to 3 weeks d) Every 4 to 6 weeks e) Once or twice per semester f) Not at all	A = 5 B = 4 C = 3 D = 2 E = 1 F = 0
How frequently do student-athletes at your institution use academic advising with professional staff?	a) Daily b) Weekly c) Every 2 to 3 weeks d) Every 4 to 6 weeks e) Once or twice per semester f) Not at all	A = 5 B = 4 C = 3 D = 2 E = 1 F = 0
How frequently do student-athletes at your institution use an academic progress survey/early alert system?	a) Daily b) Weekly c) Every 2 to 3 weeks d) Every 4 to 6 weeks e) Once or twice per semester f) Not at all	A = 5 B = 4 C = 3 D = 2 E = 1 F = 0
How frequently do student-athletes at your institution use tutoring?	a) Daily b) Weekly c) Every 2 to 3 weeks d) Every 4 to 6 weeks e) Once or twice per semester f) Not at all	A = 5 B = 4 C = 3 D = 2 E = 1 F = 0
How frequently do student-athletes at your institution use other academic support services listed in item 6?	a) Daily b) Weekly c) Every 2 to 3 weeks	A = 5 B = 4 C = 3

Item	Responses	Dummy Coding
	d) Every 4 to 6 weeks	D = 2
	e) Once or twice per semester	E = 1 F = 0
	f) Not at all	
What activities or academic support services do student-athletes at your institution use the most?	a) Academic advising with faculty	
	b) Academic advising with professional staff	A = 1 B = 2
	c) Academic progress survey/early alert system	C = 3 D = 4 E = 5
	d) Tutoring	
	e) Other academic support services	
Which academic support service has the greatest impact on the academic success of student-athletes at your institution?	a) Academic advising with faculty	
	b) Academic advising with professional staff	A = 1 B = 2
	c) Academic progress survey/early alert system	C = 3 D = 4 E = 5
	d) Tutoring	
	e) Other academic support services	

For Research Question 1, descriptive statistics were conducted for each item related to advising by faculty, advising by professional staff, academic progress surveys/early alert systems, tutoring, and other academic support services by participant group (i.e., student-athletes, academic support services personnel, and athletic department personnel). The summarized data were presented in table format. An ANOVA was used to analyze the differences in perceived frequency usage for each academic support service category among the participant groups (i.e., student-athletes, athletic department personnel, and academic support services personnel). The ANOVA allowed the researcher to compare the group means (Gravetter & Wallnau, 2017). Post hoc tests were

completed for categorical groups if statistically significant differences were found. For the responses for other academic support services that were utilized, the researcher conducted frequencies. The frequency summaries were presented by group in table format. For Research Question 2, a frequency distribution of the academic support service that had the greatest perceived impact was generated by participant group (i.e., student-athletes, athletic department personnel, and academic support services personnel). The frequencies were presented by group in a table.

Summary

If two-year colleges are going to offer intercollegiate athletic programs, then college officials should commit to providing the opportunities for these students to succeed academically. This study surveyed student-athletes, athletic department personnel, and academic support services personnel to gain insight into the availability of academic support resources, usage of academic support services, and perceived impact of academic support services on the academic success of student-athletes. The survey was distributed to student-athletes, academic support services personnel, and athletic department personnel at three selected two-year colleges in Florida that competed in the NJCAA. The survey data were analyzed with descriptive statistics to summarize the data and ANOVAs to determine if group differences existed.

CHAPTER IV

RESULTS

A problem in higher education is the lack of academic success of student-athletes at two-year colleges as measured by their retention, progression, and graduation. Many factors contribute to the poor academic success of two-year college student-athletes. These factors include the availability of academic support services, the usage of academic support services, and the perceived impact of academic support services. The study's purpose was to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes in Florida. The researcher surveyed student-athletes, athletic department personnel, and academic support services personnel at two-year colleges to gain insight into the perceived usage of academic support services and perceived impact of academic support services on the academic success of student-athletes. The survey was distributed to student-athletes, academic support services personnel, and athletic department personnel at selected two-year colleges participating in athletic competition with the NJCAA. The survey data were analyzed with descriptive statistics and ANOVA to determine if group differences existed.

