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Exploring Intercollegiate Adaptive Athletics Program Structures

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EXPLORING INTERCOLLEGIATE ADAPTIVE ATHLETICS
PROGRAM STRUCTURES

A Thesis
Presented to
the Graduate School of
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In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Parks, Recreation, and Tourism Management

by
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ABSTRACT

The purpose of this study was to explore intercollegiate adaptive athletics program structures in the United States. As athletics programs can be seen as open systems, an open systems model of sport organizations was used to guide the study. Semi-structured interviews were conducted with seven participants associated with intercollegiate adaptive athletics programs. A qualitative description design was used to gain a foundational understanding of program structures based on the programs' environments, inputs, processes, and outputs. Findings suggest intercollegiate adaptive athletics program structures are highly varied and complex open systems that are closely intertwined with their environments and have observable inputs, processes, and outputs. This study offers foundational knowledge about existing program structures and indicates that intercollegiate adaptive athletics programs can be understood as open systems. Implications for future research and practice are discussed.

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CHAPTER ONE

INTRODUCTION

The idea of students with disabilities playing adaptive sports in college is not new. The first collegiate adaptive athletics program began in the 1940s at the University of Illinois with a goal of enabling individuals with disabilities to get a college education (Savitz, 2006). In the eight decades since then, additional institutions have established programs, but in the 2018-2019 academic year just 12 postsecondary institutions were known to have programs. The following justification outlines why now is as good a time as any to explore the structure of intercollegiate adaptive athletics programs in an effort to make new program development more accessible.

As the decades have passed, the number of students with disabilities enrolling in postsecondary education in the United States has consistently increased. In 1978, just 3% of postsecondary students reported having a disability. This number grew to 6% in 1996, 9% in 2000, 11% in 2007, and remained at 11% in 2011 (National Center for Education Statistics [NCES], 1999, 2018). While these statistics are rough because students in higher education are not required to disclose their disability status, the upward trend remains observable (Harper & Quaye, 2009). Furthermore, the trend of more students with disabilities entering higher education is expected to continue (Council for Exceptional Children, 2008; Grossman, 2009; Madaus, Miller, & Vance, 2009; Mamiseishvili & Koch, 2011). As it does, an opportunity arises to more intentionally support this population of students because increased enrollment does not automatically lead to increased postsecondary degree completion (Belch, 2004).

Linking this opportunity to theory leads us to Tinto's (1975) model of student persistence. Several factors influence postsecondary student persistence to graduation, including individual attributes and prior experiences, but Tinto's (1975) model identifies two main factors that influence persistence within the postsecondary education experience. Tinto posited that higher degrees of academic integration and social integration lead to a higher likelihood of persistence. Academic integration includes one's grade performance and intellectual development; social integration includes informal peer group associations, semi-formal extracurricular activities, and interaction with faculty and administrative personnel within the college. Substantively, social integration appears as structured social engagements, university clubs or organizations, and friendships that tend to form as a result of engaging in such opportunities (Tinto, 1975). Adaptive athletics is one form of social integration, as is provides opportunities for students to interact with others outside of the academic realm. In other words, increasing access to social integration opportunities for students with disabilities leads to increased rates of persistence according to Tinto's framework.

Finally, U.S. federal action has been specific in its recommendation that schools should develop new opportunities to increase access to sport and recreation for students with disabilities. This directive is found in a Dear Colleague Letter (2013) from the U.S. Department of Education and was made following findings that students with disabilities were far less likely than their peers without disabilities to be engaged in athletic extracurricular activities (Government Accountability Office [GAO], 2010). More generally, the Rehabilitation Act of 1973 and the 1990 Americans with Disabilities Act

can be applied to the situation at hand, as they both aim to curb discrimination towards individuals with disabilities (Cottingham, Lee, Shapiro, & Pitts, 2016; Jones, 2009).

Aiding the establishment of new intercollegiate adaptive athletics programs is warranted for a number of reasons: more students with disabilities are entering higher education than ever before, adaptive athletics can be one opportunity among many to support students with disabilities in the postsecondary environment, and federal level reports have urged schools to develop new programs for students with disabilities. But no published information is available to offer any guidance to postsecondary education institutions looking to establish intercollegiate adaptive athletics programs. An exploration of the structure of existing programs is a first step in making the endeavor of intercollegiate adaptive athletics program establishment more accessible. Therefore, the purpose of this study is to explore intercollegiate adaptive athletics program structures in the United States.

CHAPTER TWO

LITERATURE REVIEW

In order to inform the exploration of intercollegiate adaptive athletics program structures, a review of topics including adaptive sports, the current state of intercollegiate adaptive athletics, related literature on sport structures, and a sport organization conceptual model follow.

Adaptive Sports

For individuals with mobility and sensory impairments interested in playing sports, adaptive sports are often the most appropriate fit. Adaptive sport is also known as parasport or disability sport, but all mean generally the same thing: "any modification of a given sport to accommodate the varying ability levels of an individual with a disability" (Lundberg, Taniguchi, McCormick, & Tibbs, 2011, p. 206). For example, wheelchair basketball is a modified version of basketball. The nature of the sports is the same; athletes move up and down the court and attempt to shoot a ball through a hoop to score points for their team. The two sports' differences arise from the use of adaptive equipment and rule modifications to accommodate such equipment and athlete abilities. Some other common adaptive sports include wheelchair tennis, power soccer, adaptive track and field, and goalball, just to name a few.

Intercollegiate Adaptive Athletics

Adaptive sports exist in a variety of formats and settings. At the highest level of competition in the postsecondary setting lies intercollegiate adaptive athletics. In the context of this study, intercollegiate adaptive athletics is defined as competition where

student-athletes with disabilities compete in team and individual adaptive sports against student-athletes with disabilities from other postsecondary institutions.

Very few intercollegiate adaptive sport programs are active in the United States. In the 2018-2019 academic year, just 12 postsecondary institutions had intercollegiate adaptive athletics programs with three sports (see Table 1 below). Comparatively, there are nearly 30 NCAA sanctioned sports available to student-athletes without disabilities at more than 1,200 institutions in the U.S. (National Collegiate Athletic Association [NCAA], 2015).

Of the intercollegiate adaptive athletics leagues and programs in existence, there is great variability in the league and program structures. Unlike traditional intercollegiate athletics, intercollegiate adaptive athletics are not sanctioned by the NCAA. League operations are instead managed by national governing bodies. The National Wheelchair Basketball Association (NWBA) manages intercollegiate wheelchair basketball, the United States Tennis Association (USTA) manages intercollegiate wheelchair tennis, and the United States Olympic and Paralympic Committee (USOPC) manages intercollegiate adaptive track and field. There is also variability in where programs are housed within the university setting. Current program housing locations include Athletic Departments, Adaptive Athletic Departments, Campus Recreation Departments, Disability Resource Offices, and even certain Academic Departments. While this variability is visible, the reasons behind the variability and how said variability influences programs is unclear.

The programs listed in Table 1 are established programs that participated in intercollegiate competitions in the 2018-2019 academic year.

Table 1: Intercollegiate Adaptive Athletics Programs					
Program	Men's Basketball	Women's Basketball	Tennis	Track	Program housed in:
University of Alabama	X	X	X	X	Adaptive Athletics Department
University of Arizona		X			Disability Resource Center
Auburn University	X				Office of Accessibility
Edinboro University	X				Athletics Department
University of Illinois	X	X		X	Division of Disability Resources & Educational Services
University of Missouri	X				Campus Recreation
University of Nebraska-Omaha	X				Campus Recreation
Southwest Minnesota State University	X				Athletics Department
University of Texas-Arlington	X	X			Division of Student Affairs
University of Wisconsin-Whitewater	X	X			Campus Recreation
Michigan State University			X		Unknown
San Diego State University			X		Adaptive Athletics Department

Sport Organization Program Structures

Although no known studies focus inquiry into the structures of intercollegiate adaptive athletics program structures, research has been conducted regarding athletics program structures and related concepts that impact said structures. Much of the following information related to the topic at hand is dated; this could be because more

established sport organizations addressed the foundational knowledge of program structures long ago.

Work from Cunningham and Rivera (2001) aimed at distinguishing the structural designs of NCAA Division I departments and found two possibilities; simple structure and enabling structure. Simple structure was identified by moderate levels of specialization among athletic department personnel, moderate formalization of tasks and documentation, and centralized decision making. Comparatively, enabling structures exhibited decentralized decision-making, high levels of specialization, and high levels of formalization. After labeling athletic departments as one structure or the other, the authors then compared markers of effectiveness and found no differences in graduation rates, but significant differences in athletic achievement. A relationship emerged showing athletic departments with enabling structures to experience higher athletic achievement.

A study of the same era by Putler and Wolfe (1999) investigated the perceptions of intercollegiate athletics programs. With a sample of students, prospective students, student athletes, alumni, faculty, and athletic program employees, the authors rank ordered a set of perceptions assumed to be held by athletics programs. The priorities with the highest rank included finances, graduation rates, win-loss records, and violations. The priorities with the lowest rank included spectator attendance, gender equity, and the number of teams within the athletic department.

Later on, Green (2005) analyzed processes of USA Volleyball in regards to optimizing athlete recruitment, retention, and transition. Main outputs of the study show that the mere provision of sport programs is an inadequate management technique. Green

found social support within the sport system to be vital to retention, along with support to athletes facing financial barriers that could inhibit the very possibility of participation. Additionally, the study called for greater attention to be given in the transition phase, as athletes move from one level of competition to the next.

