

A SUCCESSFUL ATHLETIC TALENT DEVELOPMENT ENVIRONMENT - A HOLISTIC ECOLOGICAL CASE STUDY OF AN ELITE COLLEGE SOCCER PROGRAM

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ABSTRACT

Tim Kubel: A successful athletic talent development environment - A holistic ecological case study of an elite college soccer program.
(Under the direction of Barbara Osborne)

A holistic ecological approach (HEA) was used to investigate ecological factors influencing the athletic talent development process in an elite men's college soccer program. Methods of data collection included interviews, participant observations, and analysis of documents. College soccer has been experiencing various challenges over the past decade with the expansion of the professional soccer landscape and more professional playing opportunities in North America. College soccer has been disregarded by professional clubs in the U.S., and elite youth players often forego a college career and sign a professional contract. This case study examined the development environment college soccer provides for elite players striving to transition to the elite senior level while pursuing a university degree.

The environment studied provides a unique combination where elite athletes are integrated in an elite university environment. Coaches focus on holistic long-term development of players, meaning developing the person behind the player and help develop a growth mindset and other social, psychosocial, and psychological competencies. The environment is centered around a relationship between student-athletes and a support network designed to help players balance their academic, personal, and academic responsibilities. Furthermore, the environment is characterized by a strong, open, and cohesive organizational culture. The university, athletic department, and soccer team share core values that are coherent and build on each other. The

imbalanced competition schedule of college soccer was highlighted as a major barrier to long-term development of players and adaptations could make the environment even more successful in transitioning players to the senior elite level.

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CHAPTER 1

Introduction

Developing future elite-level players for the senior team is often the primary objective of an elite youth football (soccer) academy, including Ajax Amsterdam's world-famous academy 'De Toekomst' — *Dutch for the Future*. While Ajax certainly aims to develop future first team players, the organizational structure and culture of *De Toekomst* is centered around the players' holistic development in which coaches, teachers, and families strive to create an ideal development environment for players, before maximizing team success (Larsen, Louise, Pyrdol, Sæther, & Henriksen, 2020). While it may seem logical to prioritize long-term development of players over short-term success (e.g. need to win game), when it comes to current practice in elite youth football environments it often looks very different.

Multiple studies of European elite football environments confirm a dichotomy between focusing in long-term development of future elite-level players and a "short-termism" in professional soccer (Nesti, Littlewood, O'Halloran, Eubank, & Richardson, D. 2012; Aalberg & Sæther, 2016). Researchers confirm that short-termism poses as a considerable barrier for effective talent development and successfully transitioning players to the elite senior level (Nesti et al., 2012).

Many European countries that were traditionally successful on the international stage including England and Germany, suffered from the negative consequences of having too many barriers to, and not enough facilitators of effective youth development on a macro level (e.g.,

legislation by national governing bodies DFB and FA). Germany, more specifically the German Football Federation (DFB), has traditionally been placing among the top four teams at big international tournaments. At recent tournaments however, the results have been disappointing, and experts are also seeing a decline in young German footballers on the domestic elite senior level in comparison to other European countries (DFB, 2018). In response to those results, they launched an initiative called “*Projekt Zukunft*” — *German for Project Future*, which was created to investigate innovative ways to systematically improve the development process of young German footballers (DFB, 2018). They recognize that the development process is influenced by many different factors (e.g. school, coaches, agents), and highlighted that the high competitiveness in the current *competition* model, is a barrier to effective youth athlete development and the focus should lay on individual player development rather than short-term team success (DFB, 2018). The DFB recognized that the desire for early success, meaning winning games and championships at a youth level, pose a barrier to successful youth development on a systemic scale. The priority is rarely the long-term development of all players on the team and rather the total focus on finding a line-up that can beat the other team on match day. Short-termism in football poses a barrier to successful youth development in many youth football academies and was also found to be a barrier to effective athletic talent development in American college soccer.

College soccer is currently played in a 19 game, 72-day regular season, giving players an average of four days to recover in between competition. Studies show that the minimal recovery time in between games between college soccer games leads to a significant increase in injury risk and provides limited opportunities for coaches to work on the soccer-specific development of

their players (Dupont, Nedelec, McCall, McCormack, Berthoin, & Wisløff, 2010, Huggins et al., 2018).