Participants

The target population of the study was student-athletes, athletic department personnel, and academic support services personnel at two-year colleges in Florida that had intercollegiate athletic programs governed by the NJCAA. The NJCAA was selected because nationally it serves as the largest governing organization of two-year college

athletics, which ensured consistent academic eligibility standards for student-athletes. The sample participants were student-athletes, athletic department personnel, and academic support services personnel at three selected two-year colleges in Florida with their intercollegiate athletic program governed by the NJCAA (i.e., College A, College B, and College C). These colleges were selected because of professional relationships that had been established with these institutions that allowed for access to the survey participants.

Survey participants in each group (i.e., student-athletes, athletic department personnel, and academic support services personnel) were recruited to participate in the survey through email. Student-athletes were selected as the researcher sought to add to the information available that informs practices and services available to improve student-athlete academic success. Athletic department personnel were selected to participate in the survey because they often are aware of student-athletes academic success due to the amount of time they may spend with student-athletes during practices, games, and travel as well as have an awareness and understanding of the unique demands that student-athletes may face, maintain academic eligibility to compete in athletics as well as balancing the various athlete-related physical, mental, and time demands of practice and competition. Academic support services personnel were selected to participate due to their involvement in the various academic services that are available and used by student-athletes to support their academic success.

Survey recruitment emails and reminders were sent over five weeks on January 31, February 19, and March 5, 2020. Participants completed the survey at their convenience, and the responses were captured electronically using a web-based survey

tool. The researcher assessed the characteristics of the sample. The largest segment within the sample were student-athletes ($n = 42$; 62%). Academic support services personnel ($n = 13$; 19%) and athletic department personnel ($n = 13$; 19%) made up the remainder of the sample. All cases of responses were used in the data analysis.

Findings

This study sought to answer the following research questions:

1. What are the differences in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel?

H_o: There is not a statistically significant difference in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel.

H_a: There is a statistically significant difference in beliefs regarding frequency of usage of academic support services by two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel.

2. What academic support service has the greatest perceived impact on the academic success of two-year college student-athletes among student-athletes, athletic department personnel, and academic support services personnel?

Research Question 1

To answer Research Question 1, descriptive statistics and frequency counts were conducted for each item related to advising by faculty, advising by professional staff, academic progress surveys/early alert systems, tutoring, and other academic support services by participant group (i.e., student-athletes, academic support services personnel, and athletic department personnel). An ANOVA was used to analyze the differences in perceived frequency usage for each academic support service category among the participant groups (i.e., student-athletes, athletic department personnel, and academic support services personnel). The ANOVA allowed the researcher to compare the group means (Gravetter & Wallnau, 2017).

Availability of academic support service/activity. Four questions asked respondents to indicate whether or not a specific academic support service/activity (i.e., academic advising with faculty, academic advising with professional staff, academic early alert system, and tutoring) was available at their institution. Among all respondents, 91.2% reported that academic advising with the professional staff was available. Academic support services personnel ($n = 5$; 38.5%) and the student-athletes ($n = 11$; 26.2%) reported to be unaware of academic early alert systems. Table 5 displays the frequencies and percentages for academic support service/activity availability by group.

Table 5

Frequencies and Percentages for Academic Support Service/Activity Availability by Group

Group	<i>n</i>	Academic Advising with Faculty	Academic Advising with Professional Staff	Academic Early Alert System	Tutoring
Academic Support Services Personnel	13	10 (76.9%)	12 (92.3%)	8 (61.5%)	12 (92.3%)
Athletic Department Personnel	13	10 (76.9%)	13 (100.0%)	12 (92.3%)	13 (100.0%)
Student-Athletes	42	33 (78.6%)	37 (88.1%)	31 (73.8%)	35 (83.3%)
Total	68	53 (77.9%)	62 (91.2%)	51 (75.0%)	60 (88.2%)

Frequency of use by academic support service/activity. Survey respondents reported perceived frequency of use for each academic support service/activity using a six-point scale with 5 representing *Daily*, 4 representing *Weekly*, 3 representing *Every Two to Three Weeks*, 2 representing *Every Four to Six Weeks*, 1 representing *Once or Twice per Semester*, and 0 representing *Not At All*. A series of descriptive and frequency counts was conducted to summarize the data. The data indicated that respondents perceived differing usage levels for each type of academic support service and activity. The academic support services respondents reported that student-athletes at their institutions used academic advising with professional staff ($n = 9$; 69.2%) and with faculty ($n = 7$; 53.8%) once or twice per semester. For the student-athlete respondents, they reported that student-athletes at their institutions used academic advising with professional staff ($n = 13$; 31.0%) and with faculty ($n = 12$; 28.6%). When asked about the perceived frequency of use of tutoring by student-athletes, the academic support

services respondents reported weekly usage ($n = 6$; 46.2%), athletic department personnel reported weekly usage ($n = 7$; 53.8%, and student-athletes reported weekly usage ($n = 10$; 23.8%).

