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Redesigning Athlete Leadership

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REDESIGNING ATHLETE LEADERSHIP

by

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ABSTRACT

This dissertation explores the critical role of team captains in fostering effective leadership within athletic teams, utilizing a novel approach that integrates systems thinking and design thinking principles. It challenges the prevailing practice of coaches selecting team captains based solely on athletic prowess or popularity, highlighting the need for a more comprehensive and strategic approach to leadership identification and development.

The research employed an Idealized Design session as a unique methodology to gather insights and perspectives from key stakeholders, including coaches, athletes, and support staff. This approach seeks to uncover latent needs and systemic factors influencing team dynamics, leadership effectiveness, and the selection process of team captains. By engaging in a collaborative and iterative design thinking process, the study identifies ideal qualities and attributes of a team captain that align with the complex, interconnected nature of athletic teams.

The integration of systems thinking emphasizes the interconnectedness of various elements within the team environment, elucidating the multifaceted impact a team captain can have on overall team performance. By considering the broader context and interdependencies, the research offers a holistic understanding of the team captain's role and the potential influence on team dynamics.

The findings of this dissertation will contribute valuable insights into the development of a refined and strategic framework for identifying, selecting, and developing team captains. The proposed approach aims to empower coaches with a more nuanced understanding of leadership qualities, moving beyond traditional metrics and

promoting a more inclusive and effective team leadership culture. Ultimately, this research seeks to enhance the overall performance and cohesion of athletic teams by redefining the criteria for team captain selection through an innovative synthesis of systems and design thinking principles.

DEDICATION

I dedicate this dissertation to my mother, Karen Hunsberger, who passed away during this journey. During the classroom phase of my time in the doctoral program, I utilized my drive home from the East Falls campus to my University City home, to call her and discuss how thrilled I was. Only she could fully understand how being in class with my cohort was time that I absolutely cherished. I never wanted to end class early, and on the way home she was the person who I knew would understand that if I could choose to be anywhere in the world, it was with my cohort in our doctoral classes.

My mom had been entertaining my intellectual curiosity my entire life. From as early as I can remember, this poor woman – despite being more intelligent than she gave herself credit for - wanted little to do with my questions, opinions, concerns, beliefs, and all other academic discoveries and theories. However, as I sought her out to bore her with it all, she would still be a dialogue partner for as long as she could put up with me. So, when I shared in our phone calls how excited I was every time I left class and my academic family, I think she felt relieved that others were playing along with me, right where I wanted to be. She never avoided the joy I needed to share with her. She was the person who understood me and why I was so happy.

While it is a great regret of my life that I did not finish before she passed away, those phone calls after class are some of the great treasures of my life. In gratitude for those phone calls, and so much more, this dissertation is dedicated to her.

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I want to thank the following people for their role in my life while I completed this dissertation. I first want to thank my dissertation adviser, Larry Starr. It is my great honor to study under you. You made me believe. I will never be able to give back what you have given to me.

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Thank you as well to Brian Propp, former professional ice hockey left winger who played 15 seasons in the National Hockey League (NHL), from 1979 to 1994. You played in five Stanley Cup Finals with three different NHL teams – including the Philadelphia Flyers from 1979-1989 - and won the 1987 Canada Cup with Team Canada. Watching you live from Section 1, Row 4, Seat 10 during your entire Flyers career, I witnessed first-hand what a star player you were. In my opinion one of the most underappreciated stars in the history of the NHL. As a professional athlete your participation on my dissertation committee focused my attention on the "practice" of athlete leadership rather than only "about" it.

I must acknowledge Luke Swinton for his work as my writing coach. Mostly, I want to thank Luke for his easy, calm way. You did so much for me that ended up going nowhere. Despite that, I learned so much from you along the way.

I feel terrible for people who go through this doctoral journey and are not part of a cohort group. Being part of Cohort #1 in this program made the experience more than an

individual challenge. A family emerged, and a special one at that. The eight of us understand this bond. Bob, you kept me going at times when I was going to quit. You are a true friend. Tina, you got me back in class after my health scare, and it meant everything what you did for me there. Michael, it is such an honor to be your friend, and one day I will have that coin and will run into you, expecting my drink. Adena, you were my coach, but I think after our experience here, I hope you see me differently. Michelle, we were the first ones at the first Info Session. I was so happy to see you on the first day of class. Father Al, I cherish our time together, including pizza before the Tuesday night class. You are always there for us. Guy, thank you for all you did for me, especially coming back from my health issues. Darshi, Cohort #1's "plus one," thank you for being such a great person and support to me. I always knew you were there if I needed you.

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Finally, thank you to my family and friends who have been there for me throughout this process. To my Aunt Blanche and Uncle Bob, thank you for your support and enthusiasm. To Sarah, thanks for being there in Florida with me when I found out I was accepted, thanks for being there when my life was on the line, and just THANK YOU. To John, thanks for being such an amazing friend and the other person who views athletics the way I do. To Vern, Hannah, Faith, and Antonio, thanks for being my family.

I am so lucky to have you. Finally, to Heather, you are simply the best sister in the world. I could not have done this without you.

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CHAPTER 1 INTRODUCTION: SPORT AND LEADERSHIP

My Profound Love of Sports

In 2nd grade, when I was seven years old, our school sponsored a bookmobile program involving a trailer that sold books designed for elementary-aged student reading levels. I remember vividly they allowed us to walk through on Monday, decide what we might want to buy, and on Wednesday we were supposed to return with our parent's money to buy those books we were interested in. On Monday, I saw a biography of Edson Arantes do Nascimento, popularly known as Pelé, the Brazilian soccer player. I had only heard about him, but he looked like a superhero on the book cover. I noticed there were only six copies of the book, and I was very concerned they would be sold out, something we were told often happened to the most popular books.

On Wednesday, the whole 2nd grade was crammed into the trailer with instructions to not touch the books until everyone was inside. My class was the last in and I was in a panic fearing Pelé was the hottest book in the bookmobile. I only semi-politely edged my way to the book, ready to box out at least five others to make sure I got my copy.

When the teachers finally gave permission to shop, I grabbed it, and was first to the cash register, to get the most coveted book in the world. However, I noticed my friends who played sports and soccer did not get the Pelé book. When we were permitted one final discounted shopping day on Friday, I was shocked to see that five books remained. It was then that I became aware that my interest in sports was deeper than my friends. My Pelé soccer book led me to a Pete Rose baseball book, then a Bernie Parent

hockey book, and to many more. Decades later, my primary reading topics are sport biographies and organization/leadership which I frame through a sport lens.

Better than thinking or reading about sports, was playing. By eight years old, I played organized baseball, basketball and traveled to another town to play soccer. When I was not playing these in an organized capacity for the local teams, my friends and I played those sports as well as street hockey, tennis, and touch football, every day. Of the dozen or so boys my age in my neighborhood, most only liked playing sports. However, I was attracted to all aspects of athletics: I watched full games on television, studied the rules and regulations, read about the stadiums and arenas, and learned about the history of athletic leagues.

As I continued to play sports into high school, my attention shifted to performance: why did some teams I played on succeed with less talent? Why did a team perform great one day and poorly the next? I began to think that overall performance was related to teamwork and particularly playing *for* each other. This, I also believed, was fostered by good leadership, including the coach and peer leaders on the team. I observed these characteristics when it was good and bad, yet few on my teams seemed to make it the priority I thought it should be.

On high school sport teams, I hoped my distinctive interests with athletics would make me an excellent candidate for a captain role, despite not being the best player. I lobbied for the role in some cases but was never selected ahead of the best players. I found other ways to be a leader, but I would have loved the designation and authority the role of captain would have given me. After high school, from age 18 to 35 years, I continued to play organized street/ball hockey competitively. While I cherished my youth

experiences, I acknowledged that very few high school athletes go on to have adult athletic careers. I was able to play this adult sport at the highest levels, and I am proud to have been teammates with eight Mid-Atlantic Ball Hockey Hall of Famers.

My accomplishments were also personally worthwhile, however, because they fueled my interest in leadership's role in performance success. I was the leader of my own team for four years, and was selected twice for the end of year all-star game. In my first year leading a team, we won the championship in Division 3 (lowest level of competition). The next year we moved up to Division 2 and made it to the finals. In our third year, we won Division 2. And in our final year, we made it to the Finals of Division 1, losing to the seven-time champion "Force," a traveling all-star team which had swept the last five finals four games to none. When we played against them, they won four games to two in a best of seven series, by far the toughest test they had faced in years. I believed one reason we had so much success was due to my focus on leadership. I believe it provided an edge that other teams did not have.

Organizational and Athletic Leadership

My professional career has been in higher education administration working as a manager and administrative leader in safety and security, and later in real estate and operations. My colleagues believed that earning a graduate degree in Higher Education Administration was the main pathway to be eligible for more responsible positions. While I had no reason to disagree, I continued to be deeply connected to sport and to ways to discover answers to my questions: what impact does leadership and quality organizations have on wins and losses, personal development, teamwork, sportsmanship, and athletic justice? I hoped I could answer my questions in higher education by

approaching classes through the lens of athletic leadership, and also support and advance my career as an administrator.

MS in Organizational Dynamics

After reviewing every master-level degree program within driving distance of Philadelphia, only was a fit for me, the M. S. in Organizational Dynamics program at the University of Pennsylvania. There, I anticipated I could approach my interests from two perspectives, my professional experience and my interest in athletic organizations and leadership.

I applied, was admitted and began the program in 2002, and immediately discovered it was perfect for my interests in athletics. In my first two classes I realized that the program demanded one to wear their professional hat in their approach to topics, issues, problems, projects, discussion, reading, and writing. I felt it was appropriate and ideal for me, at any time, to substitute my recent leadership role on my hockey team, for my professional leadership role. If this was truly the study of Organizational Dynamics, using experience from an organization as serious and competitive as a men's hockey league that had a strong history of legitimacy and competitiveness was as appropriate as any professional role.

My first experience was in my first semester in a class called *Ownership Matters*, taught by Andy Lamas. There was a reading early on about Green Bay's community ownership of the NFL's Packers that helped me see athletics organizations were at least partially on the table for discussion. As I worked with Andy during the class, I found a sympathetic ear for my desire to approach the lessons and topics in the class from my athletic organization and leadership "hat" more than my professional hat. He encouraged

me to do my final project on a topic from my athletic experience. My final project was a paper on the many ways my adult men's league, in a niche sport, could become a regional "professional league." It was less business plan and more spiritual guide for how a sport that was unlikely to turn a profit for many years, if ever, could still showcase great athletics for both players and fans. The paper focused on the love of the sport, and less on the power to make money, and how "owners" were going to have to be prepared to finance a project that was more likely to lose money than make money. I remember Andy was an enthusiast for my passion and the innovation, but also the challenging concept of "ownership" this project would wrestle with.

While not every class gave me great opportunities to go week to week through an athletic organization and leadership lens, there were several classes in which I was able to use my nonprofessional leadership role in athletics throughout the class. The classes I exploited most were *Leadership in Organizations* and *Organizational Experience* both taught by Jim Larkin, and John Eldred's class called *Organizational Politics and Power*.

Organizational Experience put the focus on me. Why was I not focusing on my "career" and instead on this nagging passion and interest in what makes teams over and under achieve? He forced me to look at myself through my athletic leadership lens and ask a series of questions: What is your worth? How do you identify yourself? How much do you have to give away to others? What are you doing now? How did you become who you are? What are your goals? How can you impact the future? What are you trying to influence? What makes you special? What do you not want to be? This is a sample of the probing questions that we faced all semester as we studied leadership and lives well

lived. One reason I am writing this dissertation is due to the nagging declarations I made for this class and in the final paper.

In *Leadership in Organizations*, I began what has become a lifelong study of leadership in athletics. The first way this class helped me was getting comfortable with analysis of all types of leadership. We examined closely Krippendorff's (2003) *The Art of the Advantage*. While not all of the stratagems in the text were easily transferable to athletics, many were or could easily be modified to fit an athletics leader. More importantly, the whole process excited me as I could see the connection to "the advantage" and leadership in a team sport. I thought to myself perhaps one day I could one day write *The Art of the Advantage* type of book for athletics.

Similarly, the study of "leadership moments" helped me see the effectiveness of illustrating historical leadership decisions and practices that had an impact on team and individual development, or more directly, winning games and championships. We looked specifically at Wharton Professor Michael Useem's book, *The Leadership Moment*, to study specific incidents and their impact on what was being led. I began to feel comfortable considering these moments in politics, military, business and other fields were the same as athletics. While I understand the stakes are different, leading humans and their organizations toward a successful goal is the same. My insecurity over studying an athletic leadership moment, because it might seem trite in comparison, was waning. I even began to believe that while sports metaphors could seem overused, a good analysis of a leadership moment in team athletics could translate into all of these other fields.

The class where athletic leadership was the lens for many lessons and activities, was John Eldred's *Organizational Politics and Power*. This was unique in that it allowed

for a close examination of a rarely discussed part of day-to-day function in organizations. We learned that politics was not to be ignored or brushed off. It was fascinating to study and consider these somewhat taboo topics. Once a person starts digging into them with an open mind, one quickly realizes that leaders must have the skills and interpersonal abilities to be aware of the organization's politics. This is where I began to see how a team leader (head coach) can benefit from a formal leader among his or her players.

Coaches are extremely susceptible to many of the trappings and perceptions of their use of their power. The sports metaphor, "losing your locker room" refers to a coach whose team has lost respect for their coach. This is politics in athletics. The team has turned on its leader. There are seemingly many ways to avoid this, however the one I am brought back to time and time again is the role of the team captain. This is a person (or people) who can work for both the team and the coach to make sure such a rift never happens. I left this thought-provoking class more interested than ever in the role of the captain.

Strategic Leadership and its Concepts

I was not satisfied with where my graduate degree journey ended. I felt I was on the cusp of something important in a place where my talent was needed. When a new Doctoral program at Philadelphia University was announced in Fall 2015, I knew this was my chance to dive deeper into this area of athletic leadership. Studying leadership types and other foundational areas of leadership such as definitions and themes was important to my understanding of how the study of leadership impacted my notions of what an athletic leader was and could be. I applied and was admitted into the first cohort of the Doctor of Management (DMgt) in Strategic Leadership degree program in Spring

2016. Early in my doctoral studies, I saw quickly how course topics intersected with athletic leadership.

Systems Thinking vs. Analytic Thinking

System thinking was at the core of our studies in the Strategic Leadership doctoral program, and I applied its importance to athletic leadership right away. By system, I refer to a whole which is defined by its function in a larger containing system of which it is a part. An athletic team, therefore, is a social system relative to the larger containing organizational system consisting of several teams that compete or play together. If one frames athletic leaders through a systems-thinking lens, do they care about the details that impact parts of the containing system? Are they aware of the little things that intersect with the program?

I remember meeting a Division One head coach soon after he was hired to rebuild a moribund program in a lower division school (Division One schools are commonly home to the best athletes in college sports). I mentioned to him that I thought the game starting time at 1pm showed a lack of reverence for the rest of college football which started games at noon or 3:30pm. I shared that if we were Notre Dame and intentionally trying to be different, that would be one thing, but as one of the worst teams in college football, it just made us look more confused and not ready for the big time. His response to me was that he did not notice, but he would just "show up when they tell me the game time is." Based on his demeanor, he was not being coy, he really did not care. I knew in that moment that his level of success would be limited. He should have had an opinion about the start time, but his ambivalence showed me that he was never going to care about the entire system.

Leaders of athletic teams should not just tell players where to go or what to do; rather, they should be stewards of a program that in most cases goes on, year over year, through many leaders' stewardship. From a system perspective, they are stewards of an organizational system, and their part of a bigger system. The difference between winning and losing athletic leaders may be using systems thinking to navigate complexity.

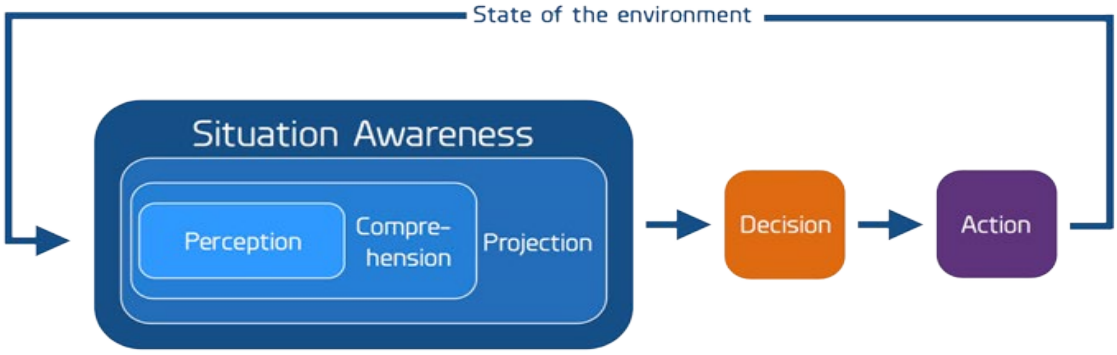
Why in the complex sports league (National Football League) were the Pittsburgh Steelers the only undefeated team early during the pandemic season of 2020, arguably the most complex competitive season? The Steelers, I posit, have owners who have embraced systems thinking. Now, during a volatile, uncertain, complex and ambiguous (VUCA) season, the team with the same ownership family since the team's inception in 1933, on a team that has had only three head coaches in the past 50 years, they have the foundation to handle the rough waters of this tough season. Where most teams are struggling with volatility by approaching the unique challenges and new rules of a pandemic season with analytical thinking, the Steelers appear to be leaning into their long history of systems thinking to confidently cope with changing rules and roster anomalies. Where other teams are struggling with uncertainty, they are bringing understanding. Where other teams are struggling with complexity, they are bringing navigation skills. And where most teams are struggling with ambiguity, they are relying on their agility. Again, even with a team with average talent, it is no surprise that a team known for their leadership, stability and consistency is dominating a VUCA season. My evaluation is this is an organization with a history of systems thinking leadership, ready to emerge in times of complexity. In the next section, I describe the key concepts that are informed by applying systems thinking theory to the practice of athlete leadership.