More recent work from Cooper, Cavil, and Cheeks (2014) reviewed the state of intercollegiate athletics at historically black colleges and universities (HBCUs). A plethora of challenges facing HBCUs was discovered in the process. From systemic racism and economic deprivation, to structural inequalities within the NCAA, high administrative turnover, and poor financial management, the state of HBCU athletics has an uphill battle ahead. Keys to success offered by the authors include engaging in entrepreneurial business practices, like creative fundraising, and strengthening collaborative relationships with many stakeholders.

A number of studies have focused on sport management structures, often at depths beyond macro-level description of organization structure. Each of the aforementioned topics of inquiry hold value in the sphere of intercollegiate athletics, but because no known resources yet describe the structure of intercollegiate adaptive athletic programs, this study aims to inform this topic by utilizing aspects of the following model.

Open Systems Theory

Open systems theory first developed in the field of biology, where living organisms came to be seen as systems that import and export resources from their environment rather than closed, self-sufficient systems (Von Bertalanffy, 1950). Shortly thereafter, open systems theory was applied to social sciences by Parsons (1951) and

Miller (1955) where social organizations were viewed much like biological organisms; complex systems that impacted and were impacted by their environments and had observable inputs, through-puts (or processes), and outputs. The trend to view social organizations as open systems has continued in the fields of in business administration and public and non-profit organizations (Ackoff, 2010; Gharajedaghi, 2011; Seddon, 2008; Senge, 1990). As open systems theory has been frequently applied to a variety of disciplines, it has proven to be applicable as a multidisciplinary theory capable of informing a variety of organizational aspects (Jung & Vakharia, 2019).

While there is a dearth of studies investigating sport organizations through an open systems theory lens, the following studies can provide some insight as to how researchers have applied open systems theory in the contexts of leisure, nonprofit, and arts and cultural organizations. A study by Thibault, Frisby, and Kikulis (1999) examined the perceptions of leisure services managers related to pressures in their specific environment and how said pressures may lead to building relationships with other organizations. Through interviews with three senior managers from three different parks and recreation departments in Canada, Thibault and colleagues found economic, political, and social pressures from the organization's environments were all factors that led to an increased focus on developing relationships with other organizations. These relationships led to increased service efficiency, reduced duplication of services, and the ability to share human, financial, land, and facility resources or inputs. The found costs associated with said relationships were lessened autonomy as an organization and an increase in the time needed to develop and maintain communication between organizations.

A conceptual article by Starnes (2001) also focused on the phenomena of relationships among organizations in specific environments. Starnes applied open systems theory in the context of management in the nonprofit sector and how nonprofits may benefit from strategic interaction with other organizations within their specific environment. Starnes reviewed a number of reasons why nonprofits ought to look to bolstering strategic relationships; to strengthen negotiation leverage, reduce overhead costs, influence legislations, enhance visibility, reduce risks, and extend their range of operations (Lamb, Hair, & McDaniel, 1998; Self & Starnes, 1999; Winston, 1994). In closing, the recommendation is made for nonprofit organizations to view themselves as open systems, as this could benefit their position and processes in several ways.

A dissertation by Jung (2012) applied open systems theory to an arts and cultural museum in Philadelphia through an ethnographic case study. Jung found that the museum was closely intertwined with its specific environment; it reacted to evolving pressures in its specific environment and observably drew human resources from its specific environment in the form of board members, staff, docents, and volunteers. Additionally, Jung identified outputs from the museum that influenced its environment; through outputting educational services and outreach efforts, the museum brought increased economic and tourism activity to its environment. Through analyzing the museum's processes and outputs, and how they are perceived by community members, Jung identified that the museum often failed to align with the desires of the community. This led to community members feeling as though the museum existed for the pleasure of the educated elite, rather than the community as a whole. Jung recommended that the

museum find ways to alter its processes and outputs to better align with the incoming pressures offered by humans in its specific environment. Lastly, Jung investigated the work culture within the museum system. Jung's final recommendation was to take on improving the museum's outputs through increased processes of collaboration and coordination among the museum's staff or human inputs.

Jung's dissertation led to a number of conceptual journal articles. Jung (2017) described generally how arts and educational organizations can be viewed as open and complex systems that depend on interconnectedness to their external environments and must evolve their operations over time in reaction to internal and external pressures. Taking this perspective may lead organizations to remain more relevant and prosperous over time. More recent work from Jung and Vakharia (2019) again conceptualized arts and cultural organizations as open systems, but looked more closely at the relationship between organizational structure and performance effectiveness. The authors recommend that, through the lens of open systems theory, organizations can be more responsive to community needs in their specific environments and understand their performance more holistically, beyond narrow-minded financial measures.

Conceptual model

A macro level perspective is necessary to explore the existing intercollegiate adaptive athletics programs because no known published foundational knowledge of this system exists. Soucie and Doherty (1996) illustrate an open systems model of sport organizations that provides a macro level overview of functional aspects of sport organizations shown in Figure 1 below. Open systems theory can be applied to a variety

of contexts, this conceptual model is an iteration of open systems theory and was selected

because it aligned most closely with the context of intercollegiate adaptive athletics.

Therefore, in order to better understand the factors that make up intercollegiate adaptive

athletics program structures, this open system conceptual model will be utilized to dissect

the who, what, and where of program structures. Each factor within the model will be

described as an individual factor, but it is important to recognize that each factor has the

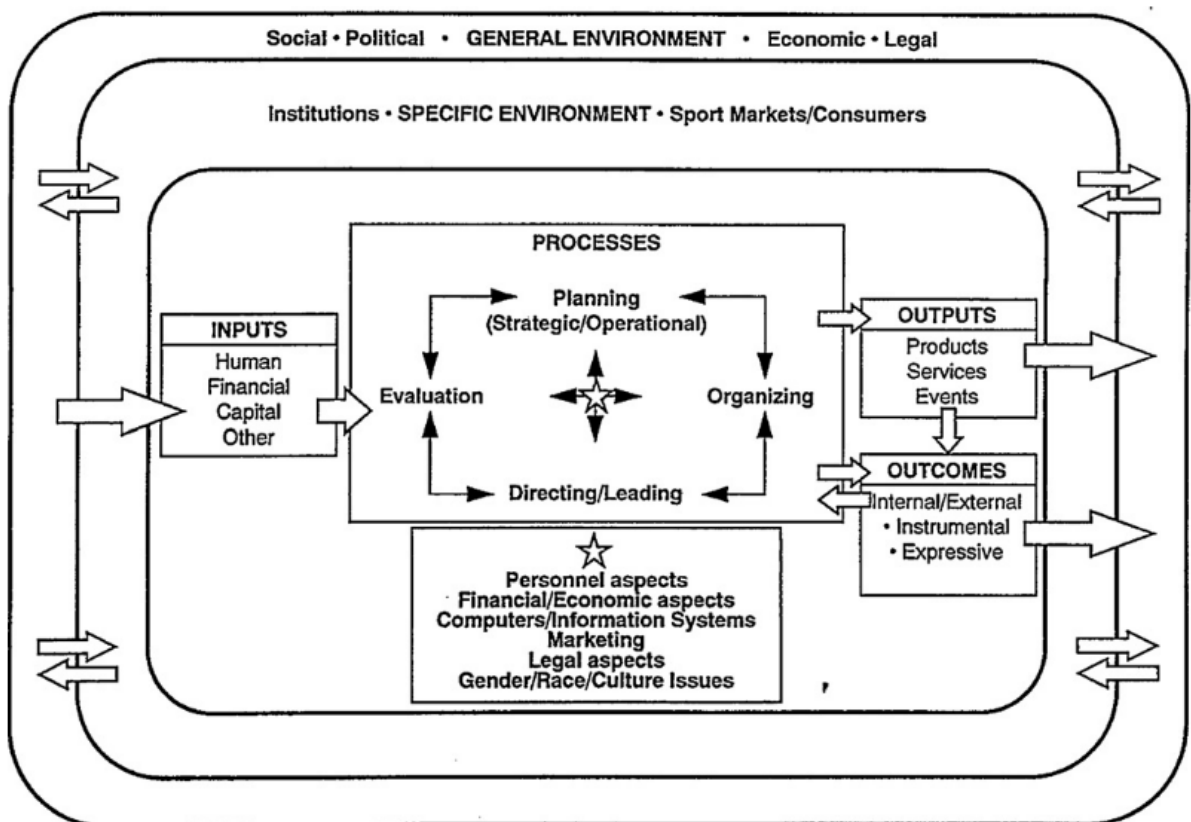potential to impact and be impacted by other factors within the model (Scott, 1987).

Figure 1. Open systems model of sport organizations (From "Past endeavors and future perspectives for sport management research," by D. Soucie and A. Doherty, 1996, *Quest, 48*, p. 496).

General environment. The model situates sport organizations within the general environment and specific environment, noting that no sport organization operates within a vacuum. Relevant factors within the general environment include social, political, economic, and legal factors. Such factors envelope sport and all sport organizations in the broadest context (Soucie & Doherty, 1996).