Based on the responses from all three groups, the average student-athlete utilized academic advising with either faculty or professional staff every four to six weeks. The perceived usage for academic early alert systems was slightly higher and approached every two to three weeks. For tutoring usage, academic support services respondents and athletic department respondents perceived that student-athletes utilized tutoring every two to three weeks; however, the student-athlete respondents reported the perceived usage of these services as closer to four to six weeks. Table 6 presents the descriptive statistics for frequency of use of academic support services/activities by group.

Table 6

Descriptive Statistics for Frequency of Use of Academic Support Services/Activities by Group

Service	Group	<i>min</i>	<i>max</i>	<i>M</i>	<i>SD</i>
Academic Advising with Faculty	Academic Support Services Personnel	0.00	4.00	1.46	1.51
	Athletic Department Personnel	0.00	5.00	1.46	1.81
	Student-Athletes	0.00	5.00	2.29	1.55
	Total	0.00	5.00	1.97	1.62
Academic Advising with Professional Staff	Academic Support Services Personnel	1.00	5.00	1.85	1.41
	Athletic Department Personnel	0.00	4.00	1.77	1.42
	Student-Athletes	0.00	4.00	1.93	1.54

Service	Group	<i>min</i>	<i>max</i>	<i>M</i>	<i>SD</i>
	Total	0.00	5.00	1.88	1.47
Academic Alert System	Academic Support Services Personnel	0.00	5.00	1.92	1.51
	Athletic Department Personnel	0.00	5.00	2.54	1.33
	Student-Athletes	0.00	5.00	2.21	1.57
	Total	0.00	5.00	2.22	1.51
Tutoring	Academic Support Services Personnel	0.00	5.00	3.08	1.44
	Athletic Department Personnel	1.00	5.00	2.92	1.61
	Student-Athletes	0.00	5.00	2.05	1.70
	Total	0.00	5.00	2.41	1.68

The researcher conducted a Levene's Test of Homogeneity of Variance to determine if the assumption of equal variance was met. All results were not statistically significant ($p > .05$), which are presented in Table 7.

Table 7

Results for Levene's Test of Homogeneity of Variance

	<i>F</i>	<i>df</i>	<i>p</i>
Academic Advising with Faculty	0.54	2, 65	.59
Academic Advising with Professionals	0.83	2, 65	.44
Academic Progress Survey/Early Alert	0.76	2, 64	.47
Tutoring	2.31	2, 65	.11

A series of one-way ANOVAs was conducted to answer Research Question 1. The results indicated that there were no significant differences in beliefs regarding the perceived frequency with which student-athletes used the academic support services and

activities assessed in this survey (See Table 8). The lack of significance within the tests did not provide support for the researcher to reject the null hypothesis, and as such the researcher failed to reject the null hypothesis. Given the results were not statistically significant, post hoc analyses were not needed.

Table 8

ANOVA Results by Academic Support Service/Activity

	<i>F</i>	<i>df</i>	<i>p</i>
Academic Advising with Faculty	2.148	2, 65	.125
Academic Advising with Professionals	0.061	2, 65	.941
Academic Progress Survey/Early Alert	0.527	2, 64	.593
Tutoring	2.753	2, 65	.071

Other academic support services/activities used at institution. A series of frequency counts was conducted to summarize the responses by group for the usage of the library, academic support centers, and specific people by student-athletes at their institutions. Most respondents reported that student-athletes used either the academic support center or a specific center on their campus for academic support services ($n = 25$; 36.8%). The library ($n = 21$; 30.9%) was the academic support service/activity that appeared second most frequently within the results (43%). Table 9 displays the frequencies and percentages for the use of other academic support services by group.