Situation Awareness

I argue that a critical proficiency required by effective athletic leadership is situation awareness and appreciation of situation awareness models (see Figure 1) developed by Mica Endsley for the US Navy (see Endsley, 2015 for a review).

Figure 1

Simple Situation Awareness Model



Situation awareness is the discerning apprehension of immediate surroundings including the context in order to properly frame then make good decisions and take effective actions. The essentials of situation awareness are *Perception*: seeing reality and apprehending truth for the moment; *Comprehension*: understanding with "ubervision;" and *Projection*: extending understanding and cautiously considering possibilities (Parse, 2018). Endsley (2015) noted that situation awareness has been applied to many domains including air traffic control, military operations, transportation, power systems, law enforcement, emergency management, health care, space, transportation, education, mining, and oil and gas operations. I argue that gaining situation awareness is critical for separating good from the great athletic leaders.

When I consider leaders who have situation awareness, I include Bill Walsh, the innovative football coach of the San Francisco 49ers who won three Super Bowls in the 1980s. One of his lesser-known innovations was not practicing with pads during the season. This meant no hitting and less physical practices, focused on plays, positioning and execution. He was the first to do it and it slowly became the normal way all teams practiced. At the time, it was so far outside the norm, but Walsh knew he was onto something. His teams hardly ever lost, and most thought it was because of his innovative, "west coast offence" or his Hall of Fame Quarterbacks Joe Montana and Steve Young; I would argue this innovation was as responsible of as any. The situational awareness was two-fold: a) they were losing too many players to injury and players were not as effective later in the year from wear and tear on their bodies; b) as a coach who focused on the cerebral part of the game, he found his game plan practices were more efficient and effective if they were without hitting and focused on the nuance of the plays. Situational awareness is important in all leadership, but, I argue, specifically in athletic leadership it can help create a dynasty.

Mindset

Mindsets are the mental lenses through which everyone, including leaders, filter information and make sense of and navigate the situations they face. Mindsets determine what and why leaders do what they do (Gottfredson, 2020). Coaches who take over losing teams understand that the same players need to change both the intellectual and emotional way they see themselves. Intellectually, they know the players must address the reality of their situation: they have lost more games than they have won, so how can they start to win with the same players? Emotionally, they are used to losing and possibly

see themselves as losers. Changing team and player mindsets is an obvious charge of the new leaders.

Carol Dweck (2007) described growth and fixed mindsets (see Decision Labs, 2022). A growth mindset holds the premise that qualities, abilities, and intelligence can change. The premise of a fixed mindset, on the other hand, is the belief that people's talents, abilities, or intelligence cannot be changed. Those with a growth mindset are more mentally prepared to approach and take on challenges, take advantage of feedback, adopt the most effective problem-solving strategies, provide developmental feedback to subordinates, and be effortful and persistent in their pursuit of goals (Gottfredson, 2020).

Changing mindset also can come from peer leadership. One of the best examples in athletics of this helped lead me to my obsession with the role of captain and peer leadership. One of my favorites in baseball was Kirk Gibson and the 1988 Dodgers. It is one of the most iconic baseball moments when Gibson, the team's unquestioned leader and best player, was too hurt to play in game one of the World Series he led them to. Still, when a chance to hit at the end of the game seemed possible, he put on the uniform and told his manager he could bat. He hits a home run to win the game in a classic at bat and hobbles around the bases, never playing again that series as the Dodgers swept the A's in four straight games. This home run is not the leadership moment or the mindset change, that moment happened seven months earlier….

Gibson was a former American League MVP and 1984 World Series champion with the Detroit Tigers, going to the Dodgers in the Spring of 1988. Gibson was a strong, physical guy, starting at wide receiver for Michigan State football team as well as playing baseball. I read this story in *The Sporting News* as a small item long before the home run

heroics. I later bought Gibson's book to confirm the story from his perspective. The basics of the story were, he took baseball and winning very seriously, and he thought the Dodgers, including manager Tommy Lasorda, were goofing around and having too much fun for a 4th place ball club (the year before). It was slowly eating at him each time he saw goofing around, when finally, someone played a practical joke on him, trying to loosen him up. It backfired, he challenged the whole team to a fight, called them out for being weak and not caring, then he left the team. The manager got him to come back and after Gibson returned, he told the team, "Look, I know how to win, and I can help get you guys there, but you have to take the game seriously and do your best for each other and I'll be a great teammate and have your back every time." From then on, the newest Dodger was their unquestioned peer leader and seven months later, with legs he could hardly walk on, he dramatically won the game and turned the World Series around.

Mental Models

Systems thinking is a mode of thinking that incorporates mental models. One popular definition of mental models was developed by Rouse et al. (1992), "Mental Models are the mechanisms whereby humans are able to generate descriptions of system purpose and form, explanations of system functioning and observed system states, and predictions (or expectations) of future system states" (p. 1300)

A mental model is a prototype we believe exists that describes how we think and synthesize the world around us. It includes the important things we use to make decisions by feeding into our prototype of what the outcome will or should be. Shared mental models have impact on team performance. Rouse et al. (1992) stated "team performance

will be enhanced to the extent that team members hold shared or common mental models of the task or team" (p. 1297).

While mental models are most valuable when they can calculate a lot of information in the simplest manner, sometimes it is the athletic leader who helps the team focus on one simple mental model. My favorite example of a peer leader, during a complex and emotional time, setting a simple mental model for the team when he felt it was needed happened in 1994.

Five-time National Hockey League Stanley Cup Champion, and former MVP during his time with another team, now with the New York Rangers, Mark Messier, pointed his team to where they were going. The Rangers, who had not won a Stanley Cup since 1940, knew they had a good team, but they were facing another good team in the conference finals. The New Jersey Devils would go on the win the Stanley Cup the next year. They were a very good team and were up three games to two over the Rangers after winning games four and five. After the Devils won game five, 54 years of falling short were weighing on the Rangers chances. Messier knew he had to do something and told the media that the Rangers "will win" game six. It took on a life of its own and was the headline of every newspaper in New York. He simplified the complexity and set the mental model for his team. He said this about why he did it, "As a captain, you are always gauging the confidence of the team, and I really wanted them to believe we could win game 6" (NHL, 2017)

Of course, in the third period, down one goal, he scores the game tying goal, then he scores the game winning goal, finally and an empty net goal to clinch the victory with the third period "hat trick". I get chills thinking of Messier's outstretched arms after the

third goal, slowly approaching the middle of his bench as if he was trying to hug the entire team at once. The Rangers went on to beat the Devils in game seven and win the Stanley Cup, also in seven games, against Vancouver.

Purpose of this Dissertation: Selection of Sport Team Leaders

Several skills and competencies have been suggested in the literature and in practice for how one should identify and select a sport team captain (Beam et al., 2004; Dupois et al., 2006; Glenn & Horn, 1993; Loughead et al, 2006; Moran & Weiss, 2006), but only recently have there been some suggestions of how coaches and organizations should target formal peer leaders (Fransen et al., 2020). In general, coaches are given full autonomy regarding how they select captains. The three most common choices are the coach selects using subjective criteria, the players vote using their subjective criteria, or a hybrid of the two (Kent, 2004).

This dissertation will address the general problem of how to select a team leader in organized athletics. I argue that the current practice of using subjective criteria is vague, ineffective and inadequate. This dissertation is also intended to improve efforts to develop athlete team leadership proficiencies. Specifically, I am seeking the design for an ideal process, i.e., set of experiences that can be developed, implemented and sustained for developing the leadership role of team captain.

One premise of this work is that athletic leadership is domain-agnostic which means the fundamental premises, processes and outcomes are reasonably stable across all sports. I do not need to study separately what is required for a hockey team captain compared to a lacrosse team captain. Another premise is that to design an ideal process requires a requisite mindset, i.e., participation by a broad community of stakeholders. As

leadership will be conceived to be a systems conception, it requires input from the stakeholders of systems to enable understanding.

Understanding elements for selecting team captains remain central to this dissertation inquiry. I am interested in the ideal capacities, competencies, or proficiencies that a captain can possess that supports winning athletic games. I am interested in how a team coach can identify and discover these characteristics for emerging or active team captains. As a systems conception, I am interested in the degree to which an "athletic department" can or should set criteria, guidelines, traditions, training and professional development, to engage coaches in a culture. Would such a systems-culture enables development of young (aspiring and emerging) leaders for this role and future leadership roles after athletics?

Research Questions and Proposed Methodology

Aligned with the general problem and purpose of this dissertation, I am proposing two research questions.

1. What information, knowledge, and understanding are most desirable, valuable, feasible and useful to select a captain for an athletic team?
2. What is the ideal design for an experience or education program that can help to select an athletic team captain?

Most efforts to answer questions about leadership generally and athletic leadership specifically are drawn from literature which presents an analytic and research evidence. In this dissertation, I review this literature, but I also present approaches from the systems and design literature. I combine these because when a systems framework is

integrated with design methods, outcomes are improved (Pourdehnad, Wexler, & Wilson, 2011).

Systems and design methods were selected because these approaches are rigorous and are appropriate for complex problems (Jackson, 2019) which I argue is the kind of challenge that describes athletic leadership. To discern the proficiencies of these leaders, I will facilitate design sessions of current and former coaches and athletic directors, the stakeholders who will design guidelines and best practices for the role of captain. The participants will be invited to be "consultants" for a proposed new school athletic department and their role is to help design the protocols and expectations.

Audience and Contributions of Dissertation

The contributions of the dissertation will assist coaches, managers, athletic directors and others in a position to lead an athletic program. My intention is to help them use the best possible methods, tools, and ideas to select formal peer leaders for their organizations. This dissertation also hopes to contribute to the growing and emerging research that frames athletics and athlete leadership as a complex system challenge.

Structure of Dissertation

The dissertation is presented in five chapters. Chapter 1 describes the background and context for the work. I outline the general questions of interested, the two research questions and the approaches that will be applied to answer them. Chapter 2 is the Literature Review. In this chapter, I provide a comprehensive review of athletic leadership and of applications of systems thinking in athletics. Chapter 3 is the proposed Methodology wherein I describe in detail the methods and tools that will be used in the design session. Chapter 4 presents the research and results, including an analysis of the

data collected. In Chapter 5, I provide my overall conclusions, as well as my recommendations for future research. My final summary will include personal reflections from the research and the process.

CHAPTER 2 LITERATURE REVIEW

Overview

This chapter presents the scholarly and practice literature from which I will draw support when I respond to the research questions posed in Chapter 1. (1) What information, knowledge, skills, competencies, or understanding are most desirable, valuable, feasible and useful to select a captain for an athletic team? (2) What is the ideal design for an experience or education program that can help athletic teams, coaches and organizations use criteria to select a captain and prepare them for the role?

The chapter begins with a review of cognitive approaches applied to athletic leadership based on the Cynefin framework a context-based approach which separates the literature into two groupings. One contains the prevailing literature concerning peer leadership in athletics, which impacts both team cohesion, as well as individual development of leaders and followers. The other contains the emerging literature on application of systems thinking.

Context in Athletics

In an article for the UK's *The Guardian* newspaper, Christopher Mowles (2013), professor of complexity and management at the Hertfordshire Business School (UK), noted,

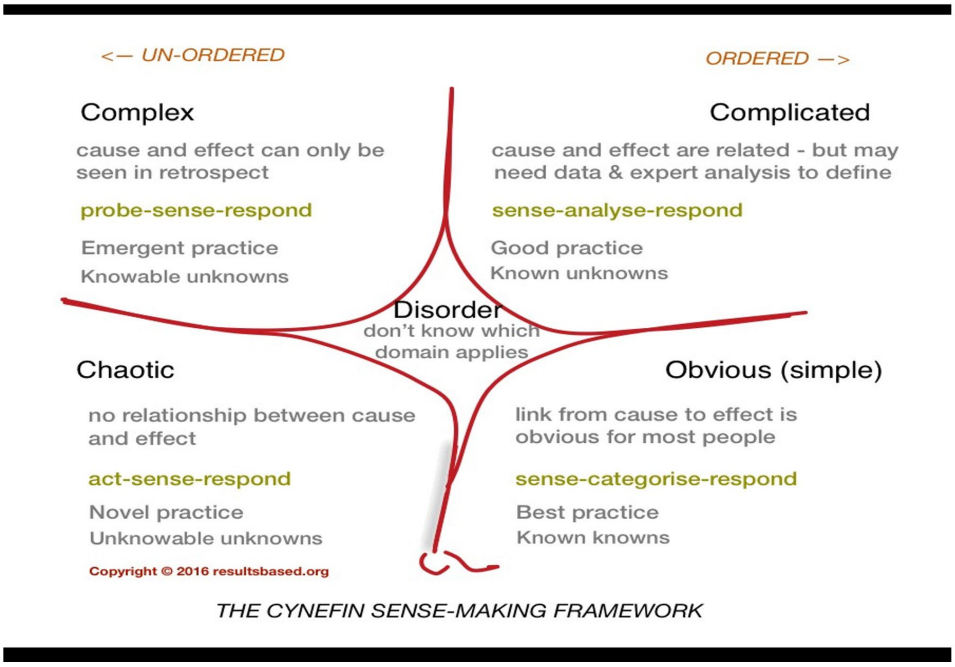
> I was recently invited by a colleague to complete a questionnaire for a 360-degree appraisal of her competence as a leader. The questionnaire assumes an orderly world where the leader predicts and controls, brings peace and harmony, motivates, encourages and transforms. Even with a moment's reflection we notice how different things are in everyday life rather than in the idealised world of the

> questionnaire. For example, what if we thought of organisations as complex, both stable and unstable? What if we recognised that leaders are in charge but not always in control, that they act, but they are also acted upon? We may notice that even the most powerful leaders in the world … have to respond constantly to the unexpected and the unwanted. Plans do not work out as anticipated (partly because they intersect with other people's plans), colleagues will always agree and disagree, co-operate and compete. Leaders may command but they will not always be obeyed, whether covertly or overtly, for good reason and for bad. Leaders may be powerful, but they too are caught up in the game of organisational life and have their own constraints (p 1).

Challenging the traditional linear conception of leadership, Northoff (2013) noted that "the concept of context … includes different kinds of contexts, social, cultural, mental, and bodily" (p. 77). That contexts change was the central concern of Snowdon and Boone (2007) who introduced the Cynefin Framework as a tool to help leaders classify the context of a problem (Figure 2). Using the Cynefin Framework, a leader rather than asking, 'what should I do to solve this problem?' asks, 'what kind of problem is this?' Leadership problems are proposed to exist in varying contexts located on a continuum. Problems (and opportunities) that are more well-ordered or reasonably well-structured would be categorized as obvious (simple) or complicated. Other leadership challenges that may be poorly structured or unordered would be categorized as complex or chaotic. In each context and grouping, the premises for understanding and for intervening (solving) differ.

Figure 2

Cynefin Framework (Snowdon & Boone, 2007; resultsbased.org, 2016)



Snowdon and Boone (2007) described this framework as a tool for sense-making described by the Welsh word, *Cynefin* (pronounced kuh-NEV-in) which may be translated as *place or habitat*. This integrates most of the typologies of others and posits that a leader's understanding and decision making can be framed into context categories that are structured and ordered or unstructured and unordered. In ordered contexts, leadership can be defined, described and explained to students by experts (teachers) who use and refer to good and best practices determined by evidence based scientific methods. Content objectives include traits, styles, behaviors, situations, and core competencies (see the extended description in Starr (2020a; 2018).

According to this conceptual framework, when the context is unstructured and unordered, it may be defined as complex or chaotic. In this context, cause and effect cannot be predicted; only appreciated in retrospect; leaders cannot easily follow

standardized strategies; instead, they must probe-sense-respond for innovative solutions that emerge by considering many elements. When the context of a situation is complex, it is also referred to as wicked (Churchman, 1967; Rittel & Webber, 1973) and a mess (Ackoff, 1974; 1981). Snowdon and Boone (2007) illustrated the difference between a problem that is ordered and complicated compared with one that is unordered and complex is as follows:

> It's like the difference between, say, a Ferrari and the Brazilian rainforest. Ferraris are complicated machines, but an expert mechanic can take one apart and reassemble it without changing a thing. The car is static, and the whole is the sum of its parts. The rainforest, on the other hand, is in constant flux—a species becomes extinct, weather patterns change, an agricultural project reroutes a water source—and the whole is far more than the sum of its parts (p. 73).

Complexity, according to Jackson (2019), is the significant source of social and other problems. According to him, an organizational system is "a complex whole the functioning of which depends on its parts and the interactions between those parts" (p.3).

The Cynefin framework and discerning between complicated and complex problems has been applied to a variety of sports including simple actions such as learning new body movements (Jaksich, 2019), and to anti-doping measures (Kazlauskas & Hasan, 2010). Some new voices have emerged in team sports, suggesting that coaches need to consider Cynefin in preparing for rugby (Jenkins) and volleyball (Martinez, 2016), but these examples are rare. Table 1 suggests how formal peer leadership may be appreciated through the lens of this framework.

Table 1

Examples of Formal Peer Leadership Issues Using Cynefin

Unstructured/Unordered Challenges/Contexts	Structured/Ordered Challenges/Contexts
Complex Problem: New coach believes strongly in formal peer leadership and its ability to help team be successful, but has not been given guidelines, system or blueprint to select the best player(s) for the role(s). Solution: Use systems thinking and stakeholders to design ideal system for new program. Then use results as basis for selecting best players for the formal role(s).	**Complicated** Problem: Coach sees many varying tasks that need to be completed by a responsible player throughout the season. Solution: Coach considers the tasks and his or her players and selects a player or players deemed best to for these roles using expert and evidence-based good practices.
Chaotic Problem: There is no captain at the first game and a starting player must represent the team at the coin toss. Lack of representation is holding up the start of the game. Solution: Coach looks at the starting lineup and picks any available person to represent the team at the coin toss. This allows the game to begin.	**Obvious (Simple)** Problem: There is no captain; teams require one on the roster before the season. Solution: Coach selects any player to assign as captain. This quick choice fulfills the requirement immediately and is a best practice.