Specific environment. The specific environment is the setting in which a singular sport organization exists. Relevant specific environment factors include factors pertaining to the immediate consumers and the institutions where the sport organization resides (Soucie & Doherty, 1996). Additionally, relationships between the sport organization and different organizations within the specific environment may be necessary to support the internal processes performed by the sport organization. These factors within the specific environment then lead to determining the resources that enter sport organizations, also known as inputs (Chelladurai, 2014).

Inputs. Inputs that sport organizations receive from the environment are grouped into categories of human, financial, capital, and other inputs. Human inputs included the array of people who are involved in the production of services. Financial inputs are the monetary resources that enter the sport organization. Capital inputs are material resources including facilities, equipment, and supplies (Chelladurai, 2014). Finally, other inputs can include information, values, and expectations of the organization (Soucie & Doherty, 1996). Other inputs can be particularly applicable to university athletic programs as it is common for said programs to aim to contribute to society in the form of producing long-term useful citizens, not just short-term student-athletes (Chelladurai, 2014).

Processes. The inputs that enter a sport organization then impact the processes enacted by the organization. Such processes are divided into categories of planning, organizing, leading, and evaluating. Planning refers to a big-picture decision making process, where organizations decide where they aim to go and how they aim to get there (Chelladurai, 2014). Organizing entails the assembly and coordination of inputs, and can include recruiting human inputs, allocation resources, and developing conditions for goals to be reached (Bateman & Snell, 2007). Leading involves an individual supporting or influencing a group of individuals to work toward goals (Northouse, 2010). Evaluating is the process where organizations and their units are judged based on their performance. Evaluating can occur at the individual, unit, or organizational level (Chelladurai, 2014).

Star. The star in the middle of the middle represents operational aspects of sport organizations that bare influence on which processes occur or how those processes occur (Soucie & Doherty, 1996). Personnel aspects include aspects related to the attitude, stress level, burnout, and training of employees or human inputs. Financial/economic aspects include items such as fundraising and financial accountability. Computers/information systems include aspects of which computers or information systems are utilized by the organization as well as the impacts those technologies have. Marketing includes aspects related to outreach, public relations, promotions, and sales. Legal aspects include liability and contracts the organization possesses. Finally, gender/race/culture issues are simply gender, race, or culture issues that may affect the organization's processes (Soucie & Doherty, 1996).

Outputs. Next, the model describes outputs produced by the sports organization. Outputs typically include functions that support consumers in the organization's environment, from products to services, events, and programs (Soucie & Doherty, 1996).

Outcomes. Lastly, the model describes outcomes, or the effect a sport organization's outputs have on its internal system

s or external environment. Outcomes include things such as internal member satisfaction, organizational culture, and community satisfaction or support (Soucie & Doherty, 1996).

Conclusion

Once more, the purpose of this study is to explore intercollegiate adaptive athletics program structures in the United States. If a greater understanding of the current state of program structures can be gained, those looking to begin programs of their own will then have a more informed lens through which to navigate the process. While published empirical evidence relating sports organizations to open systems theory is lacking, past application of the theory to leisure-related services provides some evidence as to what can be gained from applying open systems theory to new contexts. Being that guidance from past research applying open systems theory to sport organizations is not available, the researcher aimed to apply the theory in the most logical way possible based on the tools available at the time. There is potential for this initial macro level of application of open systems theory to intercollegiate adaptive athletics to inform future, more pointed inquiry.

CHAPTER THREE

METHODS

Qualitative Description

As the aim of the study is to produce a descriptive summary of the structure of intercollegiate adaptive athletics programs, the research will take a qualitative description approach. Qualitative description is a useful tool for exploring "the who, what, and where of events or experiences" (Sandelowski, 2000, p. 338). This approach has been used previously in sport research to explore phenomena that lack a high degree of foundational understanding (Figgins, Smith, Sellars, Greenlees, & Knight, 2016; Gotwals & Spencer-Cavaliere, 2014).

Sample Recruitment

The researcher employed purposive sampling in order to obtain a sample that closely aligned with the purpose of the study (Patton, 2015). The first step of purposive sampling was to establish selection criteria (Merriam & Tisdell, 2016). As the purpose of the study was to explore the structure of existing intercollegiate adaptive athletics programs, the selection criteria were limited to individuals who held positions as intercollegiate adaptive athletics program directors, program coordinators, or head coaches at the time of data collection. This set of individuals was closest to the phenomenon in question, and were therefore likely to possess the most information rich cases to inform the study (Patton, 2015). If a program had a program director or program coordinator, that individual was invited to participate. If a program did not have a program director or program coordinator, the most senior head coach was invited to

participate. The aim was to include one representative from each of the 12 existing

intercollegiate adaptive athletics programs. To identify individuals who best fit the

selection criteria, the researcher utilized information provided on the intercollegiate

adaptive athletics programs' websites.

Data Collection

Data collection took place in the fall of 2019. Following institutional review

board approval, each of the 12 individuals who met the selection criteria were contacted

via email and invited to participate in the study. An informed consent letter was attached

to the recruitment email. Then, the researcher and the consenting individuals scheduled a

time to participate in one-on-one interviews via Zoom, a video communication platform.

The participants were provided with a digital copy of the interview protocol prior to their

scheduled interview. To capture participants' perceptions of their respective

intercollegiate adaptive athletic program structures, the researcher employed semi-

structured interviews. The interview protocol was developed using the conceptual model

of sport organizations as open systems described by Soucie and Doherty (1996). The

interview protocol can be found in Appendix A. Both closed- and open-ended questions

were utilized. Closed-ended questions were used to elicit specific pieces of information,

while open-ended questions allowed for more details to be shared based on the

participants' experiences (Merriam & Tisdell, 2016). Each interview followed the

interview protocol, the interviewer asked probing and clarifying questions as needed.

Prior to each interview, participants were informed of the purpose of the study, data

security measures, and participation risk. Interviews were audio and video recorded using

tools in Zoom and a handheld audio recording device. Some participants did not have access to a webcam; therefore, the recording was strictly audio.

Data Analysis

 Following the conclusion of the final interview, the researcher transcribed each recording verbatim. The researcher then cleaned each transcript to ensure the transcript accurately reflected the interview recording and reread each transcript to increase familiarity with the data. As the open systems model of sport organizations (Soucie & Doherty, 1996) was used to shape the interview protocol, semi-deductive data analysis began with developing clearly defined a priori categories based on the conceptual model (Merriam & Tisdell, 2016). The researcher deductively sorted data points from each transcript into the a priori categories. This deductive process entailed the researcher combing through each transcript with one a priori category in mind at a time. This action was repeated until all applicable data had been sorted into each a priori category. Then the researcher shifted to an inductive mode of thought and combed through each a priori category and further sorted the data within the a priori category to build useful themes within the a priori categories based on the data (Creswell & Creswell, 2018). Throughout this process, the researcher remained open to the potential for broad inductive themes to emerge from the data as there could be factors pertinent to the participants that were not reflected in the conceptual model (Andrew & Pedersen, 2011).

 Upon the researcher concluding data analysis independently, the data analysis process was reviewed by the committee chair to ensure the outcome aligned with the data found in the transcripts. This interaction increased the trustworthiness of the study's

findings, as they are not based solely on one individual's interpretation (Creswell &

Creswell, 2018). To further address trustworthiness, the researcher engaged in reflexive

journaling before and during data analysis to record how personal background and

experiences may have related to the shaping of interpretations (Creswell & Creswell,

2018). Additionally, the researcher maintained an audit trail detailing each step and

decision in the data analysis process to allow for greater reliability in the study's findings

(Merriam & Grenier, 2019).

CHAPTER FOUR

ARTICLE

Exploring Intercollegiate Adaptive Athletics Program Structures: An Application of

Open Systems Theory

Abstract

The purpose of this study was to explore intercollegiate adaptive athletics program structures in the United States. As athletics programs can be seen as open systems, an open systems model of sport organizations was used to guide the study. Semi-structured interviews were conducted with seven participants associated with intercollegiate adaptive athletics programs. A qualitative description design was used to gain a foundational understanding of program structures based on the programs' environments, inputs, processes, and outputs. Findings suggest intercollegiate adaptive athletics program structures are highly varied and complex open systems that are closely intertwined with their environments and have observable inputs, process, and outputs. This study offers foundational knowledge about existing program structures and indicates that intercollegiate adaptive athletics programs can be understood as open systems. Implications for future research and practice are discussed.

Introduction

The number of students with disabilities enrolling in postsecondary education in the United States has consistently increased over time. In 1978, just 3% of postsecondary students reported having a disability. This number grew to 11% in 2011 and is expected to continue increasing (Council for Exceptional Children, 2008; National Center for Education Statistics [NCES], 1999, 2018). Although the number of students with disabilities entering postsecondary education has consistently increased, this increased enrollment does not automatically lead to increased postsecondary degree completion, also known as persistence to graduation (Belch, 2004). Thus, as a greater number of students with disabilities enter postsecondary education, an opportunity arises to support this population of students more intentionally in their pursuit of degree attainment.

Tinto (1975) proposed that there are two main factors that impact student persistence to graduation: academic integration and social integration. Intercollegiate adaptive athletics can be included within the concept of social integration as it provides opportunities for social engagement outside of the academic realm. In other words, increased access to social integration opportunities for students with disabilities can potentially lead to increased rates of persistence according to Tinto's framework.