Table 9

Frequencies and Percentages for the Use of Other Academic Support Services by Group

Group	<i>n</i>	Academic		
		Library	Support Center	Person
Academic Support Services Personnel	13	3 (23.1%)	1 (7.7%)	1 (7.7%)
Athletic Department Personnel	13	2 (15.2%)	7 (53.8%)	4 (30.8%)
Student-Athletes	42	16 (38.1%)	17 (40.5%)	3 (7.1%)
Total	68	21 (30.9%)	25 (36.8%)	8 (11.8%)

Research Question 2

To answer Research Question 2, the researcher asked respondents to select the activity or academic support service that they believed had the greatest impact on the academic success of student-athletes at their institution. A frequency count was conducted to summarize the responses. Tutoring was selected by the academic support services respondents ($n = 7$; 53.8%), the athletic department respondents ($n = 8$; 61.5%), and the student-athlete respondents ($n = 18$; 42.9%). The academic support services respondents ($n = 5$; 38.5%) and student-athlete respondents ($n = 7$; 16.7%) also indicated that academic advising with professional staff had the greatest perceived impact on the academic success of student-athletes. Table 10 displays the frequencies and percentages for the academic support services with the greatest perceived impact by group.

Table 10

Frequencies and Percentages for the Academic Support Services with the Greatest Perceived Impact by Group

Group	<i>n</i>	Academic Advising with Faculty	Academic Advising with Professional Staff	Academic Early Alert System	Tutoring	Other Academic Support Services
Academic Support Services Personnel	13	0 (0.0%)	5 (38.5%)	0 (0.0%)	7 (53.8%)	1 (7%)
Athletic Department Personnel	13	0 (0.0%)	1 (7.7%)	1 (7.7%)	8 (66.7%)	2 (16.7%)
Student-Athletes	42	7 (16.7%)	7 (16.7%)	5 (11.9%)	18 (42.9%)	5 (11.9%)
Total	68	7 (10.4%)	13 (19.4%)	6 (9.0%)	33 (49.3%)	8 (11/9%)

Summary

The purpose of the study was to examine the perceived frequency of usage and impact of academic support services by two-year college student-athletes. A survey was sent to three groups of survey participants, which included student-athletes, academic support services personnel, and athletic department personnel. The survey results were analyzed using descriptive statistics, frequencies, and ANOVAs. The ANOVA results were not statistically significant, meaning all three groups had similar beliefs regarding the academic support services/activities offered at their institutions. Furthermore, results indicated that academic support services might not be as widely or as frequently used to have the greatest impact on the academic success of two-year college student-athletes as measured by their retention, progression, and graduation. Chapter V will contain the analysis of these findings and the connections with the literature in Chapter II.

CHAPTER V

DISCUSSION

Summary of the Study

Higher education leaders have emphasized student engagement initiatives to improve retention and graduation (Kuh, 2009). For various reasons, such as academic underpreparedness, location, cost, or otherwise, community colleges often are the only option for access to higher education. At-risk students, who tend to enroll at community colleges, should receive targeted assistance in advising, tutoring, supplemental instruction, and intervention (Krause, 2005). According to Coates (2007) and Horton (2010), risk factors for students include part-time attendance, older students, economically disadvantaged students, underprepared students, minorities, and students with disabilities. Many institutions seek to increase accessibility to higher education and student engagement through athletics (Horton, 2010).

The lack of academic success of two-year college student-athletes as measured by their retention, progression, and graduation is an issue higher education must address. During the 2016-2017 academic year, the retention rate at four-year public institutions was 81% while the retention rate at two-year public institutions was 62%. The graduation rate at 150% time for four-year public colleges was 60% while the graduation rate at two-year public colleges was 25% (McFarland et al., 2019). Two-year college student-athletes, a subset of the general student population, have not been widely studied. By

improving the academic success of this unique student population, the overall success of the general student population could improve.

The purpose of the study was to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes. The independent variable was defined as the groups of survey participants (i.e., student-athletes, academic support services personnel, and athletic department personnel). The dependent variables were defined as the perceived frequency of usage and perceived greatest impact on the academic success of two-year college student-athletes.

The study was a causal-comparative design, using a survey conducted at three two-year colleges that offered intercollegiate athletics and participated in the NJCAA. Recruitment emails were sent to student-athletes, academic support services personnel, and athletic department personnel at each institution. The recruitment email included an introduction of the study, a request for participation, survey instructions, and the survey questions. Participants provided responses pertaining to various categories of academic support services, including academic advising by faculty and professional staff, academic alert systems, and tutoring. Participants responded to the perceived usage of the service and the perceived impact of the service on the academic success of student-athletes. A review of the characteristics of the sample indicated the largest segment within the sample was student-athletes ($n = 42$; 62%). Academic support services personnel ($n = 13$; 19%) and athletic department personnel ($n = 13$; 19%) were the remaining participants in the sample. The survey data were compiled into a database for quantitative statistical analysis. The data analysis included descriptive statistics and a series of ANOVAs. The ANOVA results indicated no statistically significant differences in

beliefs between the groups regarding the perceived frequency with which student-athletes used the various academic support services and activities. For all three groups, the academic support service that was perceived to have the greatest impact was tutoring.