As a framework, Cynefin offers a way to categorize and describe the literature associated with athletic leadership. Scholars and practitioners who assume the context in which they operate (i.e., social, cultural, mental, and bodily, as per Northoff (2013)) is well-structured and orderly, and solvable by knowledgeable leaders or experts using analytic thinking and evidence-based research, present their descriptions and solutions as obvious or complicated best or good practices. Scholars and practitioners who assume the context is unordered and poorly structured (i.e., non-linear) describe the situations as

complex or chaotic and refer to solutions that emerge from complexity thinking, systems thinking, and design thinking. The prevailing approach is the former and is described first.

Prevailing Analytical Approaches in Leadership and Athletics

Theories and Models of Leadership

According to a review of the literature by Morrill (2007), "in which certain relationships and groups influence the thought and action of others" (p. 4) leadership is primarily described in the Western tradition in three themes. In a follow-up, Starr (2020a) proposed a fourth theme that tackles the complexity of settings and problems that systems methods and systemic design problem-solving are appropriate for. This chapter will go into more detail about the fourth theme, which is central to this dissertation and will be described later in this chapter.

The first three leadership themes are presented in this chapter because they are the most prevalent and widely used methods for describing, expressing, and dealing with leadership issues. The underlying idea of the themes is that the context of leadership is reasonably well organized and structured, that leadership issues can be examined to identify their underlying causes, and that linear predictions can be made with a respectable level of accuracy (validity and reliability). The themes are categorized as (1) patterns of indirect impact, (2) patterns of direct influence, and (3) patterns of interactions.

The first, Indirect Patterns of Influence, assumes that leadership develops when a single person exhibits distinctive thinking, ideas, or behaviors that have a profound but indirect impact on the beliefs and behaviors of others, referred to as followers. Examples

of unusually well-known leaders include Vincent Van Gogh, a leader in creative practice, Steve Jobs, a leader in design and technology, Albert Einstein, a leader in scientific and mathematical thinking, and Mahatma Gandhi, a political and spiritual figure. Thought, concept, and practice leadership can be found in many regular social and professional organizations when a leader offers a compelling vision or creative solution to a problem that draws followers. Being generated by an individual's thoughts and deeds rather than by a formal position of power or formal institutional support is key to the leadership associated with indirect influence.

The theme of Direct Patterns of Influence focuses on achieving organizational objectives and is concerned with a person's direct role, function, and performance within a group or organization. A group or organization's adherence to expectations and goals set by others and its performance requirements are described in literature that addresses this issue. The leaders shown in this topic are referred to and may use their job title depending on their assigned roles and responsibilities in the organizational hierarchy. They also shape or directly affect results. The majority of direct influence traits center on abilities like subject knowledge, communication, charisma, and vision; styles like task-oriented, people-oriented, democratic, and autocratic; and actions like declaring purpose and establishing ethical norms. The two-factor theory, one of the earliest behavior methods, proposed that task behaviors and relationship behaviors made up the majority of leadership.

The third theme examines the social interactions between followers and leaders in terms of their needs and interests. This is referred to as Relational Leadership and Patterns of Relationships. Leadership literature explains how to employ influence, i.e.,

the procedures used to participate in collaborations intended to help people change their perspective and freely embrace another's. These procedures aim to achieve common corporate objectives and a feeling of significance.

Theories and Models of Athletic Leadership

Dupuis et al. (2006) argued the most noteworthy model of sports leadership was the Multidimensional Model of Leadership (MML) described by Chelladurai (1978; 1984; 1993). Chelladurai draws primarily from the theme of Direct Patterns of Influence by assuming an underlying additive formula described as

> a linear model comprised of antecedents, leader behaviors, and consequences. The antecedents are factors that influence leader behavior and can be classified into situational (e.g. team goals, norms), leader (e.g. leader's experience or personality), and team member characteristics (e.g. gender, ability). These antecedent variables are believed to influence three states of leader behavior; labeled required, preferred, and actual. Specifically, situational and member characteristics influence both required (i.e. parameters and the organization) and preferred (i.e. group member preferences) leader behavior, while leader characteristics influence actual leader behaviors. The consequences contained in the MML are group performance and team member satisfaction which are a function of the degree of congruence among the three states of leaders' behavior (p. 62).

In addition to the MML, Chelladurai and Saleh (1980) created the Leadership Scale for Sports (LSS), a tool to measure five leader behaviors: training and instruction, democratic, autocratic, social support, and positive feedback (Dupis 2006). Chelladurai

and Saleh (1978) went into more detail on all five, explaining that training and instruction are about improving player performance through training tactics and techniques. They label democratic as leadership that encourages shared ownership of decision making, where possible. They describe autocratic as essentially the opposite, where a coach exerts his or her authority. They expand on social support by suggesting it is an environment created that athletes enjoy and interpersonal relationships, compassion and care are fostered. And finally, positive feedback is, as its name suggests, an environment where positive feedback and commentary for individuals and the team are encouraged.

Burkett et al. (2014) proposed Social Exchange Theory as another theoretical explanation of athletic leaders. Social exchanges are defined as, "a two-sided mutually contingent, and mutually rewarding process involving transactions or simply exchange" (Emerson, 1976, p. 336). Moran and Weiss (2006) connect Social Exchange Theory with athletics leadership by suggesting athletes often exchange skill sharing or experience for a perceived leadership role on the team.

Peer Leadership in Athletics

The two roles, formal leader (i.e., the captain) and informal leaders have been studied as both one group of athlete leaders, and as separate, unique leadership groups (Loughead, Hardy, & Eys, 2006). Crozier et al. (2017) do an excellent job simplifying the two positions by explaining "Formal leaders are those individuals designated as leaders by the organization or team (e.g., captains), whereas informal leaders are those individuals who emerge as leaders through experience and interactions with other team members" (p. 87). Crozier, Loughead, and Munroe-Chandler, (2013) share a third

category that may be under-addressed but should be considered along with formal and informal leaders, and that is peer followers or athlete, non-leaders.

There are four primary functional peer leadership roles identified by Fransen et al. (2014). Two functions have roots in Bales's (1950) Role Differentiation Theory. In athletics, Fransen writes that the first two are considered "on field" functions. The first is the accomplishment of group tasks. The second is a motivational role, most concerned with interpersonal relationships. The next two functions are considered "off field" leadership functions are labeled "external" and "social." A leader's external functions include representing the team at meetings and functions, as well as one who steps up to represent the team with the media or to provide a team's message to the public (Rees & Segal, 1984; Todd & Kent, 2004; Voelker, Gould, & Crawford, 2011). Fransen et al. (2014) discovered teams that could achieve leadership in these four responsibilities (task, motivational, social, and external) increased team confidence, strengthened team identification, and improved team ranking.

While the four leadership roles were generally clear, Martin, Bloom, and Loughead (2006) helped with explaining social vs. motivational functions. The social function is best defined as "this leader ensures teammates are involved and included in team events" and "this leader offers support and is trusted by teammates" (p. 148). Where the motivational function is concerned with interpersonal relationships on the field, the social function is most concerned with interpersonal relationships off the field.

In addition to the four roles of athletic peer leaders, there are many tasks identified in the existing literature, many that fall under more than one role as many task

categories serve multiple roles (complexity). Examples include communications flow, player satisfaction, guidance, setting expectations, and maintaining order.

Team Cohesion

Team cohesion has been the primary focus of many researchers studying athletics leadership (coach and peer leadership), team performance and participant satisfaction. Cohesion has a long history of interest from the group dynamics research community, inside and outside of athletics. It is a construct that researchers hold in high regard among the many small group variables that exist (Lott & Lott, 1965). In the workplace and other areas within organizations, it has been considered essential to team building and productivity (Cohen, 1997). In fact, the study of athletic cohesion gets a great deal of respect and notice from mainstream social and industrial/organizational psychology (Eys, 2018). Salas et al. (2015) conducted a review of articles pertaining to the measurement of cohesion in all types of organizational environments, and they found that 20 of the 70 were athletics focused.

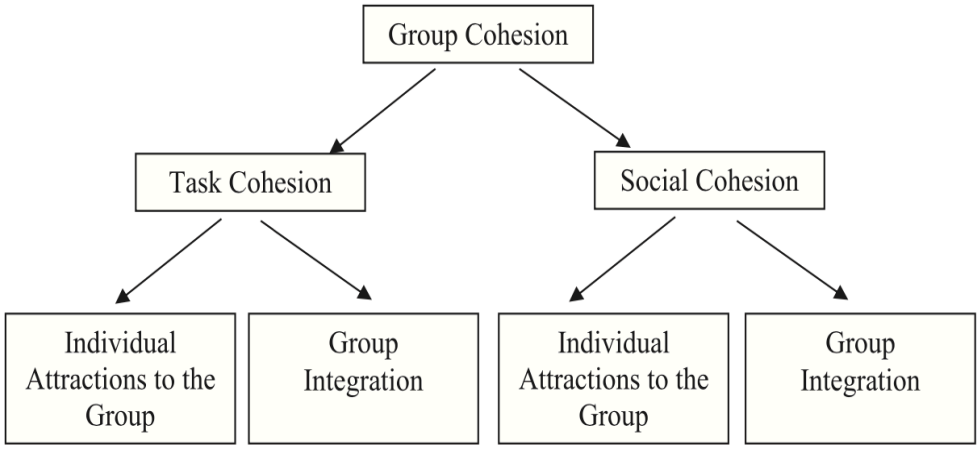
In their definition, Carron, et. al. (1998) define cohesion as, "a dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (p. 435). Carron, 2002 endorses "both a task-oriented basis and a social oriented basis for group unity" (p. 172). This was a key distinction as often the focus of team cohesion research was on either focused on task cohesion or social cohesion, but rarely both.

As Eys and Brawley (2018) observed, "the definition, conceptualization, and measurement of cohesion within physical activity research have remained consistent and

repeatedly supported for the past 30 years due to the pioneering work of Carron et al. (1985)" (p. 3). As that statement suggests, Carron et al. did more than just define team cohesion, they also created an analytic conceptual model (Figure 3) and measurement tool referred to as the Group Environment Questionnaire (GEQ; Eys, 2018).

Figure 3

Conceptual Model of Athlete Team Leadership



The widely used multidimensional measures of cohesion, the Group Environment Questionnaire (Carron, Widmeyer, & Brawley, 1985) was formed from a conceptual model where Carron, et.al. (2002) explain: "group members are assumed to hold two predominant types of social cognitions about the cohesiveness of the group: group integration, (an individual's perception about the closeness, similarity and bonding within the group as a whole); and individual attractiveness to the group (an individual's perceptions about the personal motivations acting to retain him or her to the group)" (p 170). The GEQ comprises subscales that assess the following constructs: (a) Individual Attractions to the Group–Task (ATG-T, the individual's perceptions of his/her personal involvement in task aspects of the group), (b) Individual Attractions to the Group–Social

(ATG-S, the individual's perceptions of his/her involvement in social aspects of the group), (c) Group Integration–Task (GI-T, the individual's perceptions of the degree of unity the group possesses surrounding task aspects), and (d) Group Integration–Social (GI-S, the individual's perceptions of the degree of unity the group possesses regarding social aspects) (Eys, 2007).

Task Cohesion

Schofield (2016) explains task cohesion as "the amount of drive or motivation that a group/team has and how they use their drive or motivation to reach their group goals" (p. 4). In addition, it has also been suggested that an important part of task cohesion is "team cooperation" which is also important to achieving the team's goals (Cronin, 2015). Task cohesion has also been characterized as having a focus on all individuals getting the opportunity to reach both their individual goals, as well as the team's goals (Dhurup & Reddy, 2013).

Social Cohesion

Much of the literature involving social cohesion includes its role in policy discourse, pushed by sociopolitical institutions and transnational unions. In this context, it has become a catchword for societal issues (Schiefer, 2017). Many authors have suggested different definitions and frameworks over the years from the fields of Political Science, Psychology and

Chan et al. in 2006 proposed a definition:

> Social cohesion is a state of affairs concerning both the vertical and the horizontal interactions among members of society as characterized by a set of attitudes and

> norms that includes trust, a sense of belonging and the willingness to participate and help, as well as their behavioral manifestations (p. 290).

Schiefer's (2017) review examined individual approaches to distill six distinguishable dimensions of social cohesion that were found to commonly appear in publications: Social relations, identification, orientation towards the common good, shared values, quality of life, and (in)equality. Schiefer (2017) expanded on each separately.

The first was Social Relations which Schiefer (2017) considers between groups and individuals as the most prominent aspect of Social Cohesion. The four components identified as being key to Social Relations are *social networks, trust, mutual tolerance and participation*. *Social networks* are the quality and number of social interactions with family, friends, and acquaintances. This can be measured by things like how often people visit each other in the neighborhood or talk on the phone (see Villarreal & Silva, 2006). *Trust*, is considered essential to have a society that works well together. For instance, Larsen (2013) observes social cohesion as the "belief—held by citizens in a given nation state—that they share a moral community, which enables them to trust each other" (p. 3). *Mutual tolerance* across different types of groups is required for a society to be cohesive. Connections between different cultural, ethnic, or other types of groups within a community, as well as groups defined by a particular way of life or sexual orientation, are also considered to be part of social relations. Finally, *participation* in the public life reflects sense of belonging, solidarity and the readiness for mutual cooperation in the pursuit of common goals (Berger-Schmitt 2000).

The second was Identification which observed by Kearns and Forrest (2000), is an emotional attachment to a geographical entity is a reflection of shared values, lifestyles, and socialization contexts. It gives safety and a sense of self-worth, both of which improve a person's propensity to participate in activities and build social networks.

Third is Orientation towards the common good. This perspective requires a sense of responsibility for the good of the community as well as a commitment to following social norms and maintaining order. The World Bank suggests, "a condition of things in which a collection of people (delineated by a geographical location, such a country) exhibits an aptitude for collaboration that fosters a climate for change that, in the longer run, benefits everybody" (Ritzen et al., 2000, p. 297).

Fourth is Shared Values which refers to building shared values and communities of interpretation is necessary for social cohesion, according to Maxwell (1996). Kearns and Forrest (2000) define a cohesive society as "one in which the individuals share common values" (p. 997). Shared values are said to be crucial for social cohesion because they help society's members identify shared plans and goals and regulate social interactions through similar behavioral norms (Botterman et al., 2012; Kearns & Forrest, 2000).

Fifth is Quality of Life. Physical health, psychological well-being, and objective living conditions are three categories that make up the dimension of objective and subjective quality of life. These categories are discussed in terms of their (un)equal distribution across people, groups, or regions (Schiefer, 2017).

Sixth is the Degree of (in)equality of which two main components are: distribution of resources and fractionalization (Easterly et al., 2006). Fractionalization has

been also stated as degree of ethnic conflict or degree of ethnic fragmentation (Alesina, 2003).

Additional Definitions and Subdivisions

Along with Carron's definition, additional definitions and subdivisions have been put forward. Dhurup and Reddy (2013) described team cohesion as simply "a group or team's ability to stick together as they work together to reach their goals" (p. 383). On an individual level, however, the also added the idea that "cohesion also consists of an individual's desire and opportunity to make and keep new friends in the process" (Schofield, 2016, p. 4). In addition, task and social cohesion are certainly not the only subdimensions of team cohesion. Three additional proposed subdimensions of team cohesion were proposed by Salas et al. (2015) from review of existing literature. The three subdimensions are belongingness (i.e., members' attraction to one another; Shaw, 1981), morale (e.g., group member loyalty; Cartwright & Zander, 1960), and group pride (Beal et al., 2003) (Eys, 2018). Table 2 presents a summary from Salas (2015).

Table 2

List of Cohesion Subdimensions and Their Definitions

TABLE 2: List of Cohesion Subdimensions and Their Definitions

Subdimension	Definition	Citation
Task	An attraction or bonding between group members that is based on a shared commitment to achieving the group's goals and objectives	Carron, Widmeyer, & Brawley (1985); Festinger (1950)
Social	A closeness and attraction within the group that is based on social relationships within the group	Carron et al. (1985); Seashore (1954)
Belongingness	The degree to which members of a group are attracted to each other	Shaw (1981)
Group pride	The extent to which group members exhibit liking for the status or the ideologies that the group supports or represents, or the shared importance of being a member of the group	Beal, Cohen, Burke, & McLendon (2003)
Morale	Individuals' high degree of loyalty to fellow group members and their willingness to endure frustration for the group	Cartwright & Zander (1960)

Team Cohesion in Athletics

The prevailing view is that athlete leaders can both positively and/or negatively influence team cohesion (Vincer, 2010). The next logical consideration is that higher quality team cohesion leads to better performance outcomes and overall satisfaction (Widmeyer, 1978). Therefore, the assumption is that athlete leaders can have an impact on performance outcomes and overall satisfaction through their influence on team cohesion. This idea has been supported by a meta-analysis by Carron et al. (2002) who found a moderate to large effect size between these two constructs (Vincer, 2010). As Smith et al. (2013) put it:

> Theoretically and intuitively, it is apparent that unified teams are likely to work together more effectively and consequently perform better than less cohesive teams. Therefore, understanding how sports teams can become more cohesive is

an important topic for researchers and sport psychology practitioners alike (p. 249).

Complexity and Systems Approaches in Athletic Research

In reviewing the enormous and increasing literature on leadership, Yawson (2016) described a clash of paradigms based on the differing contexts in which leadership functions. He noted in particular that increasing complexity had created a paradigm shift from (analytic) linear to (systemic) nonlinear understanding and practice.

> The world is operating in a century of complexity, unprecedented interconnectivity, interdependence, radical innovation and transformation, and unforeseen new structures with unexpected new properties … These problems are characterised by changing requirements and solutions that are difficult to recognise because of complex interdependencies … These call for a different approach to how leadership research is conducted. There is a battle for the soul of leadership … a profound divide in philosophical understandings – in the deep meanings – regarding what constitutes the nature of leadership and the research enterprise around it (Uhl-Bien and Ospina, 2012 74). This is because they have developed from contrasting philosophies of science, that is, contrasting answers to the ontological and epistemological questions that reflect the assumptions researchers bring to their work (Uhl-Bien and Ospina, 2012 56). The ontological justification of the linear approach to leadership has been the dominant premise on which leadership research has been conducted. However, starting from the early 1990s, there has been an emerging paradigmatic shift to the nonlinear

epistemology of practice and the effect on 21st-century organisations (Yawson, 2016, p. 26).