Additionally, U.S. federal action has been specific in its recommendation that schools develop new opportunities to increase access to sport and recreation for students with disabilities. This directive is found in a Dear Colleague Letter (2013) from the U.S. Department of Education and was distributed after data indicated that students with disabilities were far less likely than their peers without disabilities to be engaged in

athletic extracurricular activities (Government Accountability Office [GAO], 2010). More generally, the Rehabilitation Act of 1973 and the 1990 Americans with Disabilities Act can be applied to the situation at hand, as they both aim to curb discrimination towards individuals with disabilities (Cottingham et al., 2016; Jones, 2009).

The idea of students with disabilities playing adaptive sports in college is not new. The first collegiate adaptive athletics program began in the 1940s at the University of Illinois with a goal of enabling individuals with disabilities to get a college education (Savitz, 2006). In the context of this study, intercollegiate adaptive athletics is defined as competition where student-athletes with disabilities compete in team and individual adaptive sports against student-athletes with disabilities from other postsecondary institutions. In the eight decades since then, additional institutions have established adaptive athletics programs. However, in the 2018-2019 academic year, only 12 postsecondary institutions were known to have active adaptive athletics programs. The aforementioned justifications outline the reasons as to why exploring the topic of expanding access to intercollegiate adaptive athletics opportunities is both timely and pertinent. However, there is a dearth of published information available to offer guidance to schools looking to establish intercollegiate adaptive athletics programs (Shapiro & Pitts, 2014). An exploration of the structure of existing programs (i.e., the condition of programs' environments, inputs, processes, and outputs) is a first step in making the endeavor of intercollegiate adaptive athletics program establishment more accessible to postsecondary institutions. Therefore, the purpose of this study was to explore intercollegiate adaptive athletics program structures in the United States.

<center>**Literature Review**</center>

In order to inform the exploration of intercollegiate adaptive athletics program structures, a review of topics including adaptive sports, the current state of intercollegiate adaptive athletics, and an open systems sport organization conceptual model follow.

Adaptive Sports

For individuals with disabilities who are interested in playing sports, adaptive sports are often an appropriate fit. Adaptive sport is also known as parasport or disability sport, but all mean generally the same thing: "any modification of a given sport to accommodate the varying ability levels of an individual with a disability" (Lundberg et al., 2011, p. 206). For example, wheelchair basketball is a modified version of basketball. The nature of the sports is the same; athletes move up and down the court and attempt to shoot a ball through a hoop to score points for their team. The two sports' differences arise from the use of adaptive equipment (i.e., players use a wheelchair to travel up and down the court) and rule modifications (e.g., players incur a traveling violation when they fail to dribble, pass, or shoot following the second consecutive push of their wheelchair) to accommodate such equipment and athlete abilities.

Intercollegiate Adaptive Athletics

Adaptive sports exist in a variety of formats and settings. At the highest level of competition in the postsecondary setting lies intercollegiate adaptive athletics. Once again, in the context of this study, intercollegiate adaptive athletics is defined as competition where student-athletes with disabilities compete in team and individual adaptive sports against student-athletes with disabilities from other postsecondary

<center>23</center>

institutions. Very few intercollegiate adaptive sport programs are active in the United States. In the 2018-2019 academic year, just 12 postsecondary institutions had intercollegiate adaptive athletics programs offering up to three sports, though not every institution offers all three sports. Comparatively, there are nearly 30 NCAA sanctioned sports available to student-athletes without disabilities at more than 1,200 institutions in the U.S. (National Collegiate Athletic Association [NCAA], 2015). Of the intercollegiate adaptive athletics programs in existence, there appears to be great variability in the program structures. For example, current programs are housed in a variety of postsecondary departments, including Athletic Departments, Adaptive Athletic Departments, Campus Recreation Departments, Disability Resource Offices, and even Academic Departments. While this variability is visible from the exterior, little to nothing is recorded about why programs exist where they do and what factors make-up intercollegiate adaptive athletics program structures.

Open Systems Model of Sport Organizations

In order to better understand the factors that make up intercollegiate adaptive athletics program structures, an open systems model (Soucie & Doherty, 1996) was utilized to dissect the who, what, and where of program structures. A macro level perspective was necessary to explore this topic because no known published foundational knowledge of this system exists. Open systems theory originated in the field of biology, where living organisms came to be seen as systems that import and export resources from their environments rather than closed, self-sufficient systems (Von Bertalanffy, 1950). Shortly thereafter, open systems theory was applied to social sciences (Miller, 1955;

Parsons, 1951). Most applicably, open systems theory has been used as a lens to investigate municipal parks and recreation departments, nonprofit organizations, and arts and cultural organizations (Jung, 2012, 2017; Jung & Vakharia, 2019; Starnes, 2001; Thibault et al., 1999). While there is a lack of empirical evidence applying open systems theory to the context of sport organizations, one conceptual model has been proposed.

In alignment with this study's context, Soucie and Doherty (1996) illustrate an open systems model of sport organizations that provides a macro level overview of sport organizations (see Figure 2). This specific open system conceptual model was selected as a framework for this study due to it addressing the specific context of sport organizations. Each factor within the model will be described as an individual factor, but it is important to recognize that each factor has the potential to impact and be impacted by the other factors within the model (Scott, 1987).
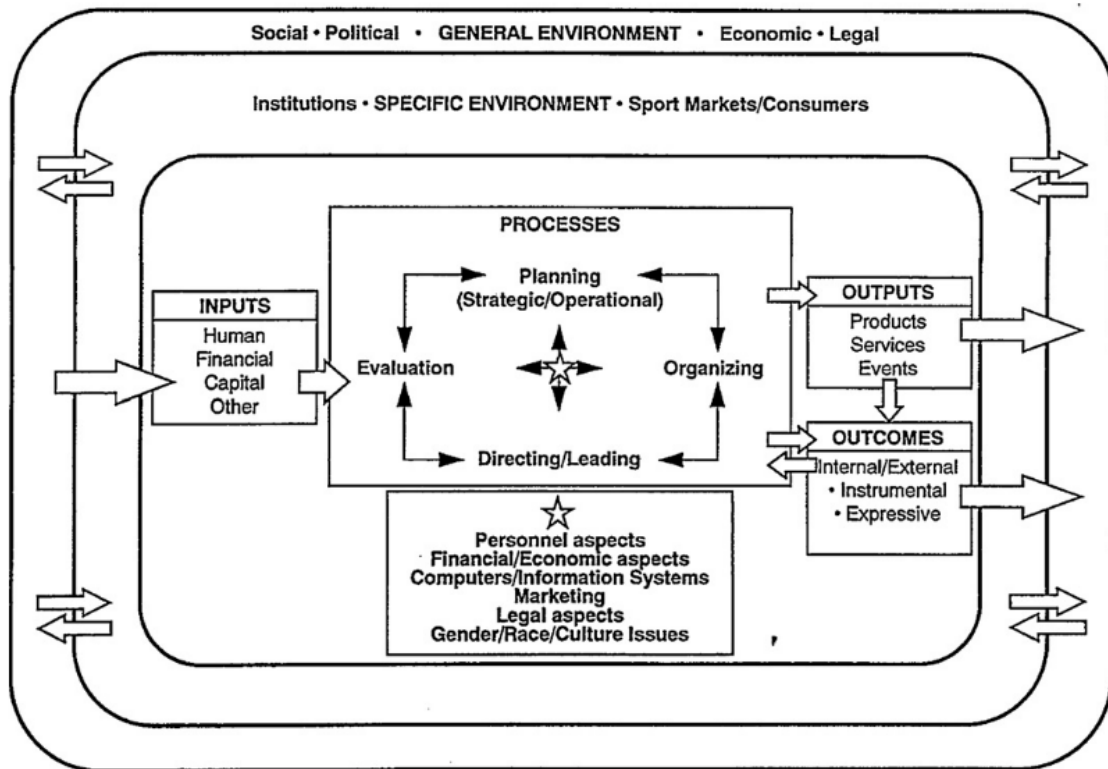
Figure 2. Open systems model of sport organizations (From "Past endeavors and future perspectives for sport management research," by D. Soucie and A. Doherty, 1996, *Quest,* 48, p. 496).

General Environment

The model situates sport organizations within the general environment, noting

that no sport organization operates within a vacuum. Relevant factors within the general

environment include social, political, economic, and legal factors. Such factors envelope

sport and all sport organizations in the broadest context (Soucie & Doherty, 1996).

Specific Environment

The specific environment is the setting in which a singular sport organization

exists. Relevant specific environment factors include factors pertaining to the immediate

consumers and the institutions where the sport organization resides (Soucie & Doherty,

1996). Additionally, relationships between the sport organization and different organizations within the specific environment may be necessary to support the internal processes performed by the sport organizations. For example, sport organizations may build a relationship with organizations who manage sport facilities to avoid needing to construct facilities specifically for their programs. These factors within the specific environment then lead to determining the resources that enter sport organizations, also known as inputs (Chelladurai, 2014).

Inputs

Inputs that sport organizations receive from the environment are grouped into categories of human, financial, capital, and other inputs. Human inputs include the array of people who are involved in the production of services. Financial inputs are the monetary resources that enter the sport organization. Capital inputs are material resources including facilities, equipment, and supplies (Chelladurai, 2014). Finally, other inputs can include information, values, and expectations of the organization (Soucie & Doherty, 1996). Other inputs can be particularly applicable to university athletic programs as it is common for said programs to aim to contribute to society in the form of producing long-term useful citizens, not just short-term student-athletes (Chelladurai, 2014).