Analysis of the Findings

The findings of the study aligned with the review of literature in several ways. As institutions face demands to provide additional opportunities for students to not only access higher education but also to create environments most conducive for students to be retained and progress towards graduation (Kinser & Hill, 2011). Higher education leaders, including administrators at two-year colleges, should focus on priorities that will influence student achievement successfully (Kuh et al., 2006). Students who have the greatest challenges with academic success frequently come from underserved populations. Two-year college student-athletes are often from the same underserved populations and exhibit risk factors greater than any other sub-group of students in education (Horton, 2010).

Based on this current study's findings, several survey participants were perceived to be unaware of the various academic support services available at their institutions. For example, 38.5% of the academic support services personnel were unaware of academic alert systems. Additionally, approximately 22% of all survey respondents were unaware of advising with faculty, and 25% of the respondents were unaware of academic alert systems. Only 31% of the student-athlete respondents reported that they utilized academic advising with professional advising staff. Similarly, 28.6% of the student-athlete respondents reported that they utilized academic advising with faculty. Nearly

two-thirds of the student-athletes either did not know about the availability of academic advising with faculty, or they chose not to use it.

In addition, only 23.8% of student-athlete respondents reported that they used tutoring services weekly. The majority of the student-athletes reported using tutoring services only every four to six weeks; however, both academic support services personnel and athletic department personnel perceived that student-athletes utilized tutoring services weekly. Nearly 43% of the student-athlete respondents perceived tutoring as having the greatest impact on their academic success, but those student-athletes are not utilizing tutoring regularly.

Two-year college athletic programs often attract students who exhibit the risk factors of other students who attend two-year colleges (Xu et al., 2016). The risk factors of student-athletes, combined with the other challenges of being a student-athlete (i.e., balancing athletics, academics, and social activities; additional time constraints; and eligibility requirements) only add to the complexity of the risk factors (Apaak & Sarpong, 2015).

Student success as measured by retention, progression, and graduation could be improved if all stakeholders knew of the services available and created opportunities for student-athletes to use those services. Institutions could find new or unique ways to generate awareness and engagement in academic support services. For example, tutoring effectiveness could be improved by creating new options, such as small group tutoring, delivery of tutoring virtually, or increasing availability of tutoring services during nights and weekends. Another option could include tutoring services staff partnering with

faculty to provide special sessions prior to significant assignment or test submissions (Bremer et al., 2013; Wurtz, 2015).

Limitations of the Study

The study was limited to selected two-year colleges in Florida, which may have negatively affected the finding's generalizability. The participants could have been located at any two-year college in the state of Florida that offered intercollegiate athletic opportunities and participated in the NJCAA. Another potential limitation occurred if institutions lacked comprehensive academic support services for students. Their responses may not have been applicable, thus reducing the quantity of data that could be collected for comparison for a particular category of academic support services. In addition, a lack of definition for the various academic support services may have impacted the participants' responses. Those institutions that had well-developed academic support service systems may have provided the most comprehensive data. Another potential limitation occurred if an institution had a predisposition or overreliance on a certain type of academic support resource or service.

Recommendations for Future Research

Recommendations for future research based on the findings and limitations of this study include expanding the study to other two-year colleges in Florida, the southeastern region of the United States, or through the United States. Additionally, future research could compare the survey results of the two-year college participants to survey results of participants from four-year colleges and universities. Another research study could compare the access and availability of student support services between the NJCAA sanctioned two-year colleges and the various levels of NCAA Division 1, NCAA

Division 2, or NCAA Division 3. Research literature, such as from Woods et al. (2018) and Gayles and Hu (2009), has been focused primarily on NCAA institutions, specifically revenue-producing sports of football and basketball, despite many student-athletes competing in non-NCAA institutions or in non-revenue producing sports.

A future study could include examining the actual usage of academic support services versus the perceived usage of these services. Additionally, the research could examine the benefits and effectiveness of academic support services when they are utilized. Lastly, future research could investigate tutoring services at various two-year community colleges to determine the best funding and implementation models for at-risk student populations, including student-athletes. How could the specific service be improved in availability and effectiveness in order to best meet the needs of student-athletes and improve their academic success? This future research could include interviews with selected survey participants from each group (i.e., academic support services personnel, athletic department personnel, and student-athletes) to explore the issue further.