Systems Approaches in Leadership and Athletics

Jackson (2019) proposes six types of systems: physical, such as rivers; biological, such as organisms; planned, such as automobiles; abstract, such as philosophy; social, such as families or closely working teams; and human activity, which maintains product quality. Athletic leadership is described primarily as a social system.

Social Systems

As presented in the previous section of this chapter, most existing leadership research focuses on the assumption of a context that is well-structured and orderly in which obvious or complicated challenges are located and for which analytic and scientific evidence-based research approaches are appropriate (Snowdon & Boone, 2007). These kinds of leadership problems consider the characteristics of leaders such as personality, skills, and relationships to be linear predictors of performance. However, the emerging approach to athlete leadership research and the primary interest of this dissertation concern the premise that athletic contexts are unstructured and unordered and have challenges that are complex and sometimes chaotic and for which systems approaches and design thinking problem solving are appropriate (Jackson, 2019). These kinds of leadership problems concern athletic teams formulated as organizational social systems.

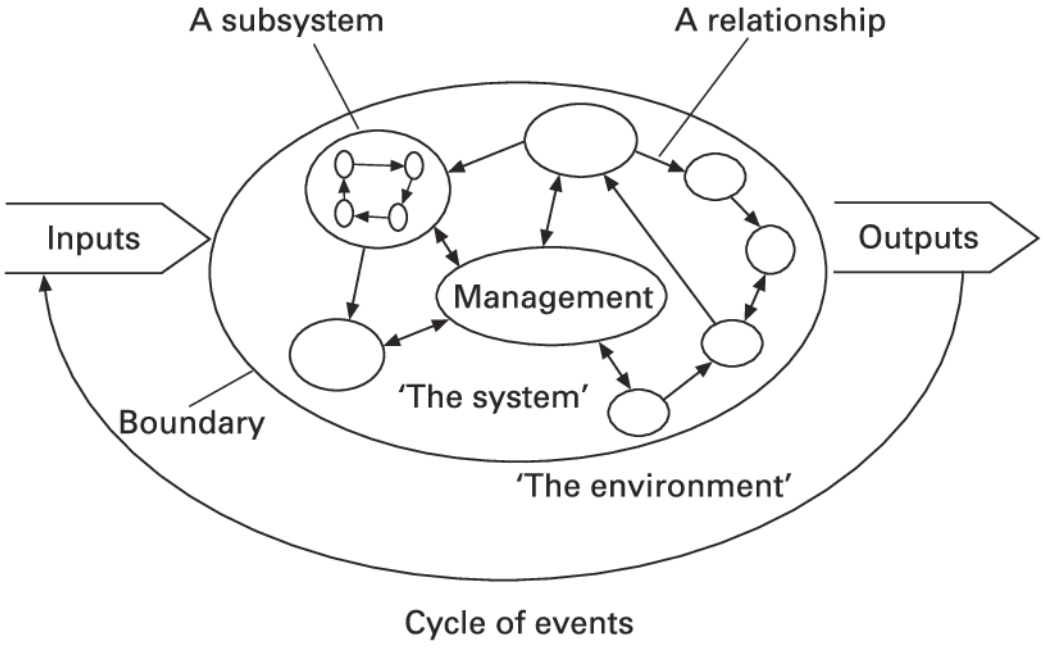
By system, I refer to a whole which is defined by its function in a larger containing system of which it is a part. An athletic team, therefore, is a social system relative to the larger containing organization system consisting of several teams that compete or play together. To understand a team system, it is appropriate to focus on the

characteristics of the containing system as well as the patterns, interdependencies, and interactions of the elements in the team system.

One approach to understanding the system formulation that characterizes athletic teams and organizations is through cybernetic social systems theory (Ashby, 1956), a transdisciplinary approach involving purposeful elements; namely, inputs, transformation process, outcomes, and circular causality, i.e., feedback. For more than 40 years, cybernetic models have been applied to improve understanding in a wide variety of domains including family therapy (Keeney, 1981), management and organizations, (Jackson, 2003; Ghiasi, Shahrabi & Siamian, 2017), pedagogy (Sloan, 2019) design (Fisher & Herr, 2019), creative arts (Apter, 1969) and leadership (Chioma, 2020). Jackson (2003) presents a simple model of a system and its components (Figure 4).

Figure 4

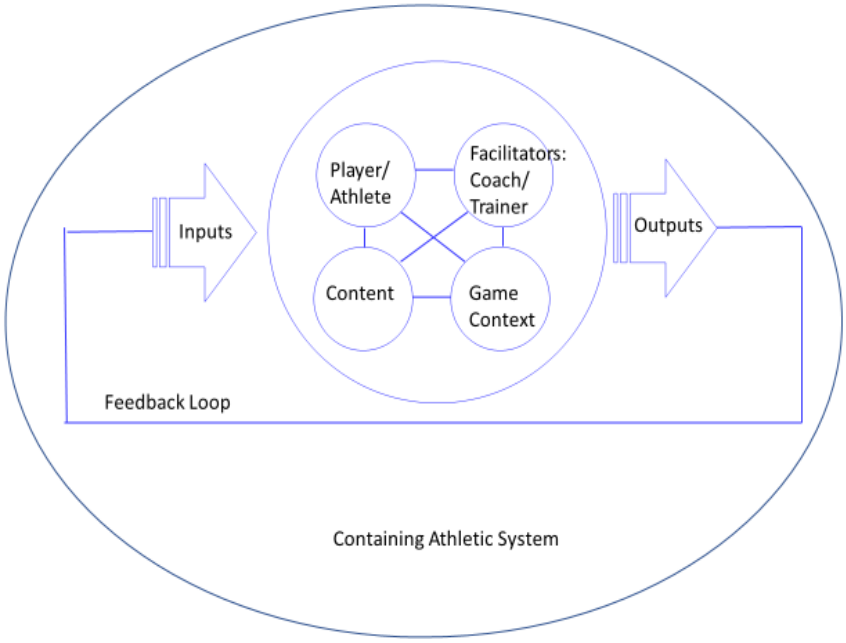
Simple Cybernetic Social System (Jackson, 2003)



Starr (2020b) applied and expanded this system model to learning leadership and noted that the transformation process has four central interdependent and interacting elements which coproduce *learning*. Figure 5 applies this to *learning athletic leadership*. The **inputs** of this model would be players input, coaches experience, competence and leadership ability, school or organization philosophy or ethos, fans and alumni dedication and commitment of support, staffing resources, facility resources, stability and organization of league and competition, marketing and outreach support.

Figure 5

System Model of Learning Athletic Leadership



The elements within the **transformation process** are: (1) characteristics of *players* including team leaders, emerging leaders and their colleagues or teammates who may be regarded as team colleagues, members and followers; (2) characteristics of *facilitators* and teachers including coaches, trainers, mentors, and administrators; (3) *content* of athletic game including rules, policies, internal organizational dynamics and

the variety of athletic activities involving other players, teams and organizations; and (4) *context* characteristics which including the culture and environment of games, influence of containing systems, and educational and learning systems, politics, communities, and professional agencies that influence performance. The **outputs** of the model would be well organized and prepared team, successful play during the game such as prepared plays working or successful defensive systems, fair play and competitive games and events, healthy players whose injuries are well cared for, formal and informal leadership impactful, acknowledged and appreciated and finally and overall positive and just experience for all involved. The **feedback loop** would be results from final record and results, end of year interviews with players, feedback from stakeholders, adjustments in programs from lessons learned, raw attendance numbers, suggestions for rule changes and other areas identified for improvement.

Systems Thinking

The nature of systems thinking, according to Senge (1990), is in seeing interrelationships rather than linear cause-and-effect change, resulting in seeing systems of change rather than synopses. He encourages active participation in action-reflection and gaining insight and purpose from action and activity feedback. In this formulation, as recognition of patterns emerge, feedback transforms into learning.

According to Bartleby (2020), Ludwig von Bertalanffy, an Austrian biologist, proposed an organized biologically-informed general systems theory in the 1940s. In the 1960s, the model was applied to social systems which could be closed or open with elements that interact with their surroundings (Andrews, 2021). As new properties emerged, the system continually developed and adapted to its context. Improvement of

complex interacting social systems, according to Ackoff (1974), necessitates systems thinking. He went on to describe that all human organizations are highly complex social systems characterized by atemporality, which meant long periods of time between doing an action and witnessing both planned and unintentional behavioral patterns as a result of that action. Furthermore, social systems are comprised of purposeful organizations that contain purposeful people and groups inside a wider purposeful system. Rather than focusing on individual people or specific activities and tools, social systems thinking focuses on the interactions of people as stakeholders (Ackoff, 1974).

Goodman (2018) supports Ackoff's concept of systems thinking by claiming that it necessitates understanding behavioral patterns as well as the *deeper unseen structures* that control them. Kim (1999) used an iceberg metaphor to explain these structures by describing events/actions, patterns/trends, structures, and mindsets, and by arguing that a complex problem should be understood not merely by the visible events but rather by forces that inform and interact with them. What is witnessed are events, “the occurrences we encounter on a day-to-day basis” that are only the tip of the iceberg (Kim, 1999, p. 4); patterns (including attitudes and beliefs), structures (patterns of patterns), and other forces are found below (Andrews, 2021). Figure 6 from Starr (2018) shows Kim’s iceberg model looking forward, and Figure 7 presents this from the top looking down. This view shows a system with its containing systems.

Figure 6

Kim's Iceberg Model (from Starr, 2018)

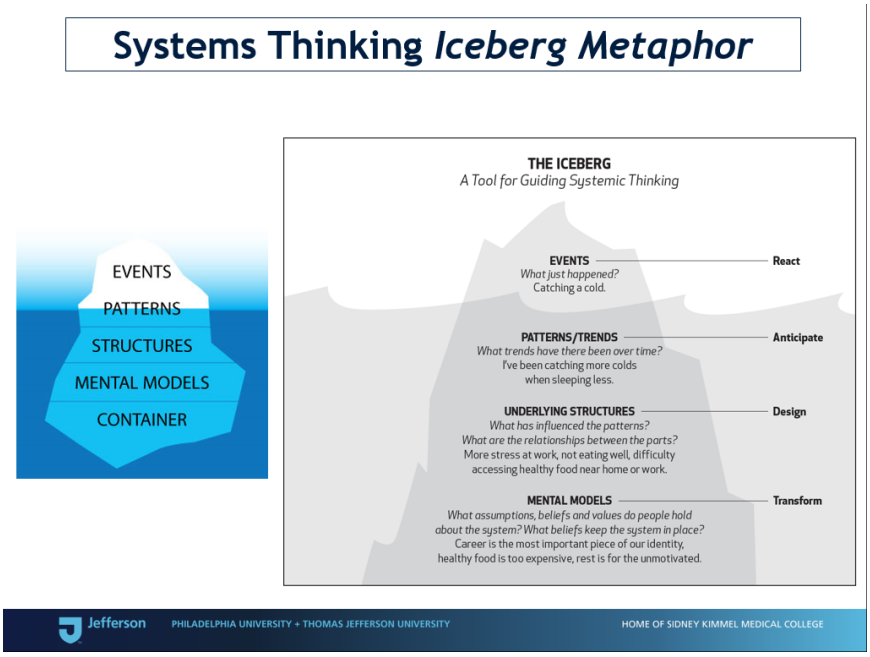
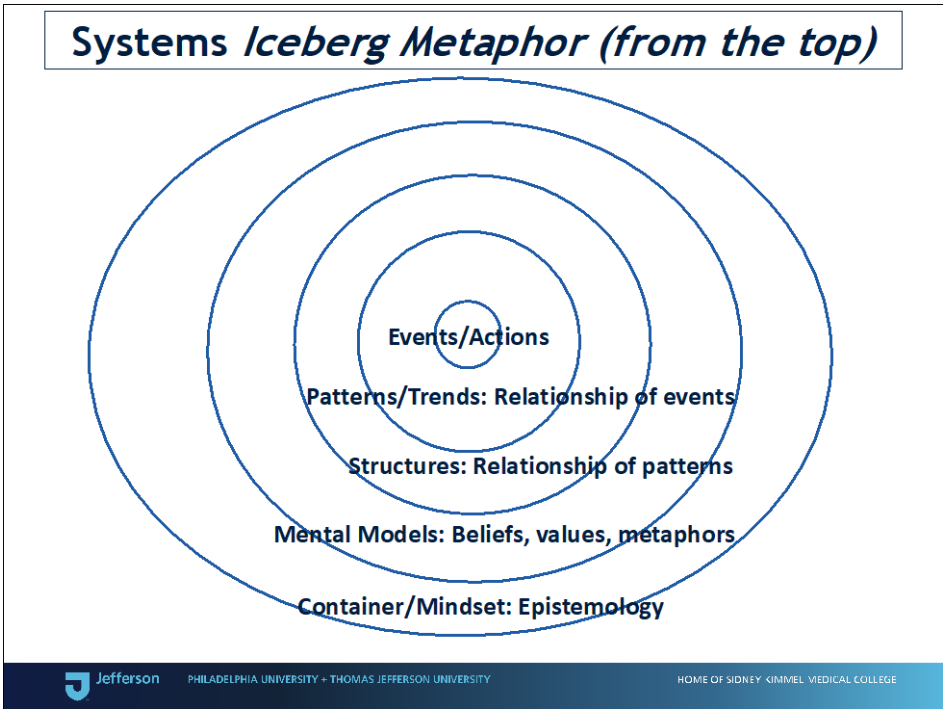


Figure 7

Iceberg Model - viewed from the top down (Starr, 2018)



Tani, Papaluca, and Sasso (2018) conducted a review of the literature to see how the key themes of complex systems were linked to open innovation research. Open innovation has been explained by Oxford Review Encyclopedia of Terms (2021).

> a situation where an organization doesn't just rely on their own internal knowledge, sources and resources (such as their own staff or R&D for example) for innovation (of products, services, business models, processes etc.) but also uses multiple external sources (such as customer feedback, published patents, competitors, external agencies, the public etc.) to drive innovation (par. 1).

The activities of the system and its constituents are the outputs of the actors' influences in complex systems. They discovered in open innovation that, like complex systems, businesses identify connections as critical to their operations; they must collaborate with independent partners and not try to limit their influence by securing a preset outcome.

Reubenstein-Montano et al. (2001) attempted to assess the most relevant information sharing and integration in order to propose what an extensive framework might include as a whole. They underlined the importance of situating knowledge management in a broad context of systems thinking in order to better identify and comprehend altering factors. The researchers proposed using Interactive Planning (IP), a systems-informed methodology, with the notion that formal peer leadership in athletics is part of a system with numerous interactive pieces. Interactive planning will assist in identifying interactive factors, comprehending the complexity of the selection process and determining how to create a program to maximize that role (Andrews, 2021).

Zurcher, Jensen, and Mansfield (2018) aimed to apply systems thinking to a project that would promote wholesome eating and vigorous living while focusing on a fair opportunity to be healthy. They applied systems thinking by clearly communicating their desired objectives as well as their opinions about the societal challenges that would lead to their desired outcomes. They also looked at the system in its current condition, including its structures and beliefs, to gain a better grasp of these specific features, allowing the researchers to shift the system from where it was to where it wanted to be (Andrews, 2021).

Athletic Systems

Athletics is increasingly being viewed through a complex systems lens by researchers. Many of the commonly recognized elements of complex systems, including its many components, non-linear interactions, emergent features, dynamism, recurrent feedback loops, path dependence, and ignorance of components, have been demonstrated to exist in sports systems (Cilliers, 1999). In addition, a growing body of scholarly literature supports the idea that sport systems are complex in nature (Hulme et al., 2018b).

Athletic organizations are being understood as social systems and the team captain is one of the elements of that system. A simple nested conception of a football quarterback (Jalen Hurts) relationship with the athletic team (Philadelphia Eagles) and the set of teams in the football conference (National Football League) is presented in Figure 8.

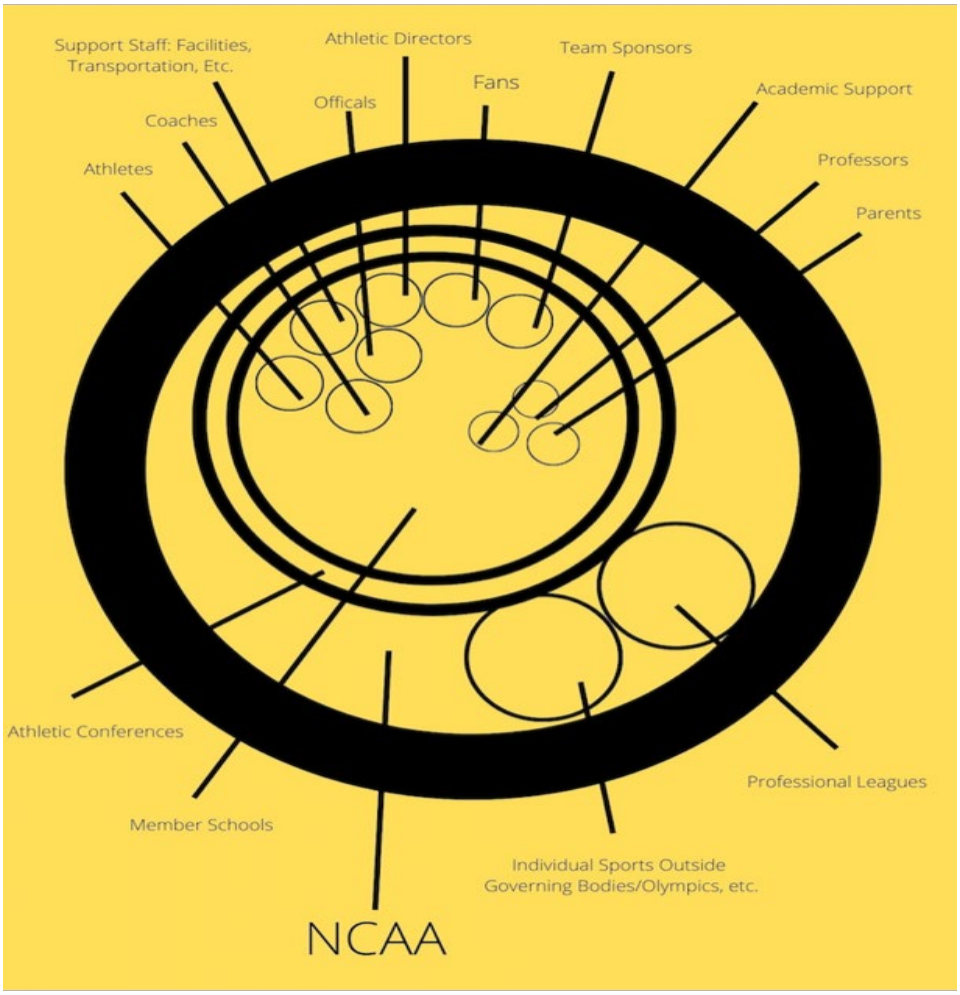
Figure 8

Nested and Containing Social Systems

A complex system such as the National Collegiate Athletic Association (NCAA) would include the individual players, teams, and league(s) contained within a larger context in which there are different sports (e,g., hockey and baseball), multi-use venues, and other organizational systems such as universities and high schools from which potential players are recruited, private organizations and government agencies which provide equipment and policies about equipment use, and other social systems (Figure 9). To understand a team system, it is appropriate to expand understanding to focus on the characteristics of the elements in other subsystems in the containing system as well as the patterns, interdependencies, and interactions of the elements in the team system.