Processes

The inputs that enter a sport organization then impact the processes enacted by the organization. Such processes are divided into categories of planning, organizing, leading, and evaluating. Planning refers to a big-picture decision making process, where organizations decide where they aim to go and how they aim to get there (Chelladurai,

2014). Organizing entails the assembly and coordination of inputs, and can include recruiting human inputs, allocating resources, and developing conditions for goals to be reached (Bateman & Snell, 2007). Leading involves an individual supporting or influencing a group of individuals to work toward goals (Northouse, 2010). Evaluating is the process where organizations and their units are judged based on their performance. Evaluation can occur at the individual, unit, or organizational level (Chelladurai, 2014).

Star

The star in the middle of the model represents operational aspects of sport organizations that bare influence on which processes occur or how those processes occur (Soucie & Doherty, 1996). Personnel aspects include aspects related to the attitude, stress level, burnout, and training of employees or human inputs. Financial/economic aspects include items such as fundraising and financial accountability. Computers/information systems include aspects of which computers or information systems are utilized by the organization as well as the impacts those technologies have. Marketing includes aspects related to outreach, public relations, promotions, and sales. Legal aspects include liability and contracts the organization possesses. Finally, gender/race/culture issues are simply gender, race, or culture issues that may affect the organization's processes (Soucie & Doherty, 1996).

Outputs

Next, the model describes outputs produced by the sports organization. Outputs typically include functions that support consumers in the organization's environment, from products to services, events, and programs (Soucie & Doherty, 1996).

Outcomes

Lastly, the model describes outcomes, or the effect a sport organization's outputs have on its internal systems or external environment. Outcomes include things such as internal member satisfaction, organizational culture, and community satisfaction or support (Soucie & Doherty, 1996).

In sum, the preceding set of factors within the open systems model of sport organizations were used to conceptualize the study's purpose of exploring intercollegiate adaptive athletic program structures. The following strategy was employed to inform this aim.

Methods

As the aim of the study was to produce a descriptive summary of the structure of intercollegiate adaptive athletics programs, the research took a qualitative description approach. Qualitative description is a useful tool for exploring "the who, what, and where of events or experiences" (Sandelowski, 2000, p. 338). This approach has been used previously in sport research to explore phenomena that lack a high degree of foundational understanding (Figgins et al., 2016; Gotwals & Spencer-Cavaliere, 2014).

Participants

Purposive sampling was used to obtain a sample that closely aligned with the study's purpose (Patton, 2015). The selection criteria were limited to individuals who held positions as intercollegiate adaptive athletics program directors, program coordinators, or head coaches at the time of data collection. This set of individuals was closest to the phenomenon in question, and were therefore likely to possess the most

information rich cases to inform the study (Patton, 2015). Following Institutional Review Board approval, one representative, of the highest possible rank, was contacted via email at each of the 12 existing programs.

Data Collection

Data collection took place in the fall of 2019. Each participant engaged in a one-on-one virtual interview via Zoom, a video conferencing tool. Interviews lasted an average of 38 minutes in duration. The interviews followed a semi-structured interview protocol based on the open systems model of sport organizations (Soucie & Doherty, 1996). All interviews were audio and video recorded via Zoom and using a handheld audio recorder.

Data Analysis

Following the conclusion of the final interview, each interview recording was transcribed verbatim by the researcher. The researcher then employed a two-step process to analyze the data. First, the researcher sorted the data from the transcriptions into defined a priori categories and sub-categories as defined by the open systems model of sport organizations (Merriam & Tisdell, 2016; Soucie & Doherty, 1996). During this deductive sorting, the researcher remained open to the potential for inductive themes to emerge from the data as there could be factors pertinent to the participants that were not reflected in the conceptual model (Andrew & Pedersen, 2011). Second, within each a priori category and sub-category, the researcher used open coding to further sort and make sense of the dense, descriptive data (Creswell & Creswell, 2018). Data analysis was independently completed by the researcher. Then, to increase trustworthiness, the data

analysis plan and outcome were reviewed by the second researcher to ensure agreement in the qualitative findings (Creswell & Creswell, 2018). Additionally, the researcher engaged in reflexive journaling and maintained an audit trail throughout the data analysis process to allow for greater trustworthiness and reliability in the study's findings (Merriam & Grenier, 2019).

Findings

A total of seven participants from seven different intercollegiate adaptive athletics programs consented to partake in the study, leading to a response rate of 58%. Of the seven participants in the study, two participants held the position of program director while five participants held the position of head coach.

The aim of qualitative description studies is to present findings to the reader in the most relevant manner (Lambert & Lambert, 2012). As the open systems model of sports organizations (Soucie & Doherty, 1996) guided the entirety of this study, it will again be used to organize the following findings. Each factor of the conceptual model will exist as its own category, divided into sub-categories where applicable, and be informed by a descriptive summary of participants' shared experiences in addition to exemplar quotes. A total of six categories and eleven sub-categories were established based on the conceptual model (Soucie & Doherty, 1996). See Figure 2 for an outline of which categories and sub-categories were represented in the study's findings. Participant quotes representative of each category and sub-category are presented in Table 2. No inductive themes emerged from the data related to the purpose of the study.
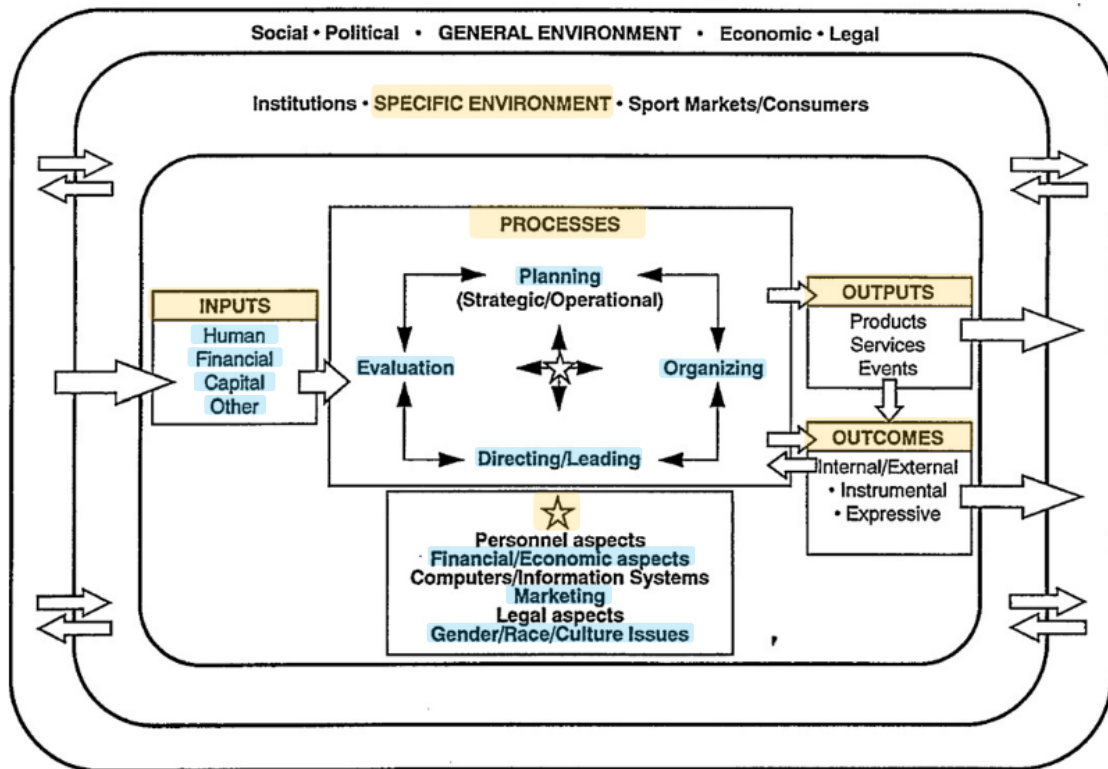
Figure 2. A priori categories (highlighted in yellow) and sub-categories (highlighted in blue) represented in the study's data based on the open systems model of sport organizations (From "Past endeavors and future perspectives for sport management research," by D. Soucie and A. Doherty, 1996, *Quest,* 48, p. 496).

Specific Environment

   The first category addresses factors that participants described related to the specific environment they exist within. Within the university setting, participants reported being housed in Athletics, Campus Recreation, Academic Departments and Disability Services Offices, one participant said their program is a collaboration between two locations. The participants' perceptions of why programs are housed in their respective locations tended to be based on alignment with the mission and vision of the housing

location, existing professional relationships, and the university's perception of the program. For example, one participant stated:

> *I think it* [the housing location] *had to do with just the one, the mission and vision of the college… and it just so happens our strongest relationships just happened to be from there.* – Participant 3

Participants listed several pros and cons they associated with their respective housing locations. Both participants housed in Athletics described perceived benefits associated with their housing location: ease of access to sport facilities and training staff, support in marketing the program, and access to funding. Additionally, one participant stated the requirement to comply with NCAA and NWBA liability standards as one drawback of being in Athletics:

> *So that's* [having to comply with NCAA and NWBA liability standards] *a little bit of a drawback, just because it forces our student-athletes and myself, my volunteers, to do double the work.* – Participant 1

Of the two participants housed in Campus Recreation, both reported the perceived benefit of ease of access to sport facilities, and just one participant described perceived benefits of student supports and adequate budgets. One participant housed in Campus Recreation detailed perceived drawbacks of no external marketing or development support and the existence of budget constraints, the other participant housed in Campus Recreation described no drawbacks.