Implications of the Study

The results of this research did not yield any statistically significant differences among the groups; however, the results suggested that athletic department personnel, academic support services personnel, and student-athletes had similar beliefs regarding the academic support services offered at the selected two-year colleges. A need still exists to create an environment at two-year colleges that provides appropriate academic support services and student engagement opportunities to foster academic success for two-year college student-athletes. Further study of this population and their interactions

with academic support services may be necessary to ensure this at-risk student population is best positioned for academic success. By improving the success of student-athletes, two-year colleges are also positioning themselves to improve the educational outcomes of their overall student population.

Conclusion

Although the study did not yield any statistically significant differences between the groups, student engagement in various academic support services remains essential for fostering student achievement. Increased emphasis on student engagement efforts has been documented to influence student success as measured by retention, progression, and graduation metrics (Coates, 2007; Kahu, 2013; Kuh, 2007). Institutions that provide two-year college athletic opportunities for student-athletes should remain committed to providing the necessary resources so that student-athletes may engage in activities that positively impact academic achievement (Hatch, 2012).

To meet the demands placed on higher education institutions to provide greater access to a college education and improve the metrics of retention and graduation, institutions could invest in academic support services that provide the necessary engagement opportunities for at-risk students to succeed. Strategic and targeted investment in resources is necessary to strengthen the resources most used by student-athletes and most impactful on their academic success. As long as performance-based funding models are utilized, institutions benefit from investing in the academic support services that can influence these funding formula metrics positively.

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APPENDICES

Appendix A

Student-Athlete Survey

Directions: Read each of the following items. Respond to the item based on your experience at your current two-year college. The responses are not considered right or wrong, and all survey data will be anonymous.

1. Which activities or academic support services are available to student-athletes at your institution?
 - a. Academic advising with faculty
 - b. Academic advising with professional staff. (Professional academic advising staff are often located in an advising center.)
 - c. Academic progress survey/early alert system (also known as grade/attendance checks).
 - d. Tutoring
2. How frequently do you use academic advising with faculty?
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all
3. How frequently do you use academic advising with professional staff?
(Professional advising staff are often located in an advising center.)
 - a. Daily

- b. Weekly
- c. Every 2 to 3 weeks
- d. Every 4 to 6 weeks
- e. Once or twice per semester
- f. Not at all

4. How frequently do you use an academic progress survey/early alert system?

(Academic progress surveys/early alert systems are also known as grade/attendance checks.)

- a. Daily
- b. Weekly
- c. Every 2 to 3 weeks
- d. Every 4 to 6 weeks
- e. Once or twice per semester
- f. Not at all

5. How frequently do you use tutoring?

- a. Daily
- b. Weekly
- c. Every 2 to 3 weeks
- d. Every 4 to 6 weeks
- e. Once or twice per semester
- f. Not at all

6. What are other academic support services do you use at your institution? (open-ended)

7. How frequently do you use the other academic support services that were listed in item 6?
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

8. What activities or academic support services do you use the most?
 - a. Academic advising with faculty
 - b. Academic advising with professional staff. Professional advising staff are frequently located in an advising center.
 - c. Academic progress survey/early alert system (also known as grade/attendance checks).
 - d. Tutoring
 - e. Other academic support services

9. What other academic support services are available at your institution but are not being used by you? (open-ended)

10. Which activity or academic support service has the greatest impact on your academic success at your institution?
 - a. Academic advising with faculty
 - b. Academic advising with professional staff
 - c. Academic progress survey/early alert system

- d. Tutoring
- e. Other academic support services

11. What activities or academic support services are missing from your institution but could be beneficial for your academic success? (open-ended)

Appendix B

Athletic Department Personnel Survey

Directions: Read each of the following items. Respond to the item based on your experience at your current two-year college. The responses are not considered right or wrong, and all survey data will be anonymous.