Figure 9

NCAA Organizational System



Emerging Athlete Leadership Literature

If a stakeholder within a system does not appropriately identify a problem or opportunity as complex and treats it as if it is simple or complicated, this mis-formulation can lead to a likelihood where the decision about action will fail and perhaps make the problem worse (Starr, 2020a). Referred to as the plunging-in bias (Bhardwaj et al, 2018) defined it as not understanding the problem and not thinking about how best to solve it before starting to solve it. The authors argue:

> Problem formulation is the single most underrated skill in all of management practice … It is possible to solve the wrong problem or solve one badly due to poor formulation. The misallocated effort and resources that follow impose an opportunity cost along with financial and competitive costs (p. 4).

The broader problem which involves the leadership proficiency to appropriate understand the situational context was explained by Goldstein, Hazy and Lichtenstein (2010):

> Until recently the differences between complicated and complex were not well understood; as a result, they have often been treated in the same way, as if the same process should be used to "deal with" situations (or concepts) that are complicated or complex. Business schools justified this by treating organizations as if they were machines that could be analyzed, dissected, and broken down into parts. According to that myth, if you fix the parts, then reassemble and lubricate, you'll get the whole system up and running. But this is exactly the wrong way to approach a complex problem (p. 3).

Consider, for example, a defensive back in a football game who thinks the opposing team's quarterback will perform in a predictable manner because the problem of how to prepare and act for this is simple or complicated. However, the behavior of players, particularly quarterbacks in a football game, are actually a complex process because decisions are operating in a complex organizational system. This mismatch – assuming complication when the context is complex - can lead the defensive back to act in a way that allows the quarterback to make the game-winning run to the end zone. It is important for an athletic team leader to convey to the rest of the system how the

complexity of a situation can influence the behavior of individual players including the competitor's quarterback.

Shared Leadership in Athletics

Recognizing the increasing complexity and ambiguity of leadership challenges, a shared leadership model has emerged in athletics. Maechel, Loughead, and Beckmann (2020) argue that "a key tenet of shared leadership is that the complexity and the ambiguity make it difficult for a single leader to successfully perform all the various leadership functions." Shared leadership is an organizational structure in which there are several leaders within a single team which allows for leader-players to be distributed based on their behaviors (Leo et al., 2019).

Researchers have studied shared leadership using three different types of leadership: Task Leadership, Social Leadership and External Leadership (Fransen, 2014; Eys et al., 2007). Based on these studies and their own, Leo et al. (2019) suggest a need for a complex shared leadership *within* each type of leadership. Given the complexity of the functions, and the needs of the team, they recommend an ideal structure of: three Task Leaders, two Social Leaders and two External Leaders per soccer team as ideal for team effectiveness. Leo goes on to suggest the next important steps are finding the right peer leaders and developing these qualities.

The concept of so many formal, shared leadership roles, even within leadership tasks, allows for great a diversity in shared leadership assignments (Schotanus & Martin, 2022). Leo at al's (2019) ideal structure of shared leadership in athletics, for the purposes of this paper, confirms the value of peer leadership as well as the "complexity and ambiguity" involved in leading athletic teams.

Nonlinear Aspects of Athletics

Stacey (2012) argues that leaders must address the increasing complexity of their environment and not rely on previous "complicated" approaches when trying to solve problems or make immediate choices. An important component of the complexity in athletics may be appreciated by considering the nonlinear aspects of sports. One of the distinctive characteristics of athletics is the emergence of sudden variability which creates a lack of predictability for each player, the content of individual and team behaviors, and the influences of sport context. Consider, for example, if the world's best sprinter has a bad nights' sleep prior to an important competition; the outcome may lead to a poor performance. Or if a historically poor team feels a special energy due to the supportive audience in their home stadium, they may be motivated to increase their vigilance and confidence leading them to an upset win. Complex nonlinear system effects are associated with individual, team, and context variables of athletics and sport.

Balague (2013) describes complex systems in sports as "structurally and functionally heterogeneous components which interact (generally informationally or/and mechanically) with varying intensities and spanning different spatio-temporal scales" (p. 5). This criteria may be applied to determine if a particularly athletic or sport is a complex system, and if it is linear or nonlinear. They argue if the "non-proportional effects" are regularly critiqued and debated, then system and its components are nonlinear. The concept of non-proportionality concerns the relationship between input and outcome in an organizational system. In a mechanical system, such as an automobile, there is direct proportionality: depressing the accelerator increases the vehicle's speed; the faster and harder the press the greater the speed. However, there is non-

proportionality in a sport. One or a few players who work harder or act faster may briefly improve a particular situation, but this may not necessarily lead to a win in the full competition. This is because there are many interacting variables that influence the final outcome.

Systems Research in Athletics

A systems approach to sports performance considers that the whole system is much more than the sum of its parts (Hulme et al., 2017). For example, estimating how well a sports team will perform in the future by analyzing each player on their own is a poor method. A better approach may be to examine how the players interact with each other (Duarte et al., 2012; Travassos et al., 2013). Complex problems require gaining understand of the interactions and emergent properties that make up performance, as well as how much those interactions affect behavior. Analyzing the athlete, the match, the team, the club, the league, and the governing bodies as separate maybe helpful, but it is insufficient to produce understanding of performance. Using systems thinking and the tools and methods informed by systems approaches can improve this knowledge gap.

Complex systems applications have been reported in the sports literature for injury prevention (Bittencourt et al., 2016; Hulme et al., 2019); performance and performance analysis (Duarte et al., 2012; McLean et al., 2017, 2019); sports science in general (Duarte et al., 2012; McLean et al., 2017, 2019; Soltanzadeh & Mooney, 2016; Mooney et al., 2017); and in athletic training (Pol et al., 2020).

Systems thinking research that focuses the individual athlete who is undergoing training has indicated the following:

> The classical focus on learning/acquiring skills and fitness is replaced by the aim of increasing the diversity/unpredictability potential of teams/athletes through the development of synergies. This development is underpinned by the properties of hierarchical organization and circular causality of constraints, that is, the nestedness of constraints acting at different levels and timescales. These properties, that integrate bottom-up and top-down all dimensions and levels of performance (from social to genetic), apply to all types of sport, ages, or levels of expertise and can be transferred to other fields (e.g., education, health, management) (Pol et al., 2020, p. 1).

The perspective of complex systems when applied to team performance analysis (PA) by McLean et al. (2017) developed a "soccer match system" model using an application of Cognitive Work Analysis (CWA). The CWA framework was developed to model sociotechnical work systems, which includes constraints, and describes how work is actually conducted as well as prescribing how work should be conducted. When applied to athletics and sport, this framework suggests how a complex system team may improve performance by overcoming constraints.

This complex systems model of a soccer match was designed to identify the interacting network of (often constraining) components that require measurement (and management) for comprehensive PA. This model led to Subject Method Experts designing new PA's not previously used. Key to this research was determining an understanding of "performance" in a soccer match ~~is~~ through a systems lens. This was done by "describing in-depth all of the behaviors required for optimal performance." This systems approach to reimagined PA, a characteristic that was historically determined only

through experiential analysis. Similar work was completed by Hulme et al. (2017) with a relatively new sport called Netball. The researchers were able to take advantage of the lack of established PA's for such a new sport when conducting their Cognitive Work Analysis.

Athletic governing bodies have been examined using a systems approach. Brouwers et al. (2012) examined the polices, processes, and performances of the National Tennis Associations as an open system. The goal was to look for factors in these organizations that led to, or could lead to, success. The results of their systems approach to the study were represented at three levels according to the researchers: (1) the formal policies, (2) the proximal environment and (3) the distal environment of NTAs. While the formal policies were considered similar to that of more analytical analysis, items 2 and 3 which concern the system context were considered findings that went extended past the most basic view of the role of an NTA, and provided new insight into how these organization can influence performance.

Athletic fund raising and the traditionally strained relationship between the athletic department and a university's development office was examined through a systems lens (Zullo, 2021). This research showed concern for potential redundancies and a lack of clarity within the many subsystems and interconnected relationships. Table 3 presents the difference in areas of systems thinking between Division I schools and Division III schools.

Table 3

Systems Theory in Division I and Division III Corporate Sponsorships

Characteristics	Division I	Division III
Subsystems	School, athletic department, outsourced marketing firm, sponsors, fans	School, athletic department, staff securing sponsors, sponsors, fans
Holism	The totality of the outsourced marketing and the athletic department relative to each sports program including women's and Olympic Sports	The totality of those procuring sponsors and the athletic department relative to each sports program including women's and Olympic Sports
Open System	Exchange of information between athletic director and outsourced marketing firm	Exchange of information between those procuring sponsors, including those in a school's institutional advancement
Input-Transformation-Output Model	Coaches and internal sports marketing staff help the outsourced marketing firm pinpoint existing relationships to further develop	Coaches help those procuring sponsorship to know of existing relationships to further develop
System Boundaries	Outsourced marketing firm must honor school and governing body boundaries	Those procuring sponsors must honor school and governing body boundaries
Dynamic Equilibrium	Balance is incurred through continuous inflow of materials, energy and information between athletics and outsourced marketing firm	Balance is incurred through continuous inflow of materials, energy and information between athletics staff and institutional advancement
Feedback	Informational input between athletics and outsourced marketing firm can help to adjust, transform or maintain processes	Informational input between staff procuring sponsors can help to adjust, transform or maintain processes
Hierarchy	Suprasystem of institution of higher education exceeds athletics and outsourced marketing firm	Suprasystem of institution of higher education exceeds athletics and individual sports programs
Internal Elaboration	Outsourced marketing firms help to procure sponsors and internal sports marketing staff help to	Those staff procuring sponsors work with institution of higher education for significant

	enhance game experience and attendance at events	sponsorship opportunities (ex. facility naming rights)
Multiple Goal-Setting	Outsourcing marketing firms help to generate revenue and sports marketing staff help to enhance game experience and attendance	Staff procuring sponsors help to advance greater athletic department goals and objectives and needs of individual programs too
Equifinality	Results can be achieved in different initial conditions, different ways, diverse inputs and varying internal activities	Results can be achieved in different initial conditions, different ways, diverse inputs and varying internal activities

Responsibility for player safety and injuries has been looked at using systems thinking to try to shed new light on a complex and serious issue. Bittencourt et al. (2016) make the case that injury prediction is a complex problem, and the field must make the paradigm shift "from reductionism to complexity." They conclude:

> Adopting the complex systems approach may push us forward in terms of concepts and methods to improve sports injury prediction. In this sense, moving research from isolated risk factors to injury pattern recognition, by means of identification of the complex pattern of interactions among the web of determinants, is obligatory. Although difficult, it is feasible to identify and even understand the regularities of a web of determinants using real data and statistical modelling. This approach may be the only option if we accept the non-linearity and complexity of sports injury (Bittencourt et al., 2016, pp. 1-7).

Despite positive beginnings of systems research in athletics, there is much research to be done, particularly in the area of Athletic Leadership. Pol et al. (2020) explained:

> Experiential and scientific knowledge, relating to sports training methodologies, has been historically influenced by reductionist models. Based on complex systems science and theories of biological evolution, we provide a systematization and update of theoretical and methodological principles to transform the understanding of the sports training process. This contribution is not another methodology; it simply seeks to promote the critical thinking of scientists, coaches, and practitioners to help them update or create safer and efficient interventions. Coaches and practitioners usually search for practical recipes, but the only recipe emerging from complex systems principles is that there are no fixed recipes. Functional methodologies and interventions in one context can be dysfunctional in another, and contexts are always unrepeatable and inevitably unique. Instead of focusing on practical recipes, the focus is put on understanding the systems (athletes/teams) properties and the principles that rule their interactions with the environment, keeping in mind the main aim of the process: developing the diversity/unpredictability potential of athletes/teams, that is, synergizing the system (p 11).

Comparing Contexts

Starr (2021) compared and summarized cognitive approaches of those who adopt an analytic compared to a systemic approach to problem formulation and decision making (Table 4).

Table 4

Comparing Analytic and Systemic Thinking

	Analytic/Analysis	Systemic/Systems
Reasoning	An explanation of leadership is derived from an explanation of the role of parts – primarily competencies that add up to leadership.	An explanation of leadership is derived from explaining and the influences of the organizational system.
Explanation of Cause	Cause and Effect: Leadership is primarily context/environmental- free, linear, additive with predictable effects (outcomes) following from well-defined causes.	Producer-Product: Leadership is context/environmental-full/rich, non- linear, non-proportional, not predictable with co-produced and emergent characteristics.
Relationships of Elements	Linearity and Proportionality: A change to one element of the input/cause creates a direct in the output/effect at a constant rate that is predictable and sequential.	Nonlinearity and Nonproportionality: Changes made to the input/influence are not proportional to the output/emergent effects and may appear unpredictable, nonlinear and counterintuitive.
Problem Solving Methodology	Research: Science and evidence- based thinking using inductive and deductive reasoning (and reductionism) can solve a problem by generating a solution that meets the objectives and creates an optimal solution.	Design: Design, creativity and innovation using abductive reasoning (and expansionism) can lead to emergence of a novel configuration that can dissolve the problem and create conditions where the problem cannot occur.

Reasoning

The prevailing analytic and reductionistic approach to athlete leadership research and practice focuses primarily on identifying and improving competencies that add up to leadership.

Dupuis and colleagues (2006) Multidimensional Model of Leadership is the best example of this. Chelladurai (1978; 1984; 1993) described it consisting primarily of "antecedents, leader behaviors, and consequences" (p. 62). In addition, the majority of leadership literature in athletics considers the result of team cohesion to be the primary positive result from peer leadership (Carron et al., 2002).

When complex systems reasoning is applied to athlete leadership it focuses on how differing contexts for problem formulation and problem solving require different mindsets. Applying Snowdon and Boone's (2007) framework demonstrated that only for well-ordered and well-structured problems would an analytic approach suffice. For a complex athletic match, however, where there are nonlinear events that suddenly emerge, a shift to systems thinking would be needed. Furthermore, a complex systems view of athletic leadership concerns the interaction of elements and have a transformation process. These two related reasoning approaches were described by Duarte et al. (2012) in his description of sports teams as "superorganisms". They suggest: "Most research has typically investigated team game performance in subunits (attack or defense), rather than considering the interactions of performers within the whole team" (Duarte et al., 2012, p. 633). In addition, they describe the "superorganism" as having "idiosyncratic collective behaviors underlying the cooperative and competitive tendencies of the team" (Duarte et al., 2012, p. 633).

Explanation of Cause

Early analytic thinking led to a longstanding theory put forth by Chelladurai and Carron (1977) that athlete leaders were selected primarily for two reasons: (1) those occupying a more central position, and (2) visibility. This idea was confirmed in later

study by Lee, et al, (1983). This is extraordinary reductionist thinking where coaches are proven to be assigning peer leadership roles simply to the person playing the most central and visible position.

A systems thinking approach would not assume any position on the field or demographic off the field is ideal for selecting the leader who will have the greatest impact on outcomes. Newman et al. (2019) present five interactive processes for coaches to develop a team leader: (1) fostering a team culture of leadership, (2) determining the role of the team captains, (3) process for identifying and selecting team captains, (4) developing and supporting team captains, (5) evaluating and reinforcing team captains.

Relationship of Elements

While not a sports leadership example, the best athletic examples of systems thinking approach to the old cause and effect beliefs is in sports injuries and training norms. Hulme and Finch (2015) use running to explain the potential value of systems thinking principles. They use the output of a running injury to share that the traditional approach of reducing the distance running system down to just the biomechanical and behavioral levels. They suggest instead that it requires an additional systems approach described as,

> traversing ‘up and out’ of the system to also identify and examine the contribution of indirect influences and systemic processes as they relate to running injury development. This includes, for example, the marketing, distribution and uptake of running footwear, the design of built environments, social expectations and norms, emerging technologies and the role of ‘e-health’, athletic policies, and the influence of private industry and healthcare services (Hulme & Finch, 2015, p. 9).

Problem Solving Methodology

Traditional analytic thinking regarding the demands on formal peer leaders has led to a response of developing leadership training for captains (Voight, 2012). The growing demands of peer leadership roles, along with the variety of competencies it takes to fulfill the differing tasks, led to a reductionists idea that one can simply train one or two captains to have a full complement of skills for the diversity of needs.

More recently, some systems thinkers designed a different method to accomplish all of the leadership expectations. To address the complexity of the changing and assorted demands of athlete leadership and peer leadership specifically, Fransen et al. (2020) have designed a hybrid approach called 5R Shared Leadership. It uses a process called "Shared Leadership Mapping" to determine who are the best leaders for the four distinct leadership roles they have identified: the *task leader*, the *motivational leader,* the *social leader,* and the *external leader.* While this method is yet to be fully tested and evaluated, this design and innovation is a novel configuration that could solve the changing needs of the role of team captain.