Of the programs housed in an Academic Department or Disability Services Office, two participants described benefits of ease of access to support from professional employees. One participant in this setting perceived not having to comply with Athletics

rules, regulations, and reporting as a benefit along with having some flexibility in budgeting. A common drawback of housing in an Academic Department or Disability Services Office shared by two of the participants was lacking the dedicated sport facility spaces. The third participant in this housing location had been able to acquire dedicated facilities that the university's athletics department moved out of upon building new facilities.

Every participant reported external relationships their program had with other organizations outside of their program. On-campus relationships were maintained with various academic departments, disability services, athletic departments, financial aid, development, housing, registrar, campus recreation, and veteran services. One participant outlined a program relationship as such:

> *We work really well with our disability center, because of all the things that they can help provide for our guys.* – Participant 7

Additionally, most participants described external relationships their programs have with organizations off-campus. These relationships were with equipment sponsors, national sport governing bodies, community adaptive sport organizations, local schools, state and federal governments:

> *We partner with the State Department and we bring emerging leaders in from around the world as part of the global sports mentoring program.* – Participant 4

The final factor related to programs' specific environments has to do with the specific environments' perspectives of the programs. In other words, how the program is viewed by their respective universities and campus communities. Some programs conveyed

perceiving campus attitudes of respect; their student-athletes were seen as equals to other student-athletes on campus:

> *The athletes are seen as true student-athletes. –* Participant 5

One participant described the opposite, in an instance where the program's student-athletes were publicly perceived to be of a different status than student-athletes in the university's athletic department.

Inputs

The second category addresses the array of resources or inputs that participants reported in relation to their programs. Findings aligned with the four sub-categories of inputs with the conceptual model: human, financial, capital, and other. While some participants listed a greater quantity or diversity of inputs compared to other participants' programs, every participant identified inputs in each of the four sub-categories.

Human Inputs

In the sub-category of human inputs, participants recounted a wide variety of individuals who held a wide variety of responsibilities within each program. Every program described internal professional employees, individuals who were salaried and whose primary responsibility related to the intercollegiate adaptive athletic program. This included directors, coordinators, trainers, head and assistant coaches. Some programs listed up to five internal professional employees; others only identified one.

Additionally, every participant reported having external professional employees, individuals who were salaried, but whose primary responsibilities lay outside of the intercollegiate adaptive athletic program. This included team doctors, student services,

athletics department, and campus recreation staff. For example, one participant whose

program is housed with the Athletics Department stated the following:

> *We also get the athletic trainer. So, some programs don't have access to the athletic trainers that the athletic department has. So, we get that as well.* – Participant 5

Every participant also described some number of human inputs in the roles of

nonprofessional employees and student-athletes. The former being volunteers, student

employees, graduate assistants, and student interns; the latter being adaptive track and

field, wheelchair basketball, and wheelchair tennis student-athletes. For example, one

participant stated:

> *We do have some volunteers to help with that that are students, some student managers. Obviously, they're not planning it, they're just kind of showing up and I'm saying, hey you're going to do filming, you're doing the clock today when it comes to game day.* – Participant 5

Financial Inputs

In the sub-category of financial inputs, participants reported annual operating

program budgets that ranged from $0-$500,000. One program is entirely reliant on

fundraising and donations, the rest of the programs recounted established funding streams

stemming from program housing locations, state budgets, student fees, class fees from

courses taught by program employees, fundraising, donors, or endowments. For example,

a participant stated:

> *Well, the whole program is state funded. We also have some funds come*
> *from student fees, and then generated revenues. So, those are like the*
> *three areas.* – Participant 7

Six of the participants stated that the paid positions within their programs were funded by the respective program housing locations or state budgets. One participant stated their position was the sole paid position within the program and was funded in the following way:

> *So, we had a very generous donor donate half of my position and* [the university] *matched the other half.* – Participant 3

Every participant described some degree of financial resources dedicated as student-athlete monetary aid. The scholarships and aid described stemmed from program housing location budgets, fundraising, state vocational rehabilitation programs, disability services offices, university academic scholarships, out of state tuition waivers, and endowments. For example, one participant said:

> *We offer scholarships. Some of them are athletic aid, some of them are*
> *from our office for students with disabilities.* – Participant 1

Capital Inputs

In the sub-category of capital inputs, participants described tangible facility, equipment, and supply resources relative to their programs. Six participants reported using Athletics or Campus Recreation facilities to practice and compete and one participant reported having a facility solely dedicated to their program. Those with programs within Athletics or Campus Recreation expressed greater ease of access compared to those who exist outside of Athletics or Campus Recreation. For example,

one participant whose program is housed in an Academic Department stated the following:

> *We also have access to… our campus recreation facility and that's where the basketball teams practice on a regular day to day basis. We also host our tournaments in that campus recreation facility as well, but we're limited on when that's available.* – Participant 2

Although this participant's program shared Campus Recreation space for practices and competitions, they and one other participant reported having weight rooms and cardio space in their housing location dedicated to their program. For example:

> *But for the most part, it's, the court is all ours. Our sperate spaces, our locker room, weight room, strength room, athletic training room, that's completely ours. Nobody else has access to those spaces.* – Participant 6

In general, participants specified a spectrum of facilities their programs used: sport courts and tracks, weight training and cardio rooms, athletic training spaces, locker rooms, storage, research labs, media rooms, video rooms, and offices.

While every participant reported capital inputs of sport wheelchairs, the means of acquiring the chairs differed. Some participants stated that their programs do not purchase sport chairs for student-athletes, but they do offer access to sport chairs at a discounted rate and support student-athletes in writing grants to acquire sport chairs. Other participants stated that their programs do purchase sport-chairs for incoming student-athletes, but it may come with stipulations like the following:

> *We have our guys measured and we will pay for a chair for them. Okay, but it remains property of the university.* – Participant 7

Lastly, participants described having apparel for competitions, practice, and travel. Some participants conveyed inclusion in their university's sport apparel contracts while others described a desire to be included in said contracts but were being denied access. For example, one participant said the following:

> *Typically we keep uniforms for like five years, until they are in really bad shape… but, now with the opportunity to collaborate with athletics and inclusion of us in their Nike deal, then we've been able to order them a little bit more frequently than five years.* – Participant 2

Other Inputs

In the sub-category of other inputs, every participant spoke to some type of value, mission, or philosophy that went into their program. Participants conveyed a desire for their programs to benefit their campus or community, to ensure student with disabilities had opportunities to earn degrees, and to care for student-athletes as students, athletes, and individuals. For example, one participant stated:

> *Yeah, I think just in general, part of our mission is to be a resource for people with disabilities in the community.* – Participant 4

Processes

The third category addresses the actions participants and their programs manage in order to transform inputs into outputs. Overall, many of the processes participants shared were common among some or all the programs, but variance appeared in who was responsible for which processes. For example, one participant noted the process of coaching as a responsibility of volunteers, whereas other participants assigned the task of coaching to salaried internal professional employees. Similarly, the task of managing

travel in different programs was designated to program coordinators, head coaches, or athletic trainers. The following paragraphs outline the four sub-categories of processes: planning, organizing, leading, and evaluating.

Planning

In the sub-category of planning processes, participants illustrated developing long-term program goals and how they chose to utilize financial resources to work toward said goals. Participants shared program goals related to increasing the size of their teams, adding new sport offerings, developing new student-athlete supports, and adding new internal professional employee positions:

> *We're still developing that right. Like do we want an athletic training position, do we want strength and conditioning officially, do we want to pay the coaches.* – Participant 3

In order to work toward said goals, participants characterized strategies they had developed to align their resource utilization with their program goals, like the following:

> *So, when we created the endowment* [for student-athlete scholarships] *it was looked at more as a long-term plan understanding that we may miss out on some student-athletes now.* – Participant 6

Organizing

The next sub-category of processes concerns organizing tasks managed by participants and their programs. Every participant reported recruiting prospective student-athletes to join their programs through traveling to junior's league events, word of mouth, hosting summer camps, or using existing relationships between program alumni or current student-athletes to find new prospects. Five participants also spoke about

recruiting other human inputs in the roles of graduate assistants, student workers, interns, and volunteers like the following:

> *Because I'm part of the school, it's been very sort of easy to tap into the internship program, to talk to the athletic training folks, to talk to the… students and sort of get them involved whether they're volunteers or interns or undergraduate and graduate assistants, helping out with programs.* – Participant 3

Every participant stated that their programs organized several student-athlete supports. The range of supports that participants shared was vast and included organizing scholarship offerings, academic, disability-related, social, mental, and physical health supports to benefit their student-athletes. Some supports were accessed by tapping into resources on that already existing on the participants' respective campuses (i.e., tutoring and mental health services), like the following:

> *We try to find resources on campus that, because we don't have academic athletics advisors, we try to find all the resources on campus like trio tutoring or other tutoring programs for our athletes.* – Participant 4

Conversely, some participants described developing and maintaining tutoring and mental health within their program boundaries.