1. Which activities or academic support services are available to student-athletes at your institution?
 - a. Academic advising with faculty
 - b. Academic advising with professional staff. (Professional academic advising staff are often located in an advising center.)
 - c. Academic progress survey/early alert system (also known as grade/attendance checks).
 - d. Tutoring

2. How frequently do student-athletes at your institution use academic advising with faculty?
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

3. How frequently do student-athletes at your institution use academic advising with professional staff? (Professional advising staff are often located in an advising center.)
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

4. How frequently do student-athletes at your institution use an academic progress survey/early alert system? (Academic progress surveys/early alert systems are also known as grade/attendance checks.)
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

5. How frequently do student-athletes at your institution use tutoring?
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks

- e. Once or twice per semester
 - f. Not at all
6. What are other academic support services do student-athletes use at your institution? (open-ended)
7. How frequently do student-athletes at your institution use the other academic support services that were listed in item 6?
- a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all
8. What activities or academic support services do student-athletes at your institution use the most?
- a. Academic advising with faculty
 - b. Academic advising with professional staff. Professional advising staff are frequently located in an advising center.
 - c. Academic progress survey/early alert system (also known as grade/attendance checks).
 - d. Tutoring
 - e. Other academic support services
9. What other academic support services are available at your institution but are not being used by student-athletes? (open-ended)

10. Which activity or academic support service has the greatest impact on the academic success of student-athletes at your institution?
- a. Academic advising with faculty
 - b. Academic advising with professional staff
 - c. Academic progress survey/early alert system
 - d. Tutoring
 - e. Other academic support services
11. What activities or academic support services are missing from your institution but could be beneficial for student-athletes? (open-ended)

Appendix C

Academic Support Services Survey

Directions: Read each of the following items. Respond to the item based on your experience at your current two-year college. The responses are not considered right or wrong, and all survey data will be anonymous.

1. Which activities or academic support services are available to student-athletes at your institution?
 - a. Academic advising with faculty
 - b. Academic advising with professional staff. (Professional academic advising staff are often located in an advising center.)
 - c. Academic progress survey/early alert system (also known as grade/attendance checks).
 - d. Tutoring

2. How frequently do student-athletes at your institution use academic advising with faculty?
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

3. How frequently do student-athletes at your institution use academic advising with professional staff? (Professional advising staff are often located in an advising center.)
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

4. How frequently do student-athletes at your institution use an academic progress survey/early alert system? (Academic progress surveys/early alert systems are also known as grade/attendance checks.)
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all

5. How frequently do student-athletes at your institution use tutoring?
 - a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks

- e. Once or twice per semester
 - f. Not at all
6. What are other academic support services do student-athletes use at your institution? (open-ended)
7. How frequently do student-athletes at your institution use the other academic support services that were listed in item 6?
- a. Daily
 - b. Weekly
 - c. Every 2 to 3 weeks
 - d. Every 4 to 6 weeks
 - e. Once or twice per semester
 - f. Not at all
8. What activities or academic support services do student-athletes at your institution use the most?
- a. Academic advising with faculty
 - b. Academic advising with professional staff. Professional advising staff are frequently located in an advising center.
 - c. Academic progress survey/early alert system (also known as grade/attendance checks).
 - d. Tutoring
 - e. Other academic support services
9. What other academic support services are available at your institution but are not being used by student-athletes? (open-ended)

10. Which activity or academic support service has the greatest impact on the academic success of student-athletes at your institution?
- a. Academic advising with faculty
 - b. Academic advising with professional staff
 - c. Academic progress survey/early alert system
 - d. Tutoring
 - e. Other academic support services
11. What activities or academic support services are missing from your institution but could be beneficial for student-athletes? (open-ended)

Appendix D

IRB Approval from Columbus State University

From: CSU IRB <irb@columbusstate.edu>
Date: Mon, Nov 18, 2019 at 10:17 AM
Subject: Protocol 20-037 Exempt Approval
To: Michael Kiefer [Student] <kiefer_michael@columbusstate.edu>, Jennifer L. Brown <brown_jennifer2@columbusstate.edu>

Institutional Review Board
Columbus State University

Date: 11/18/2019
Protocol Number: 20-037
Protocol Title: An Examination of Two-Year College Student-Athletes' Engagement in Academic Advising, Supplemental Instruction, and Academic Alert Systems
Principal Investigator: Michael Kiefer
Co-Principal Investigator: Jennifer Brown

Dear Michael Kiefer:

The Columbus State University Institutional Review Board or representative(s) has reviewed your research proposal identified above. It has been determined that the project is classified as exempt under 45 CFR 46.101(b) of the federal regulations and has been approved. You may begin your research project immediately.