Selecting Team Captains

Kent and Todd (2004) generalize what most teams have done and continue to do when selecting a team captain. They suggest it starts with the coach looking for someone who would be a good leader. They summarize their criteria as simply: "one who is respected and commands respect of the other team members" (Kent & Todd, 2004, p. 21). This approach corresponds with the prevailing conception that leadership is in the individual but does not describe if this is due to indirect, direct or relational characteristics (Starr, 2020). For example, relying on "respect" does not enable one to

determine if there is any significant leadership thinking or if there is any set of competencies that the person possesses in their style or in how they address conflict among team members.

There are three prevailing decisional approaches for selecting the team captain: 1) Coach personally selects the captain; 2) Team votes for the team captain and the majority make the decision; 3) A hybrid model where input from coaches and team members combine to make the selection (Kent, 2004). Unfortunately, it seems that coaches and teammates are equally poor at selecting captains as Fransen et al. (2019) note,

> Both coaches and players used experience, sport-specific technical abilities, and irrelevant attributes as selection criteria for appointing their team captain...The fact that the irrelevant attributes were the most cited attributes, regardless of whether the coach or the players had appointed the captain, suggests that the leadership quality of the team captain does not depend on who selected the team captain, but rather on the selection criteria used in the process.

Historic Criteria Used in Captain Selection

Yukelson et al. (1983), pioneering researchers who sought to explain why team captains are chosen, noted that the selection of captains in baseball and football appeared to be based on technical skills. In agreement with these findings, Moran and Weiss (2006) discovered that coaches gave athletes with superior athletic prowess the formal leadership role.

Centrality of position was also shown to be a factor in some sports. In addition, Lee et al. (1983) revealed that team leaders were chosen based on their position on the field, with football captains more likely to play in a centrally located position than their

teammates. Additionally, research indicates that team leaders are likely to be athletes that hold positions of high interactional centrality, or roles that need a lot of interaction with other players, in various sports (such as volleyball, handball, ice hockey, etc). (e.g., midfielder in soccer; Fransen et al., 2016).

Past research has also pointed to tenure as a factor in selecting captains. In collegiate hockey teams, Tropp and Landers (1979) did not discover a relationship between interactional centrality and team captaincy. Instead, their research revealed that team tenure—and the fact that team captains typically had the longest stay on their teams—was what distinguished captains from non-captains. Fransen et al. (2018) recently verified and broadened these findings across a wide range of sports, indicating that team tenure was the sole factor on which team captains distinguished themselves from informal athlete leaders.

Finally, along with finding out that from 223 players that, "captains were mainly selected based on attributes that are not directly related with leadership," Fransen, et al. (2019) also discovered that the most often cited reason (17%) had no link to leadership whatsoever. Examples of responses include: "daughter of the club president," "sibling of the previous team captain," and "to motivate a player who had a history of problematic behavior" (Fransen et al., 2019).

What Teammates Want in their Captain

Much of the current research centers around findings from more than 70 years ago such as by Bales (1950). Focusing on role differentiation's two types of leaders, those with instrumental orientation, (tasks) and expressive orientation (team morale and relationships) remains context-free and naïve. As well as the two types of athlete leaders

Fransen et al. (2014) added to the literature, “external” and “social”. Several studies looked at this through this lens or something similar.

Rees and Segal (1984) exposed Bales’ (1950) two types of leaders as not mutually exclusive, as football team members described the best leaders as scoring high in both areas. Similarly, a study of 23 basketball teams providing feedback throughout the season showed similar results. The leaders in that study were strong in both styles (Rees, 1983).

In an attempt to break free from the limits of two types of peer leaders, Kent and Todd (2004) asked high school students for more specific qualities, from the two types of leaders’ styles, they prefer in a peer leader. Some of their findings included (1) The overwhelming top attribute the adolescent athletes wanted in a peer leader was that they were a hard worker, specifically in practice; (2) They wanted leaders who respected their teammates. Most often the concern in selecting a captain is, does the team respect the peer leader? It turns out they respect those that already show respect his or her teammates; (3) They want a leader who expects high levels of performance from self and others; (4) Males lean towards task orientation. Despite wanting all of the morale and relationship perks of a formal peer leader who is strong in expressive orientation, males were less concerned overall with politeness or kindness; and (5) Female adolescent athletes were more balanced between the two types of responses. Kent and Todd (2004) surmised from responses that selecting a team captain is far from a popularity contest. Perhaps when it came time to pick they would act differently, but when describing what they wanted in a captain, popularity was not a priority.

Selecting the best player to be captain seems to be a default process that coaches often use, presuming that performance during competition translates into leadership skills

or at least the respect of his or her teammates. One could never picture selecting players to start in key positions because they are the most skilled leaders, but the opposite had become common place. When it comes to critics of selection mistakes, automatically picking the best player to also serve as captain may be the most common, but it does not end there.

In a large study conducted by Fransen et al. (2014) 4,451 participants were asked to evaluate their leaders based on the four leadership categories. They discovered that only 1% of teams selected captains that teammates thought were the best in all four leadership categories. Even more shocking, 43.6% did not have their captains ranked first in any of the four categories. In the study, there was no noticeable change when separated by gender, team level or sport.

Conclusion

It appears the epistemological framework for selecting captains comes from the mindset of authority/power and a heuristic mode of thinking (Starr, 2018). I argue, however, that athletic leadership is complex and requires new a new thinking and problem-solving approach. Researchers continue to ask the same questions about what teammates and coaches look for in a captain, but their approach applies reductionist thinking and repeatedly asking the same questions seems to be producing the same results. In the next chapter, I suggest application of a system's thinking approach to athletic leadership in order to shed new light on the value of the role of the captain, as well as new parameters and guidelines to help ensure the best leaders are selected for this role.

CHAPTER 3 METHODOLOGY

Chapter 1 presented the general overview of this dissertation and identified two research questions: (1) What information, knowledge, skills, competencies, or understanding are most desirable, valuable, feasible and useful to select a captain for an athletic team? And (2) what is the ideal design for an experience or education program that can help to select an athletic team captain? Chapter 2 presented a review of the academic and practice literature which surrounds and supports the research questions. As described, the prevailing research has formulated athlete leaders through the lens of analytic, linear research thinking. This has produced many elements that have attempted to predict successful performance for leaders and teams, although these continue to be inadequate. An emerging literature was also presented that formulated athlete leadership in terms of systems and complexity, and particularly teams as complex organizational systems. In this conception, different assumptions, methodologies and tools are applied to understand and improve performance. This chapter describes a systems-based methodology used to answer the two research questions. I explain the methodology, processes, tools, and the details of the research and design activities associated with it.

Analytic/Research vs Systems/Design Approach

Adopting the traditional science/evidence mindset, followed by analytic thinking and decision making, Pfeffer and Sutton (2006) proposed that organizational leaders could practice more successfully if evidence-based research was employed more regularly. However, even for seasoned leaders, the context in which they must operate is frequently volatile, uncertain, complex, and ambiguous, and wanting evidence-based approaches does not mean that research has established how people should perform in

various contexts in which leadership must operate. Indeed, "Making evidence-based practice (EBP) a reality throughout an organization is a tough goal (since) little is known about the actual role and function of various levels of leadership in the company," wrote Stetler et al. (2014, p. 219).

Snowden and Boone's (2007) decision-making framework, however, suggests that a context-based approach may be appropriate. Snowdon and Boone (2007) also note that when faced with a complex context problem, making decisions requires a change in mindset where there are no experts or best or good practices. Instead, leaders enter the domain of emergence. Jackson (2019) further notes that in this context only systems thinking is the appropriate way to formulate and make choices. While new program material (or products or services) can be decided upon or designed without using a systems framework, the outcomes are better when one is used. Moreover, Pourdehnad, Wexler and Wilson (2011) argue that when the context is complex, first adopting a systems framework then applying an appropriate design methodology yield the best outcomes.

For this dissertation I applied a social systems perspective and used Interactive Planning and Idealized Design (IP/ID) to answer the research questions. ID/IP originated at Bell Laboratories in the 1950s (see Ackoff, Magidson & Addison, 2006), and has been applied globally to hundreds of complex organizational systems challenges. Central to its application is the involvement of a problem’s stakeholders, those who are most directly involved in the processes and outcomes of a problem. Starr (2015) described an example of its application in the design of an ideal doctoral leadership degree program:

> More than 100 people participated: academic leaders (e.g., deans of schools, directors, chairs of departments and programs, faculty members from the university and from other universities); leaders and members of administrative functions (e.g., registrar, finance, library, development, and other roles from several universities); alumni of graduate degree programs; current graduate students (Master and Doctoral) from several universities; leaders and thought leaders from professional organizations and leadership societies; executive level leaders from corporate in-house universities and training departments; government and nonprofit training leaders; senior HR administrators; and representatives from organizations where there was no support for graduate education (par. 5).

According to Starr (2015), once participants had been selected, they were asked a series of questions soliciting their outlook on how such a program should be designed.

> In workshops and meetings, participants were challenged to generate characteristics of an ideal leadership program that "you would personally want to teach in; you would want to administer via your professional work; you would want to be a doctoral student in; you would recommend colleagues apply to; your organization would support if colleagues were admitted as doctoral students, faculty or mentors; you would want to join for professional and community support; your organization would want to partner with for consulting and research projects; and you would want to be acknowledged as a co-designer." These were not specifications for the future or for others; rather, these were what the stakeholders and users wanted right now and for themselves. The only limitations

were that elements must be technological feasible and that the program must be capable of thriving in the existing environment, as well as be sustainable in the future as the environment may change (Starr, 2015, par. 5).

Eriksson (2007) nearly 15 years ago reported that more than 300 Interactive Planning projects had have been referenced in the literature (e.g. Ackoff, 1981). Many more have been recorded since then (Jackson, 2019). IP/ID remains only rarely applied in comparison to the tens of thousands of opportunities where team leaders are selected. Indeed, the current project's premise is that most schools and athletic organizations have few clear parameters, expectations, leadership education, or other considerations, and that, most organizations will continue to do a poor job in selecting the best possible captain and miss an opportunity to maximize the impact of this role. Regarding IP/ID, Ackoff (1981) noted:

> The objective of interactive planning is an effective pursuit of an idealized state. The state is formulated as a design of that system with which the current system's stakeholders would replace it if they were free to do so. Such a system should be technologically feasible and operationally viable, and it should provide the system with an ability to learn and adapt quickly and effectively (p. 246).

Through such a process, I aimed to discover a prototype design that will assist coaches and organizations select team captains who will enable high levels of performance of team members. Selecting the best possible team captain impacts effectiveness and therefore, team success (Fransen et al., 2017).

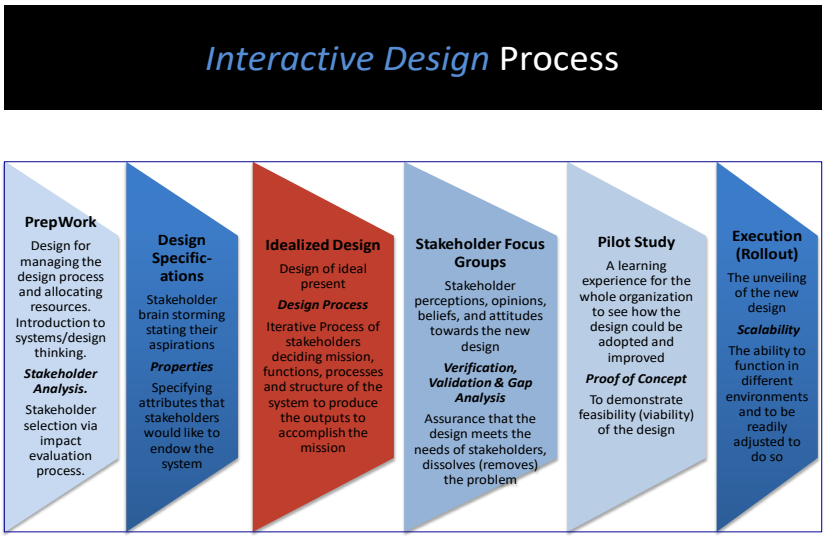
Institutional Review Board (IRB)

Prior to carrying out any aspects of the methodology, the proposed research was submitted to the Thomas Jefferson University Institutional Review Board (IRB) for an evaluation of its risks and harms. An approval in the form of an “IRB Exemption” was provided by Kyle Conner, Associate Director, Office of Human Research on December 8, 2022. This noted that the research would have no physical or ethical harm to participants.

Methodology Processes

Interactive Planning/Idealized Design (IP/ID) was utilized for this project because it addressed objectivity. As described by Ackoff (1999), "Objectivity produces only value-full judgments and it can only be addressed by groups and individuals with various values, not by a single investigator or decision-maker" (pp. 311-312). As a result, stakeholders are critical in a social system's decision-making process. To expand on Ackoff's definition of objectivity, he contends that both planning and design should be based on broad participation and involvement, which is the foundation of a client's desire for change, and that stakeholders should plan for themselves. He also emphasizes the need for viewing organizations as social systems that serve themselves, their constituents, and the larger systems of which they are a part (Jackson, 2003). Figure 10 depicts the processes of IP/ID.

Figure 10 *Interactive Design*

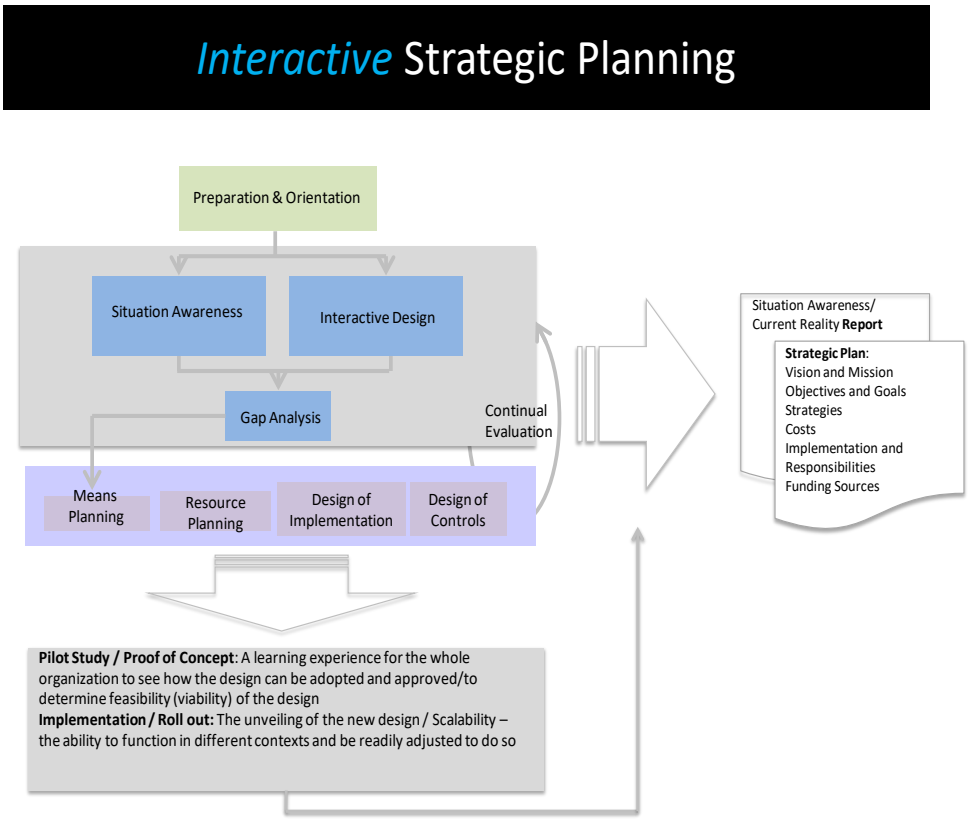


The **preparation work** includes identification of the resources and determining who the stakeholders should be. For this project, stakeholders were drawn from multiple organizations and have a strong interest in how to select team captains. The stakeholders are connected to school's athletic teams in one of many possible ways. Players, coaches, administrators and even staff with a background in athletics were part of the stakeholders group. Diversity was important as there are many areas that need representation. Most importantly is ensuring the group has balance of genders, races, ages and positions, as possible.

The **design specifications** are the properties collected during the brainstorming process facilitated by a process consultant. These elements are aspirations desired for an ideal educational system including the vision, functions, processes, and structures and governance that will enable the desired outcomes to emerge and will avoid or eliminate the current situation. The remaining three process steps, focus groups, pilot study, and

roll-out are not part of this dissertation but will be discussed. A schematic of IP is presented in Figure 11.

Figure 11 *Interactive Planning and Idealized Design Schematic*



The logistics and communication process supplied to the participants are what *preparation and orientation* refer to. The specifics are listed in Table 5. The comprehension of the current state of formal peer leadership (the role of captains on athletic teams) is referred to as *situation awareness*. This information was acquired and presented in Chapter 2 and is often known as the current reality report. The *interactive design* and *strategic plan* refer to the design that emerges from the processes to address the captain selection process.

Table 5

Summary of Steps of Interactive Planning and Idealized Design

FUNCTION	PURPOSE	RESOURCES	NOTES
Preparation	Formation of Project Team (Researcher, Facilitator, Scribes & Program Chair); confirm meeting dates	Researcher & Facilitator	Voluntary assignments
Pre-Meeting Communications	Email Meeting Schedule & Overview of Interactive Planning to stakeholders as background information	Drafted by Researcher and Facilitator; emailed to Stakeholders by Researcher	Maintain attendance commitment list (some stakeholders might not be able to commit to assigned date)
Orientation to Design Activities	Introduce Systems and Design Thinking and Planning Methodology to stakeholders/Ackoff Video	Facilitator & Program Chair	Facilitated workshop
Design Specifications Vision/Mission, and Specifications	Brainstorming and generation of ideas	Facilitator & Stakeholders	Stakeholders decide the vision/mission and properties for ideal selection process and program for future captains

Host Institution IRB

The Interactive Planning / Idealized Design workshop required a host institution or location, preferably in the PA/NJ/DE area where the author/researcher and doctoral program was located. It was not anticipated but it was soon learned that the host institution as an educational enterprise would require its IRB representative to review the proposed research prior to agreeing to its use. This approval was granted on January 31, 2023 (see Appendix A).