Every participant reported some degree of organizing facility usage for training, practice, and competition. This task commonly involved a reservation process in coordination Athletics or Campus Recreation facility managers that often took place far in advance of the date the space was needed, as such:

There's a form in place that every, we're required by our department guidelines to send our team calendar up in usually July, sometimes as early as June, for the next season. – Participant 1

Additionally, participants described organizing the acquisition of apparel, sport chairs, equipment, and supplies; managing equipment and supply inventories; sport chair management; and laundry. For example, one participant stated the following:

Then the repairs, if it's something that happens while being a part of our program, we'll replace tires, tubes, casters, spokes, upholstery, welds, whatever maintenance needs to be done. – Participant 7

Every participant noted the task of organizing program travel to competitions. Within the task of organizing travel needs were the following tasks in addition to organizing lodging:

He [the athletic trainer] *puts together the entire itinerary for the trip. So, when the bus is picking them up, when they're leaving, when they're eating.* – Participant 2

Leading

In the sub-category of leading processes, participants characterized actions they took to guide groups of individuals toward goals. The process most commonly listed in this sub-category was coaching during a number of team activities, like such:

I'm responsible for the day to day activities of the team. Whether it be practice, individual shooting sessions, one-on-one meetings, team meetings. – Participant 1

Similarly, participants also described leading in the context of leading camps and public outreach events. Some participants described supervising subordinate employees to monitor the progress and completion of tasks like the following:

> *I* [the head coach] *oversee our strength and conditioning portion, even though we've got a strength and conditioning coach that does that, she reports to me.* – Participant 6

The final leading process characterized by participants was that of advocating. Participants stated that they had advocated on behalf of their programs aiming to get graduate assistants, greater recognition for their student-athletes, inclusion in the university apparel contract, and:

> *Constantly bugging my supervisors about why do we have separate and unequal treatment on campus, why don't we get a marketing and development support for our program?* – Participant 4

Evaluating

In the sub-category of evaluating processes, participants reported evaluating and recognizing the academic and athletic achievements of their student-athletes in the form of end-of-season banquets. Some participants stated that they were included in their university's Athletics banquet, others stated that they recognized student-athlete achievements separate from Athletics. For example, a participant said:

> *We are included in the athletics end of year awards banquet, where our guys get academic awards and are recognized for their accomplishments at the same time as the traditional athletes are.* – Participant 4

Star

The fourth category addresses an array of factors that participants shared related to the star portion of the model including financial/economic aspects, marketing, and gender/race/culture issues. Though personnel aspects, computers/information systems, and legal aspects were factors within the conceptual model, they were not substantially reflected in the perspectives offered by participants.

Financial/Economic Aspects

In the sub-category of financial/economic aspects, participants recounted the task of fundraising and how their programs' financial standing impacted their overall processes. Four of the participants reported fundraising as a mandatory or vital task for their program to flourish or even just exist:

> *We have to raise about $15,000 a year to maintain a schedule that is competitive.* – Participant 1

Of these four participants, in addition to fundraising in order to travel to competitions, others reported having to fundraise in order to purchase essential equipment and supplies. The other three participants recounted fundraising as a less vital task, but still something they did to upgrade the program's equipment or manage their respective universities' perspectives of their programs:

> *Well we're not required* [to fundraise]*, but yeah, it looks good. Like we're not just sitting back asking for money.* – Participant 4

In addition to fundraising, participants reported ways in which their programs were impacted by financial pressures. Some programs conveyed some degree of contentment

with their finances, while others shared operating with frugality due to the uncertainty of the future of their finances like the following:

> *So, our like travel funds, I'm very frugal. We plan ahead… we're very conscious of how we spend our money because we know that at any moment, you know, whatever could happen to those funds, you know, and then that's not there.* – Participant 2

Marketing

In the sub-category of marketing, participants reported managing websites, social media accounts, and interacting with traditional media outlets in order to communicate and promote their program happenings like the following:

> *But also, I use it* [community outreach events] *as part of our social media, and I use it as part of our message to the university on the value of our program as a community resource.* – Participant 4

Some participants described receiving external assistance with marketing tasks from their housing locations, while others stated that it was a task they had to manage internally. Another way participants reported interacting with the public was through outreach events such as speaking engagements and sport demos at local schools:

> *Within the community we've done a number of outreach stuff with schools in the area. Specifically, my kids' schools, going in and doing a wheelchair basketball demo at their schools.* – Participant 6

Gender/Race/Culture Issues

In the sub-category gender/race/culture issues, participants only commonly spoke to their experience in working with student-athletes with disabilities and how that

experience can differ from student-athletes without disabilities. Four participants conveyed how their student-athletes' disabilities may affect aspects of their experience. Participants stated that this could lead to providing individualized supports for student-athletes, assisting student-athletes in accessing academic accommodations, or maintaining professional relationships with on-campus resources, like the following:

> *In adaptive sports there's a lot of learning disabilities, so that's a lot of IEPs and stuff like that as well. So, our disability resources is here on campus, obviously that office and myself work closely together. –* Participant 5

Outputs

The fifth category addresses the outputs that participants' programs had produced. The only output listed by each participant was that of intercollegiate adaptive athletics teams. Six participants said they had programs that compete in men's wheelchair basketball, with three participants doing so in the following way:

> *So, right now we've got a co-ed wheelchair basketball team that participates in the men's division, the collegiate men's division of the NWBA. –* Participant 6

Men's wheelchair basketball was the most common sport reported. In addition to men's wheelchair basketball, two programs had both women's wheelchair basketball and track and field teams. Lastly, the one program without men's wheelchair basketball reported only having a wheelchair tennis team. One other type of output that participants commonly mentioned, were events ranging from community outreach events, adaptive sport expos and summer camps:

> *We stared adult camps and veterans' camps and also… just an all-girls*
> *camp.* – Participant 4

Outcomes

The sixth and final category addresses the outcomes that participants characterized as resulting from their programs' outputs. Outcomes manifested in the form of increased public awareness and recognition of programs with potential benefits like the following:

> *But for us it's always been about building the exposure and having more*
> *people know about us that ultimately may come to our games, follow our*
> *social media, support us during fundraising events, things along those*
> *lines.* – Participant 6

Participants also spoke to an outcome of increased public awareness regarding the skills and capabilities of people with disabilities.

> *And through adapted athletics and recreation, that's how they* [past
> program leaders] *promoted the abilities and the possibilities of persons*
> *with disabilities.* – Participant 2

Discussion

The purpose of this study was to explore intercollegiate adaptive athletics program structures. An open systems model of sport organizations (Soucie & Doherty, 1996) was used to guide the endeavor. The study's findings show that the lens of the open systems model of sport organizations (Soucie & Doherty, 1996) can be an applicable lens through with to better understand intercollegiate adaptive athletics program structures. Participants described programs that were complex; had observable

inputs, processes, and outputs; and were dependent on resources from their environments. These findings align with the broader understanding of social organizations as open systems (Miller, 1955; Parsons, 1951). This foundational conclusion is important as, prior to this study, empirical application of open systems theory in the broad context of sport organizations did not exist.

Within the programs' specific environments, findings indicate substantial integration and coordination between programs and their specific environments. Participants described numerous relationships with organizations on their campuses and within their respective communities. The reasons for said relationships ranged from providing student-athletes supports to enhancing the visibility of their programs among community members. These relationships and their purposes parallel Starnes' (2001) guidance that nonprofit organizations ought to bolster strategic relationships to benefit their position and processes.

Inputs or resources that enter programs appear to depend substantially on programs' relationships to their specific environments. The programs that are situated within Athletics or Campus Recreation benefit from the infrastructure those settings provide. Depending on the program, these benefits may entail built-in training and development support staff and greater ease of access to facilities and funding. Additionally, existing within this setting means needing fewer internal professional employees because of the potential supports that already exist in the form of professional employees who are responsible for athletic training, strength and conditioning, marketing, etc.

In the realm of processes, participants described providing holistic care for student-athletes, to view them as students, athletes, and individuals. In this, programs organize physical health, mental health, academic, and social supports. This tendency may be programs reacting to pressures they receive from their environments. For example, because athletes are not eligible to compete if they do not perform as a student, programs are sure to provide extensive academic supports in order to keep athletes on the court. This phenomena relates to findings from Jung and Vakharia (2019) who described how arts and cultural organizations find greater success and relevance if they remain open to the pressures they notice in their environment.

Regarding the inputs of student-athletes and outputs of intercollegiate adaptive athletic sport teams, just two of the programs included in this study had men's and women's wheelchair basketball teams and adaptive track and field teams. Relatedly, these two programs had a substantially greater number of student-athletes compared to the other programs represented in this study. Based on program establishment years, these two programs are among the three oldest programs included in the study. So, the longevity of a program could correlate to hosting a greater number of sport teams and a greater number of student-athletes. Conversely, the youngest program had one sport team and significantly fewer student-athletes compared to the previously mentioned programs with far greater longevity. This trend highlights the potential for programs to get started with limited offerings and hints at the potential for programs to grow over time if they are able to navigate opportunities and challenges that may arise.

Limitations

A number of limitations should be considered when interpreting this study. First, of the 12 universities with existing intercollegiate adaptive athletics programs, as defined by this study, details from only seven of those programs are represented here. While this study did not aim to provide generalizable findings, the findings reported here may have some degree of transferability to others' unique environments.

Additionally, the study's participants held different positions within their respective intercollegiate adaptive athletics programs. Two participants held the position of program director while five participants held the position of head coach. There is potential for participants' perspectives to be inherently skewed toward different sets of roles, responsibilities, and knowledge bases. Due to this existence of varied perspectives across the study's participants, it is possible for some of the study's findings to be skewed toward the perspective typical of program directors while other findings may be skewed toward the perspective unique to head coaches.