Please note any changes to the protocol must be submitted in writing to the IRB before implementing the change(s). Any adverse events, unexpected problems, and/or incidents that involve risks to participants and/or others must be reported to the Institutional Review Board at irb@columbusstate.edu or (706) 507-8634.

If you have further questions, please feel free to contact the IRB.

Sincerely,

Manasa Mamidi, Graduate Assistant

Institutional Review Board
Columbus State University

Appendix E

Initial Recruitment Email

Dear _____,

In an effort to improve the academic success of student-athletes who participate in intercollegiate athletics at two-year colleges, you have been selected to participate in a research project. By completing this survey, you will make a valuable contribution to the research by providing information regarding student-athletes' use of various types academic support services and the perceived impact on academic success. The survey will take approximately 20 minutes to complete it. To access the questionnaire, please select the following link or copy and paste it into your internet browser:

[survey link]

Your input would be much appreciated. Thank you in advance for your participation.

Appendix F

Informed Consent

You are being asked to participate in a research project conducted by Michael Kiefer, an EdD student in the Department of Teaching, Leadership, and Counseling at Columbus State University. Dr. Jennifer Brown is supervising faculty member for this student-led project.

I. Purpose:

The purpose of the study will be to examine the differences in perceived usage and impact of academic support services by two-year college student-athletes in Florida.

II. Procedures:

The researcher will conduct a web-based survey using three selected two-year colleges that offer intercollegiate athletics and participate in the NJCAA competitions. The survey will be distributed electronically via email to student-athletes, athletic department personnel, and academic support services personnel at each institution. The expected duration of survey completion should not exceed 20 minutes. The data from this research may be used for future research projects.

III. Possible Risks or Discomforts:

There should be no risk or discomfort resulting from participation in the survey.

IV. Potential Benefits:

The survey will provide information regarding the availability and usage of academic support services by two-year college student-athletes at select colleges in Florida. The results may provide institutional leaders with information to ensure appropriate academic support resources are available and used to foster academic success of student-athletes.

V. Cost and Compensation:

There are no costs, compensations, or incentives associated with this study

VI. Confidentiality:

The questionnaire will be created using a web-based survey application, Qualtrics. The Qualtrics software creates a Response ID, which is randomly generated, for each participant. The IP address, which derives from the user's computer or network, is recorded, but the email address is not recorded because the invitations to participate will be distributed using the anonymous link. Once the raw data are retrieved from Qualtrics, the IP addresses will be deleted from the dataset. The researcher will ensure that the participants'

confidentiality is maintained using a password-protected computer in the PI's Office to store the electronic files. The raw data will be stored for 5 years on the PI's office computer. The data will be accessed and analyzed by PI and Co-PI.

VII. Withdraw:

Your participation in this research study is voluntary. You may withdraw from the study at any time, and your withdrawal will not involve penalty or loss of benefits.

For additional information about this research project, you may contact the Principal Investigator, Michael Kiefer at [REDACTED] or kiefer_michael@columbusstate.edu. If you have questions about your rights as a research participant, you may contact Columbus State University Institutional Review Board at irb@columbusstate.edu

I have read this informed consent form. If I had any questions, they have been answered. By selecting the *I agree* radial and *Submit*, I agree to participate in this research project. **To agree and participate in this study, you must be at least 18 years of age.**

- I agree.
- I do not agree.

Submit

Appendix G

Follow-up Recruitment Email

Dear _____,

In an effort to improve the academic success of student-athletes who participate in intercollegiate athletics at two-year colleges, you have been selected to participate in a research project. By completing this survey, you will make a valuable contribution to the research by providing information regarding student-athletes' use of various types academic support services and the perceived impact on academic success. If you have not completed it yet, here is your second chance. It will take approximately 20 minutes to complete it. To access the questionnaire, please select the following link or copy and paste it into your internet browser:

[survey link]

Your input would be much appreciated. Thank you in advance for your participation.

Appendix H

Third Recruitment Email

Dear _____,

In an effort to improve the academic success of student-athletes who participate in intercollegiate athletics at two-year colleges, you have been selected to participate in a research project. By completing this survey, you will make a valuable contribution to the research by providing information regarding student-athletes' use of various types academic support services and the perceived impact on academic success. If you have not completed it yet, here is your last opportunity. It will take approximately 20 minutes to complete it. To access the questionnaire, please select the following link or copy and paste it into your internet browser:

[survey link]

Your input would be much appreciated. Thank you in advance for your participation.