Stakeholders and their Characteristics

A stakeholder is defined by the International Standards Organization in their code ISO 26000 as "person or group that has an interest in any decision or action of an organization" (ASQ, 2020). ISO 26000 is the worldwide standard offering guidelines on social responsibility. The purpose of using stakeholders is to provide participants the opportunity to combine their beliefs, thoughts, and interests to help construct the ideal future that will assist coaches with their selection process where they may have blind spots. Stakeholders actively engage in planning, uphold objectivity, and are aware of their potential contributions to the organization (Ackoff, 1981, 1999b). A stakeholder approach to design involves many people who are invested in the system and plan independently rather than relying on what others plan for them (Pourdehnad & Hebb, 2002). Results produced by this are more significant, lasting, and successful.

To build the ideal experience, to help generate the best results from the process, and to be representative stakeholders are represented, 50 stakeholders were invited by email to take part in the workshop for this project. Invitees were from various groups connected to Salem Community College and had expressed interest in the success of their school's athletic teams. Participants with different experiences, backgrounds, ages, genders, and areas of expertise were requested to participate in order to ensure diversity and to enable the collecting of a wide and innovative set of ideas.

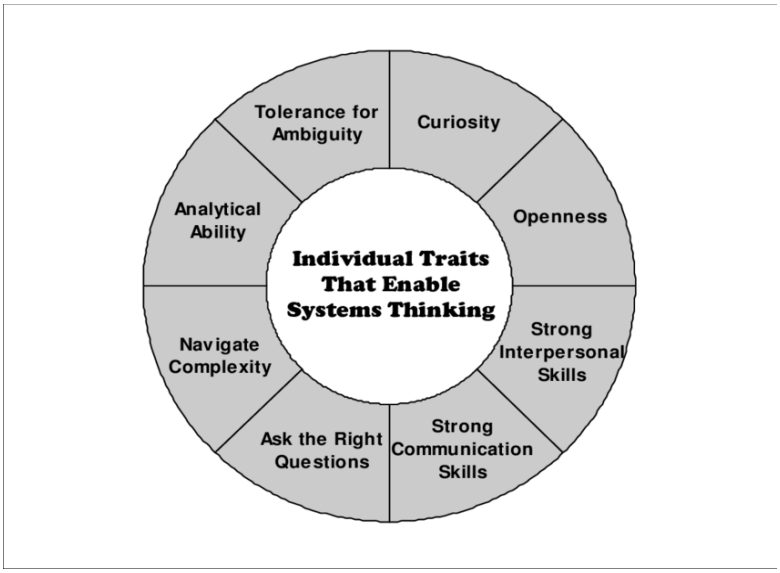
Facilitators and their Characteristics

Davidz and Rhodes (2005) and Tull (2020) suggested descriptions of the traits and skills necessary for efficient facilitation of idealized design and interactive planning programs. Figure 10 illustrates the traits of systems thinking facilitators according to Tull

(2020), which include openness, curiosity, tolerance for ambiguity, analytical aptitude, capacity to manage complexity, ability to ask the proper questions, and good communication and interpersonal abilities. The facilitator must be able to deal with ambiguity because systems are unpredictable, subject to change over time, and can appear to be disorganized. The capacity to define problems, formulate questions, and acquire data analytically is another essential quality. Furthermore, in order to negotiate and carry out decisions to support innovation, facilitators should also possess the abilities to ask the proper questions and navigate complexity. Successfully navigating all of this requires excellent interpersonal and communication skills. Finally, facilitators should exhibit attributes of curiosity and openness. These qualities encourage people to improve their ability to design using systems thinking. To ensure these characteristics two expert facilitators were invited to participate in the workshop at Salem Community College.

Figure 12

Facilitator Traits that Support Systems Thinking



Details of the Workshop Preparation

Emailed invitations (Appendix B) to participate in a 3-4 hour in-person workshop that would assist this author's doctoral research, as well as serve as an event for the school's athletic program were sent to 50 stakeholders. The invitations were sent approximately 4 weeks before scheduled meetings. Just before the design session, participants read and signed document "Survey Participants Acknowledgement Sheet" (Appendix C) which included details participants were required to know before agreeing to before the design teams began.

Assignment to Groups

Stakeholders who agreed to participate were assigned into two groups (to work with the two facilitators) prior to arrival. The assignments were to balance groups in terms of roles, ages, and other demographic characteristics. Adjustments to the groups were made as participants arrived or failed to arrive for the workshop.

Steps of Idealized Design/Interactive Planning

After agreement to participate but prior to arrival at the workshop, all participants were asked to watch a video (35 minutes) about the history, process, and value of idealized design. The video is presented by Dr. Russell L. Ackoff who created the methodology based on his experiences at Bell Laboratories in the 1950s.

Upon arrival at the workshop location, the ID/IP session began with a brief introduction by the author/researcher, each of the two facilitators, followed by each of the participants. When the two groups were established in different areas of the large room where the workshop was held, each facilitator provided their group an overview of Idealized Design and Interactive Planning, and the objectives of the session. To

encourage innovation, the facilitators informed their groups of a ***hypothetical challenge*** regarding athletic leadership in their organization: "The Gates Foundation is offering $250,000,000 if their school can create the ideal selection process for formal peer athlete leadership." Participants were encouraged to generate ideas based on this motivation.

With the groups and facilitators established, the workshop began. Each facilitator encouraged ideas from their team about a set of topics. As an idea was spoken, it was written on a flipchart for all in the group to see. As the flipchart page filled, it was attached to the wall so it could continue to be read as new ideas and topics were discussed. When the topics were completed, the groups returned to their original seating and all the pages were moved so they could be read by all. Participants were then given colored pens and each person walked around the room checking in color the ideas that were most valuable and acceptable based on the motivating idea and the desire to identify the properties and elements of the ideal design for an experience or education program that can help to select an athletic team captain.

CHAPTER 4 RESULTS

IRB Approval

After reaching out to several colleges to request the design session be held at their school, one school emerged as viable and desirable. Salem Community College President Dr. Mike Gorman responded directly offering his full support. He explained that Salem was rebuilding an athletic program that was shut down a decade ago. In a few short years they had six teams and were ready to expand. He put me in contact with Dr. Bob Bunnell, Athletic Director, and both were supportive of Salem Community College hosting the Idealized Design Session. After confirming the invitation to participants included protective language, as well as fulfilling other human subject expectations, as mentioned in Chapter 3, IRB approval was received from Salem Community College on January 31. 2023 (Appendix A).

Stakeholder Responses

With the assistance of Dr. Bunnell, contact information for athletic coaches and administrators was provided. The coaches then identified student athletes to reach out to. While the stakeholders identified included athletic alumni, i.e., previous sport athletes who no longer were active, Dr. Bunnell revealed that that Salem Community College did not have lists or records of their athletic alumni. Although it was hoped that 50 participants would be available from the 50 email invitations sent, 25 stakeholders responded that they would participate. Table 6 and 7 presents the stakeholder characteristics of the participants for each design team.

Table 6

Stakeholder Participants Group #1

Stakeholder Group #1	
Current Student Athletes	10
Coaches or Assistant Coaches	3
Administrators	3

Table 7

Stakeholder Participants Group #2

Stakeholder Group #2	
Current Student Athletes	9
Coaches or Assistant Coaches	2
Administrators	3

Facilitators and Observers

Two facilitators each worked with approximately 12 participants/stakeholders. Both facilitators were well-experienced professionals who had completed several IP/ID sessions. They are referred to as T.G. and L.S. in this dissertation. Dr. Bunnell, Athletic Director for Salem Community College, and I served as observers for the session.

Session Introduction

After arrival and check-in by all participants, facilitators, and guests, I (researcher) gave a brief (10 minutes) power point presentation of my dissertation topic and of interactive planning and idealized design.

Properties of an Ideal System

Stakeholders were invited by the facilitators to focus on six characteristics of an ideal system. These were purpose/mission/vision, value proposition, function/deliverables, processes, structure/governance, and revenue models. As each characteristic was presented, properties of these topics were called out and written on a flipchart. The session produced more than 100 elements for the ideal design for an experience or education program that can help to select an athletic team captain.

Purpose/Mission Vision

The purpose of the ideal design for this program was the first characteristic within the IP/ID session. Table 8 presents a summary of the 15 elements generated by the two groups.

Table 8

Purpose/Mission/Vision

1. Build culture of success
2. Emphasis on women in sports and education
3. Evolving into better player in state of the art facility
4. Free and successful education
5. Provide connections to larger institutions
6. Part of culture and community while having fun
7. Empowering success after graduation
8. Empower education for use
9. Fair and impartial
10. Bringing out the best in our students
11. Mature hard-working humble collaborative committed
12. Dedication, good communicator, responsible experience, enthusiastic
13. Accountability, empathy, entrepreneurship, voice, confident.
14. Provide an opportunity for student athletes to reach maximum potential on off the field.
15. To establish an inclusive athletic program that develops leadership personal and professional skills for future success.

These elements were entered into a WordCloud program (WordClouds.com) to illustrate themes generated from the data gathered by the stakeholders. This tool emphasizes the frequency of key terms in text-based data. As depicted in Figure 13, the concepts of success and education were the most repeated.

Figure 13

Mission/Vision WordCloud

Ideal Value Proposition

The ideal value proposition for the experience of an athletic program was the second topic. This characteristic is a justification for a customer using a service or purchasing a good which for this project related to students acquiring knowledge and skills education. The results of the 14 elements collected are in Table 9.

Table 9

Ideal Characteristics of the Value Proposition

1. Free/Affordable
2. Outreach/Build Network
3. Educate
4. Win
5. Evolve
6. Better Players
7. Succeed
8. Part of Culture
9. Fun
10. Connection with Larger Institution
11. State of the Art
12. Compete
13. Internship
14. Prepare for Next Step

Figure 14 presents the graphic representation of this list which centered on cost, outreach, complete, and competition.

Figure 14

Value Proposition WordCloud

Ideal Functions/Deliverables

The third topic addressed was the functions and outputs of the ideal educational system for selecting a sport team captain. As listed, there were 23 properties identified by the stakeholders (Table 10).

Table 10

Ideal Functions and Outcomes

1. Leadership training education
2. Confidence
3. Experience
4. Communication opportunity
5. Next level readiness
6. Experience
7. Access to interaction with many people
8. Pride
9. Interaction with people from diverse backgrounds
10. Market/promote yourself
11. Deal with difficult situations
12. Problem solving
13. Empathy
14. Liaison to coach
15. Mentor
16. Coach on and off field
17. Inspiring teammates
18. Ideal image
19. Embodies the values of entire team
20. Trust of the coach
21. Confidant
22. Advocate
23. Servant-leader

Figure 15

Ideal Functions and Deliverables WordCloud

Ideal Processes and Procedures

The ideal procedures that would support the functions and fulfill the purpose and vision made up the fourth category. This property included steps that needed to be followed to accomplish the goal.

Table 11

Ideal Processes and Procedures

1. Selected by coach
2. Team vote
3. Interview process
4. Former captains input
5. Outgoing captain selection
6. Captain emerges through situation
7. Ranking system
8. Ethical decision maker
9. Toughest
10. Reflects on weaknesses overcomes them
11. Hands-on internship
12. Outreach exchange
13. Mentorship experience
14. Research study
15. Self-reflection
16. Personal experience sharing
17. Consistency
18. Recruit successful leaders
19. Support from first contact
20. Academic face to face tutors and online
21. mental health counselors face to face and online
22. athletic trainers, sports specific
23. practice facilities and time
24. personalized coach
25. Access to a capable teams mixed capabilities

Figure 16

Ideal Processes and Procedures WordCloud

Ideal Structure and Governance

The 5th category was the structure and governance of an ideal program for selecting captains. The 13 items collected are presented in Table 12.

Table 12

Ideal Structure and Governance

1. Student Advisory Board
2. External graduates and alumni
3. Board of leaders
4. Multidisciplinary experienced players
5. Code of ethics
6. Orientation program
7. Student handbook
8. Student advisory committee
9. Continuous improvement
10. Accreditation
11. Enforced and evaluated
12. Coaches handbook
13. Creation of handbook by athletic department students and chain of command

Figure 17

Ideal Structure and Governance WordCloud

Ideal Revenue Model

The revenue model was the last category. This concentrated on the optimal source of revenue to support and sustain the program and the experiences of stakeholders. The dpzen properties generated provided insight as to where leaders focused their time and energy (Table 13).

Table 13

Ideal Revenue Model

1. Sponsorships
2. Alumni contributions
3. Broadcast deals
4. Internet deals
5. Selling ads
6. Merchandise
7. Tickets
8. Electronic board for athletic department.
9. Community partnerships
10. K through 12 partnerships
11. Scholarships from alumni
12. Company patches on uniforms

Figure 18 presents the WordCloud representing how the stakeholders perceived the importance of the ideas generated. Concepts of "deals, partnerships and connections with alumni" were deemed significant opportunities.

Figure 18

Ideal Revenue Model WordCloud

CHAPTER 5 DISCUSSION

While there is a rich body of research concerning coaching and leadership, evidence-based research concerning peer leadership in athletics is scarce. Moreover, there is very little information about how captains for an athletic team are selected. The small amount of research that exists suggests that little thought is put into selecting the best captain and/or the best peer leader in an athletic team. The purpose of this dissertation was to frame captain-selection in athletics as a system problem and to use a system-based methodology, i.e., Interaction Planning and Idealized Design (IP/ID) to answer the two research questions derived from this general problem:

1. What information, knowledge, and understanding are most desirable, valuable, feasible and useful to select a captain for an athletic team?
2. What is the ideal design for an experience or education program that can help to select an athletic team captain?

Chapter 1 presented my history with sports and my passion for this topic. I explained the general problem, why this was important to me, and to sport stakeholders. In Chapter 2, I reviewed the literature on leadership and sport leadership and summarized the conventional analytic-research and the few studies that took a systems and complexity perspective. This chapter reported studies that attempted to explain what was desirable, valuable, feasible and useful to select a captain for an athletic team. In Chapter 3, I described how the methodology of Interactive Planning/Idealized Design was applied to a community of stakeholders to design an ideal experience or education program that can help to select an athletic team captain. In Chapter 4, I presented the results of this application in a set of Tables and Figures that illustrated the elements and properties of

this ideal experience/education program. In this Chapter, I discuss these results in terms of the research questions. I also provide a prototype design for an ideal system based on what stakeholders generated.

Using IP/ID methodology acknowledges the complexity involved in this challenge. Selecting the best peer leader available from a team requires an adequate understanding of the concept and characteristics of leadership, players' capability for leadership, how to evaluate for leadership, and how to educate and support self-development of leaders once selected. Coaches cannot be expected to be experts in their sport and in the complex characteristics of leadership. However, organizations with multiple teams can provide tremendous support by creating a cultural context including experiences and education which supports development of captains and which guides how the organization supports coaches in selecting captains.

This research attempts to fill in gaps in the literature and provide some guidance for organizations who wish to create their own program. It also suggests guidelines for selecting, supporting, and celebrating their captains.

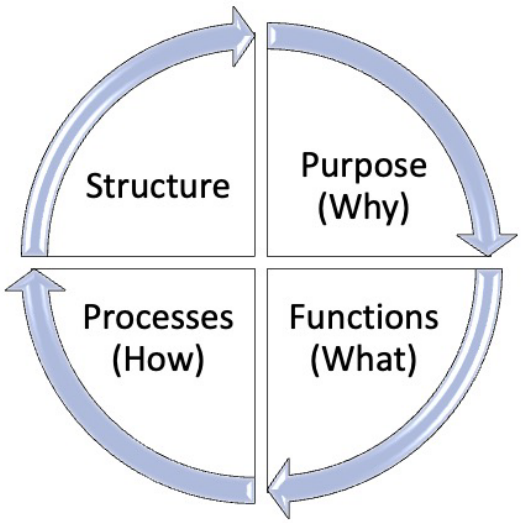
What Was Learned from the IP/ID

Of the six topics selected and presented to the stakeholders, four were derived from a process of design thinking and planning. Specifically, the purposes, functions, processes, and structures are part of the design spiral described Gharajedaghi (2011). When designing a new system or enterprise, he refers to this as an "iterative process of inquiry for understanding complexity" (Gharajedaghi, 2011, p. 93). He further states, "Successive iterations would yield a greater understanding and more closely approximate the nature of the whole." (Gharajedaghi, 2011, p. 93). When using IP/ID, the components

of the spiral can guide the design of a new enterprise including an ideal program (Andrews, 2021). The spiral is presented in Figure 19.

Figure 19

The Design Spiral



Purpose and Value Proposition of the Ideal Program

When stakeholders were asked for an ideal purpose/mission/vision, they were particularly concerned with four interrelated issues. When asked for an ideal value proposition associated with those purposes, they identified three additional characteristics.

Purpose/Mission

The first concept relevant to an ideal program's purpose was that it should be able to "bring out the best in our students." Acting as a design team, stakeholders saw this at multiple levels. One was the leadership opportunity that a student can gain when selected as a formal peer leader and assigned responsibility to help bring out the best in their

peers. This was suggested to be the educational mission for a captain. Another was that the more leaders assisted the coaches to get the best out of their teammates, the more the role becomes valuable and worthwhile. Selecting the best player without consideration of critical leadership skills risks that the person will put little effort into sharing leadership is a lost opportunity for another better player to thrive in the role of captain. It is also a failed opportunity for the poorly selected captain to see how a better peer leader would conduct themself in that role.

A second theme of the ideal design purpose was for leaders and players to be "collaborative." This refers to sharing power and decision making among coaches, trainers, and students/players which requires a mindset that not all athletic departments are ready to accept. While most athletic organizations continue to hold a top-down and directive leadership assignment (control) strategy, in the ideal program described by athlete stakeholders, the preference was to increase collaboration among all involved which was further promoted as an important way to build trust in leadership choices.