Regarding the study's interview protocol, there is potential that participants failed to provide various details about their programs as the interview protocol neglected to ask a number of pointed questions such as items related to programs' general environments and star factors (i.e. personnel aspects, computers/information systems, and legal aspects). The absence of these questions likely led to the exclusion of certain details that could have enhanced the understanding of programs' structures.

When relying on human subjects as sources of data, it is possible for reported information to misrepresent factual happenings. There is potential that participants provided socially desirable answers to show their programs in a better light or

misremembered happenings or facts they were asked to report. Additionally, there is potential for researcher bias to impact the study and its findings. It is possible that the researcher's experience in some of the first interviews with study participants influenced the researcher's probing in later interviews. This could have led to acquiring different degrees of detail from participants based on when the interview took place.

Recommendations for Future Research and Practice

With regard to intercollegiate adaptive athletics program structures, it appears as though open systems theory is one applicable lens through which researchers can systematically and holistically explore aspects of program structures. Future research may consider specific circumstances within the intersection of these programs and open systems theory. For instance, exploring how programs maximize relationships with on-campus organizations in their specific environments in order to be able to survive with fewer internal human inputs. Because there is not a standardized place within university settings for adaptive athletics programs to be housed, a more in-depth investigation into the relationship between program housing locations and resource acquisition or processes seems warranted. Additionally, there is potential to explore how programs navigate stages of growth, stability, or decline. Intertwined in these stages may be the opportunity to investigate how program structures or certain circumstances relate to program efficiency or performance. Lastly, while this study focused specifically on intercollegiate adaptive athletics programs, program structures of other types of adaptive sport opportunities (i.e., adaptive intramurals) would likely differ. Therefore, it may be useful

to apply the open systems model of sport organizations (Soucie & Doherty, 1996) to other types of sport and recreation opportunities.

With regards to practice, future program leaders may utilize the perspective of this study's participants in determining the most feasible housing location for a prospective program. This could depend on existing professional relationships, the perception the university has toward the program, or alignment between the program's mission and the prospective housing location's mission. In addition to understanding what may lead a program to a specific housing location, program leaders should understand how each housing location may impact their programs' access to resources. For example, if programs exist in Athletics or Campus Recreation, they will likely have greater ease of access to sport facilities and benefit from an infrastructure that is accustomed to supporting sport teams.

Participants spoke emphatically about their relationships with others on their respective campuses and in their respective communities. Program leaders may look to focus a great deal attention on the development and maintenance of several different relationships to improve student-athlete supports, lessen the workload of internal professional employees, and support community needs. In this pursuit of building relationships, future program leaders should look to utilize resources that already exist in their specific environments rather than reinventing the wheel within their program boundaries. For example, looking to engage student-athletes in existing tutoring opportunities rather than constructing an in-house tutoring program.

In the vein of human inputs, there was substantial variance in the roles that existed within each program. Program leaders ought to consider the effectiveness of their planned or existing management structure and the choices they may have in the creation of types of positions. For example, there is potential to rely on a volunteer, graduate assistant, internal or external professional employee to guide athletic training. Lastly, regarding which sport teams new programs may look to develop first, one strategy is to start small. By limiting sport offerings in the beginning stages, future program leaders will need to acquire fewer human, financial, and capital inputs. Conscious growth of these inputs can then be a concerted effort over time which may allow for the addition of more sport teams.

Conclusion

The purpose of this study was to explore intercollegiate adaptive athletics program structures and an open systems model of sport organization was used to guide the process. Because this study was exploratory in nature, it provides a first look at how these programs can be conceptualized as open systems. Because of the lack of published research around this topic, this study aimed to produce foundational information about the make-up and operations of intercollegiate adaptive athletics programs in order to provide a bit of insight to those concerned with the topic. Findings from the study indicate that these programs are complex; have observable inputs, processes, and outputs; and are dependent on their respective environments. Future research has the opportunity to better understand these programs in all their complexity.

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CHAPTER FIVE

CONCLUSION

Students with disabilities have been competing in intercollegiate adaptive athletics since the 1940s. Over time, a number of universities have developed programs, but few currently exist, especially in comparison to the athletic opportunities available for the general student body. As more students with disabilities continue to pursue higher education, with potential interest in competing at the level of intercollegiate athletics, there is an opportunity to develop a greater supply of programs to meet the potentially growing demand of prospective student-athletes with disabilities. Additionally, student engagement through adaptive athletics has the potential to lead to higher degrees of persistence to graduation (Tinto, 1975), and U.S. federal action points to encouraging new program development. While there is existing interest in the process of developing new programs, virtually no published literature regarding the very foundational aspects of existing intercollegiate adaptive athletics exists. In the pursuit of increasing access to intercollegiate adaptive athletics, it seemed like a logical starting point to employ a thorough investigation into how programs are currently structured.

Therefore, the purpose of this study was to explore intercollegiate adaptive athletics program structures through the lens of the open systems model of sport organizations (Soucie & Doherty, 1996). The study's findings were informed by seven program directors and head coaches from across the United States. This exploratory qualitative descriptive study described numerous details regarding the structures of the participants' programs.

Overall, the study's participants described programs that can be understood as opens systems. The details they reported conveyed that programs structures are complex; have observable inputs, processes, and outputs; and are closely tied to their specific environments. Additionally, programs operate with a rather high degree of variability compared to one another. This variability appears to stem from existing in various types of housing locations within their respective universities.

Looking back, it is clear to me that the interview protocol could have been improved to better elicit participant reaction in relation to the conceptual model. As time passed, my familiarity with the conceptual model increased and granted me broader perspective through its lens. If I were to start this study again from the beginning, I would certainly make edits in the interview protocol to more purposefully question participants.

The process of writing the study's findings was a challenge. There were many iterations of how to describe and display findings. Matrices, tables, and narratives were all explored and constructed with narratives being selected as the most appropriate choice in the end. I think this challenge arose due to myself having little experience in the task of writing findings and trying to convey an incredible quantity of findings. Due to the breadth of information gathered, choices had to be made about which details to describe and which details to summarize. I tried to find a balance of discussing the big picture with added finer details where possible and most applicable or useful.

I think, to at least some degree, the notion of how this study began, to gain some better understanding of what makes up intercollegiate adaptive athletics programs, in order to offer a more informed lens to those interested in the topic, succeeded. As I have

described above, there are ways this study could have been better, but I do think there is value in what I was able to produce. This reflection has led me to recall a few participants' closing remarks during interviews, a few commented on how thorough my list of questions was and they could not think of anything else about their programs to share, while one characterized the questions I had asked as quite surface level. I am grateful for the attitude of the former, as I agree, there were a lot of important details shared in the interviews. But I am also grateful for the attitude of the latter, as there is certainly more to be known about these programs, more than I was able to uncover.

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APPENDICES

Appendix A

Interview Protocol

Date: _____ **Time:** _____ **Location:** _____

Interviewer: _____

Interviewee: _____

Introduction: Hello and thank you for taking the time to meet with me today. My name is Breida, I am a graduate student working to explore the structure of intercollegiate adaptive athletics programs, and I'm interested in your experience. I will be audio and video recording our interview today. This recording will later be transcribed; both the recording and transcription will be stored securely. I have some questions that will guide our conversation today and as we go, I may ask some follow up questions to clarify or inquire further about something you share. I estimate the interview to last about an hour.

Did you have a chance to review the informed consent document that was attached to the first email you received from me? Do you have any questions regarding informed consent?

1. What intercollegiate adaptive sports does your program compete in? (outputs)
2. How many athletes currently participate in your adaptive athletics program? (outputs)
3. Where is your program housed within the university setting? (specific environment)
    a. What led to your program being housed where it is? (specific environment)
    b. How does this location affect your program? (specific environment)
4. Do you have established relationships with fellow programs or departments on campus/in the community? (specific environment)
    a. What is the purpose of said relationships? (specific environment)
5. What roles exist in your program management structure? (human inputs)
    a. What are the coach's responsibilities? [likely links to PROCESSES and STAR] (human inputs)
    b. What are the director's responsibilities? [likely links to PROCESSES and STAR] (human inputs)
    c. What are the responsibilities of any other role (not coach or director) that exists within your program? (human inputs)
    d. Generally, how are these positions funded? (i.e., faculty line, endowment, etc.) (human inputs)

6. How is your program funded? (Grants, university funding, department funding, fundraising, donors, etc.) [likely links to PROCESSES] (financial inputs)
   a. How does your funding structure impact your program? (financial inputs)
7. What is your program's approximate annual operating budget? (financial inputs)
8. What facilities does your program have access to? (capital inputs)
   a. Tell me about these facilities… (capital inputs)
   b. Tell me about your access to these facilities… (capital inputs)
   c. How did your relationship with said facilities come to be? (capital inputs)
9. Tell me about your program's equipment… (capital inputs)
   a. How are things like sport wheelchairs acquired for your program? (capital inputs)
10. How does your program recruit athletes? (processes)
11. Do you provide supports to your athletes? (processes)
    a. If so, what kind of supports? (Athletic training, nutrition, tutoring, campus transportation, scholarships, etc.) (processes)
12. Is there anything else you would like to share about your program structure?

Thank you so much for your time, that concludes our interview.