A third characteristics was to be "enthusiastic." The design team felt this was a key component in athlete leadership when choosing athlete leaders. A fourth was for the ideal program to be "fair and impartial." The design team felt there is little time or relevance for favorites or cliques on athletic teams. An athletic program must be fair and impartial, making this essential when selecting leaders.

Integrating these characteristics into a mission statement for the ideal program suggested the following: The purpose was "to establish an inclusive athletic program that develops leadership personnel and professional skills for future success." This

summarized the stakeholders' important concepts into an overall statement of purpose for the athletic program, and therefore for all leaders including captains.

Value Proposition

There were three concepts identified as critical for the value proposition for this ideal program. These were that it should be "state-of-the-art," "part of culture," and should emphasize "win and succeed." These suggested that an ideal program would take itself seriously and demand that its values were central to its existence. It also suggested that stakeholders believed that selecting the best captain and having a strong captain program can help win games.

Functions and Procedures of the Ideal Program

Functions/Outputs

Upon reviewing the responses for ideal functions/outputs, the following highlights emerged: "Leadership training education" was identified by the stakeholders as a crucial program that any team seeking to develop its captaincy must consider providing. Such a program would equip the captain with the necessary skills and knowledge to lead the team effectively.

The responsibility of being a "Liaison to coach" was identified as a critical yet often overlooked role of the captain. The design team noted that if both the coach and captain can appreciate the value of this relationship, they can work together to create an environment where players feel heard and supported. Additionally, the captain can act as an intermediary when the coach's message needs to be conveyed through another player.

The design team recognized that the captain can serve as a "Mentor" and a source of inspiration for their teammates. This role can be especially important for young players

who look up to the captain as a role model, and for those who need extra motivation and encouragement.

Ideal Procedures

In reviewing the responses for ideal procedures, a range of ideas was presented. Several answers were highlighted for their potential value:

The design team suggested an "Interview Process" as an interesting approach to selecting a captain. They observed that, given the importance of the role, it was surprising that there was no discussion or interview between leadership and the selected player. The team felt that at least one interview should be conducted to ensure that the player and coach/organization are on the same page.

The design team also discussed a potential "Ranking System" that could involve a combination of graded traits and other metrics. While they emphasized that the captain should not be selected solely based on this system, they felt that it could serve as a useful guide. Examples of gradable traits included punctuality, attendance at team functions, visible support for other teams and organizations, and pride in the team and school.

Using athletes as designers created some unique and interesting answers. One player on the design team suggested that the captain should be the "Toughest" player on the team. They argued that the underlying fear of a physical altercation if players got “out of line” (i.e. were not focused on the team’s purpose, etc.) was a real concern.

Lastly, the design team proposed "Recruiting successful leaders" as a potential solution. They suggested that once a standard was established for captains, coaches should look for leadership qualities in their recruits. This approach could help to ensure that the team consistently has strong leaders in the captaincy role.

Governance Procedures

Upon reviewing the responses for governance procedures, a range of ideas was presented. Both design teams identified "Student Advisory Board" and "Student Advisory Committee" as top answers. The teams felt that having student involvement in the governance process would help to ensure that decisions were made with the best interests of the athletes in mind.

There was concern among the design teams regarding enforcement and follow-up once rules were established. They felt that while implementing bold new approaches was important, it was equally important to maintain them over time. Whatever was decided must endure personnel changes and down periods. Therefore, the design teams stressed the importance of making sure that the rules were "Enforced and Evaluated."

The design teams emphasized the importance of a "Coaches Handbook" to ensure that new coaches understood the proper handling of captains and other business. The handbook would serve as a guide for all coaches to follow.

Lastly, the design teams proposed the "Creation of a handbook by the athletic department, students, and chain of command." They felt that whatever was decided must be put in writing and have the support of everyone from players all the way up to the president of the university. The teams believed that if they were committed to this ideal, everyone must be on board.

Revenue Properties

During the review of the responses for revenue properties, the design team found that this topic was the least connected to the research questions. However, there were still a few noteworthy answers. One of the highlighted responses was "alumni contributions."

The design team believed that creating a positive team environment through strong peer leadership and captains could lead to more winning and a better overall experience for players. This could ultimately result in increased alumni support. Another response was "NIL deals." The design team recognized the potential for captains to become the face of the program and therefore have opportunities for sponsorships, scholarships, or other financial benefits. Lastly, "broadcast deals" was mentioned as a potential revenue source.

Prototype of a Captains' Program

Research Question 2 posed a clear challenge: What is the ideal design for an experience or education program that can help to select an athletic team captain? The utilization of Interactive Planning and Idealized Design methodology by stakeholders of a community college was the pathway to provide a response.

The Ideal Program for Athletic Team Captains

Informed by stakeholder feedback gathered from this research are the following design characteristics.

The mission statement of the ideal program is **to provide opportunities for student athletes to reach their maximum potential on and off the field**. An organization would meet this mission by establishing an inclusive athletic program that develops leadership personal and professional skills for future success. Once established, the culture of success will empower student athletes to be enthusiastic, collaborative, and successful in formal leaders' roles on all teams in the organization.

The value proposition of the ideal program would be **to support winning and success as core characteristics**. In addition, being considered "state of the art" and having athletics be "part of the culture" are central values of the program. These

expectations demand that the program hold these values as important to its existence and that selecting the best captains is a key component to the winning and success.

The ideal functions of the program concern preparing for the development and growth of team captains through three functional activities. One is leadership training for emerging and current captains. This enables development of the team leaders, as well as setting general expectations for leadership as part of the captain role. The second is serving as a liaison to the coach. This should include all expectations the organization and the coach have for the coach-captain relationship, and which should be agreed upon ahead of each season. The third is mentoring. This is designed to prepare captains to serve as an example and to support new or younger players. These expectations should be formal, measurable, and specified in writing. Furthermore, designating leadership as a team-skill should be part of recruiting to the team and to the institution with athlete teams.

The component of the ideal program that addresses processes, refers to how the functions will be integrated. While traditional approaches include "the coach will decide" or "the team will vote" can be included, an ideal system should add more shared evaluation tools. Two generated by stakeholders were to apply a "grading/ranking system" based on observed leadership behavioral data, and an interview process that would lead to finalists/top ranked candidates.

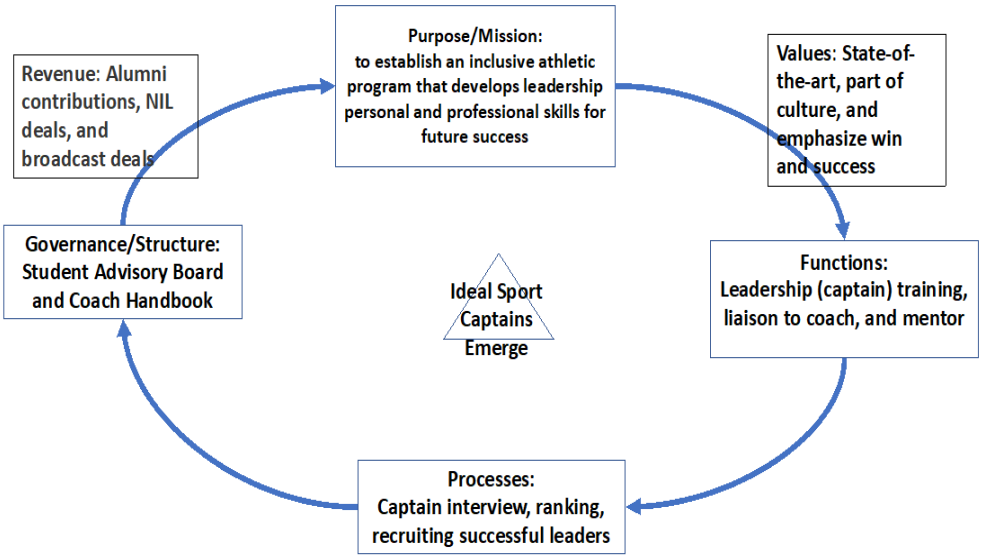
The ideal characteristics of athlete team governance was identified as the Student/Athlete Advisory Board. They, along with the Athletic Department personnel and the top administration of the school or organization would create the "athletic department handbook and guidelines" which includes a description of the leadership program for

captains. New coaches will have to agree to lead their teams and select their captains by following these guidelines. Any violation of the captain process would be “enforced and evaluated” appropriately and in a timely manner. Hold exceptions to guidelines for one team or coach would require full and formal agreement by the Advisory Board and Athletic Department in advance.

The final design component addressed by stakeholders for an ideal system concerned revenue generation. This would focus on areas that could have long term impact. First, a well led team with a strong captain would be promoted to alumni to support and connect over the years. Another means of revenue would be to seek direct financial support for Name, Image, License (NIL) deals for the players. The final suggestion was that an athletic program that produces winning and excellence would be promoted to the community to gain direct and indirect revenue impact through marketing and sales efforts. Figure 20 presents a schematic of the ideal model generated by stakeholders.

Figure 20

Ideal Athletic Department Captain Program Model



Additional Premises and Guidelines

In addition to the properties and elements in the model are the following drawn from the literature and from the author's professional experience.

Coaches

Programs should be careful to only hire and retain coaches who support the program. When hiring, be sure the new coach not only understands but also supports the captain's program at the school. Genuine support and agreement to work within the program's guidelines are essential.

Coaches should be educated and knowledgeable about appropriate leadership trends and research. To support this, coaches should have annual peer leadership training that reviews the school's Captain's program, as well as the latest literature on how peer leadership and captains can help programs be successful.

Potential and Emerging Captains

All players should be regularly evaluated through a leadership lens. Coaches, administrators, and peers should be documenting positive leadership moments throughout each player's career. By a player's junior or senior year, they should have had significant evaluation through the leadership lens, and the data to back it up.

One key component to watch for in players is leadership consistency. It is easy to be enthusiastic during a winning streak. However young players who are not consistent with their leadership traits, especially when things are not going well, are likely poor candidates for a captain appointment.

Selecting Captains

Organizations should consider using all available tools for selecting captains. As suggested by the design teams, this includes but is not limited to ranking systems and an interview process. These tools can turn subjective decisions into those that are objective and fair. Each school must select their own process with a goal to develop the best leader to serve as captain.

Supporting Captains Once Selected

It is important to provide leadership training and expectations to new captains. This can be in-house training, external training, or both. Such training does not have to be limited to captains; however, captains deserve their own distinctive training above and beyond other leadership training provided to players.

Athletic Department and coaches should share written expectations for the role of the captain to support the coach and as well as the team. While coaches vary in how they work with their teams, there will be specific functions and processes that each coach

expects that should align with written expectations consistently across all sports within an Athletic Department.

Recognizing and Celebrating Captains

Athletic Departments should develop on their culture by creating traditions and celebrations where the captain is added to the symbols that represent the team and the school. Being the captain while a member of the campus should denote organizational rewards and expectations while holding the role. Athletic Departments should treat alumni captains with additional recognition to show the extended community that the honor continues after graduation. This promotes that additional work associated with being a team captain extends to activities later in life.

Maintaining a Successful Program

The design teams suggested that it is important that an ideal program should be regularly "enforced and evaluated." This should involve both formal annual reviews, as well as an informal recommitment from leadership during these reviews. Perhaps most importantly, recognizing that if one decides to ignore the program, its guidelines and responsibilities in favor of personal approaches to selecting and managing captains will not be tolerated.

Evaluation of the Use of the Methodology

Recruiting stakeholder volunteers to agree to participate in a workshop in support of this research was very difficult. Many participants who gave up their time to participate were there primarily because they love their teams and their school Athletic Department. That passion came through in their behavior and responses. For a small number who were less passionate, it took almost the entire session for them to loosen up

and share their feelings until they started to trust the facilitators and the process. Perhaps it is because ID/IP is a democratic process with all stakeholders providing equal voice that was challenging for those who commonly have power over organizational decisions.

Having professional facilitators is important to the success of using this research tool. While TG and LS were different in their approaches, both design groups responded (anecdotally) that they had "the better facilitator." Each facilitator won over their group with quality leadership and presentation. After the design/collection session was over and the two groups merged, they each bragged how their group was better and their facilitator was the best. This friendly competition indicated shared values and that stakeholders cared about the product they were producing.

Evaluation of the Stakeholder Design Team

The design team reflected their personal experiences, roles, and the context of the connection to their academic institution. Salem Community College is reviving their athletics program that was shut down for almost a decade until 2018. It was a positive influence in the sense that stakeholders are enthusiastic and looking to grow. It is suspected that the President of the college was such a supporter of the workshop is because he is looking for ways that energy and excitement can be built around the athletic program. Being in a growth or rebuild mode is a motivator to a new design opportunity. The negative aspect was that the college had far fewer programs then a typical college athletic department would have. The majority of the participants were drawn only from baseball and softball.

One distinctive characteristic about Salem Community College is that they do not yet have captains on any of their teams. Since the restart of the program this has not been

a priority. This meant there was nothing to improve about the current way that captains are selected. That stakeholders were in start-up design can be benefit to this methodology which asks participants to set aside the current challenges and to design something innovative.

Another quality that Salem Community College possesses is that they are a two-year school. While this is common in most junior colleges and community colleges the majority of programs both high school and college are four years. This meant for this stakeholder group, the amount of time given to evaluate leadership and captain candidates is shortened. Any program that wishes to utilize all four years to evaluate captain candidates would create a program that started looking at potential leaders years ahead of their possible captain years. Two-year programs have a much smaller window of time to evaluate and prepare someone for the role of captain. Turnover of players is fast and furious compared to four-year schools. This means that answers we would get regarding selecting the best captain would leave out the ability to utilize two or three years leading up to the players prime captain candidate years. Given that most high school and colleges are four-year programs, and community colleges and junior colleges are in the minority being two year programs, it is likely we could miss important ways to use those years.

The design team in this research were drawn from one school, rather than across different schools. The value in one school familiar with each other and feeling the purpose of redesigning their schools program motivated this choice. However, had the stakeholder/design team have been larger and more diverse across academic institutions, the idealized design of a prototype model and set of premises may have been different.

Discussion of Recommendations

It is hopeful that the role of captain will be led by the school's peer leadership programs, and no longer the domain only of each individual coach. The role of captain hopefully will no longer be viewed as unimportant or ceremonial. Selecting the best captain for a team and using them properly is as important as picking the best goalie or winger or whatever the coach's decision traditionally has been. This decision/selection may be just as important if not more important than any other position or playing time decision he or she makes. The importance of a school to step in and lead their coaches and programs on how captains from their school will be selected, educated, supported, and celebrated will hopefully increase to become a norm in decades to come.

It remains important for coaches to retain some decision making in their teams, but the stakeholders argued that ideally this should not be the coach's decision alone. The relevant issue, therefore, is by what methods will decisions be made.

In addition, by making the team captain distinctive and a role that a school recognizes in addition to the general sense of being a member of the team can make this leadership role something for which student athletes compete. Stakeholders in this research agreed and were enthusiastic that creating a captain's program was a feasible and desirable way to improve the experience of sports and the performance of their teams.

Future Research

The lack of significant research on the role of the captain in sports suggests there are opportunities to engage in future exploration. The following are questions of further study that emerged from this dissertation. How are captains selected? What specific characteristics should be sought in a captain? What are the outcomes for the selection of a

poor captain? How to the characteristics of the captain contribute to team performance and outcomes? Would a coach support democratic and open guidelines for selecting team captains? What is the means of evaluation for the captain-coach relationship? What is the relationship between sport team captain in college and one's roles and success in one's after-sport occupation and performance?

I leave it to colleagues and my students to continue to pursue answers to these questions.

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APPENDIX A: Invitation to Workshop

SALEM
COMMUNITY COLLEGE

MEMORANDUM

DATE: January 31, 2023

TO: Derek Hunsberger, Doctoral Candidate, Thomas Jefferson University, Philadelphia, PA

FROM: Ken Robell, Vice President of Academic Affairs, Salem Community College, Carneys Point, NJ

SUBJECT: INSTITUTIONAL REVIEW BOARD APPROVAL

Mr. Hunsberger is granted Institutional Review Board (IRB) approval to conduct research using program design input from workshop participants at Salem Community College. In accordance with the data collection plan, no identifying information shall be collected as part of the design workshop nor through any observations of the design workshop process.

Any questions regarding this approval can be directed to the Academic Affairs office at Salem Community College (856-351-2670).

KR/mm

APPENDIX B: Invitation to Workshop

Dear Invitee,

My name is Derek Hunsberger. I am a doctoral student at Thomas Jefferson University. Thank you for your interest in my upcoming workshop that will serve as my doctoral research. By way of this letter, I am formally requesting your participation in a doctoral research study that I am conducting titled: Rethinking Peer Leadership in Athletics. The research will be conducted as an idealized design workshop where you will serve as the stakeholder designers. Specifically, I am seeking the design for an ideal program for selecting, training, and supporting athletic team captains on the college level.

The graduate level study involves a two hour workshop on the campus of Salem Community College. The date is February 3rd between 10am and 12:30pm Participation is completely voluntary, as there is no reimbursement or payment for time, and you may withdraw from the study at any time. There is zero anticipated or expected risk to participating. The study is completely anonymous, therefore, it does not require you to provide your name or any other identifying information. No personal information of any kind will be collected. All data will be kept secure by password protection and data encryption.

Thank you for your time and participation, and if you have any questions, please contact me via email.

Sincerely,

Derek Hunsberger
Doctoral Student, Thomas Jefferson University

APPENDIX C

Survey Participants Acknowledgement Sheet

University: Jefferson University
Program of Study: School of Business
Title of Project: Rethinking Peer Leadership in Athletics
Advisor: Larry Starr, Ph.D.

This document serves as acknowledgement of my participation in the idealized design workshop being held on February 3, 2023, is on a voluntary basis. I acknowledge that my participation is in support of Derek Hunsberger's pursuit of the Doctorate of Management in Strategic Leadership at Jefferson University.

I further understand that:

1. My participation is strictly on a volunteer basis.
2. My participation will not involve tests or instruments.
3. Neither business intelligence nor personally identifiable information will be requested.
4. I will not be subject to legal, physical, psychological or social risks.
5. Derek Hunsberger will observe my participation in the design session and the data gather from observation of my participation will be generated as input for his dissertation.

   Name (print): _____

   Signature: _____