While competition certainly is one aspect of effective youth athlete development, it is only one of many influences on the development of youth athletes. Many researchers have researched influences on the talent development process with a multitude of theoretical models and research approaches, investigating elite-environments around the world. Research in youth athlete development has become gradually more holistic due to the interrelation of pertinent research, and a recognition that understanding and optimizing the influences on a particular environment in which the youth athletes find themselves in, will increase the effectiveness and efficacy of youth athlete development (Henriksen, Stambulova, & Roessler, 2010).

A research approach, called *holistic ecological approach* (HEA) was developed by Henriksen, Stambulova, & Roessler (2010) and is designed to capture factors influencing the environment's success in developing future elite-level players. Henriksen et al. (2010) developed two working models, called *Athletic Talent Development Environment (ATDE)* and *Environment Success Factor (ESF)*, which have been used by many researchers to investigate elite-sporting environments, including Ajax's 'De Toekomst' (Larsen, 2020).

In a later research project, Henriksen & Stambulova (2017) connected independent research on elite ATDE's and identified eight shared features of successful ATDE's: (1) Training groups with supportive relationships, (2) Proximal role models, (3) Support of athletic goals by wider environment, (4) Support for personal and career development, (5) Focus on long-term development rather than early success, (6) Integration of efforts (e.g. school, family, sport, life), (7) Strong organizational culture, and (8) Training that allows for diversification (Henriksen et al., 2017).

While Henriksen et al. (2017) included research on many elite individual and team sport environments from multiple countries, and across numerous sports, no research utilizing Henriksen's (2010) HEA has been conducted on a U.S. collegiate program, more specifically men's soccer. This research is designed to investigate the eight shared features discovered in European elite ATDE's in an elite men's college soccer environment.

Statement of Purpose

The purpose of this study is to provide a holistic ecological description of an elite men's soccer program, one of the most successful college soccer programs in producing elite-level soccer players, examining factors influencing the environment's success in developing future elite-level players (i.e., professional players), and analyze if and in what ways the eight features of a successful ATDE are present in the environment. Over the past decade one core mission of the National Collegiate Athletic Association (NCAA), the governing body of intercollegiate athletics including college soccer, has been to improve student-athlete welfare and ensure that the athletes are protected physically and mentally, on and off the field (NCAA, 2020). This research is designed to inform coaches and practitioners when creating an environment that facilitates effective athletic talent development.

Research Questions

- 1) What ecological factors characterize an empirical version of the ATDE and ESF of an elite college soccer program?
- 2) If and in what ways are the eight features of a successful ATDE present in the environment?

Assumptions

1. The answers given to questions in the semi structured interview are truthful and complete.
2. The research methods used in this study are valid and reliable.

Delimitation

1. This study is designed to focus on the environments effectiveness in developing elite level players (e.g. professional players).
2. Success in this research is defined as transitioning players to the next level (e.g. professional level). However, it is recognized that there are numerous other valid definitions of success including maximizing individual potential, winning trophies, and winning percentage.
3. This study is researching a college soccer development environment, which is unique in its integration of the academic and athletic domain and is inherently different from other soccer development environments that don't have a fundamental connection between both domains.

Limitations

1. This research is focused on an elite U.S. college soccer environment and some findings may not be transferrable to other divisions in the NCAA, or U.S. and European youth soccer academies.
2. The research will be based on and is limited by the amount of data available to be reviewed in terms of interviews, documents, and observations.

Definition of Terms

Holistic Youth Development – Development focus is not exclusive on athletic ability and rather attempts to effectively integrate athletic, academic, and personal domain of future elite senior athletes to provide a foundation for success on the professional level, and beyond.

Athletic Talent – A set of competencies and skills developed based on innate potential and of multi-year interactions with the environment – as well as the ability to exploit the strengths and compensate for the weaknesses of the environment, and to contribute to his/her own development.

Student-Athlete — Student at University that is also competing as an athlete on a varsity team for the university.

Student-Athlete Welfare – Includes the physical and mental wellbeing of student-athletes, on and off the field, as defined by the NCAA.

Significance of Study

College soccer has been providing educational opportunities for many student-athletes since the NCAA offered it as a championship sport in 1959. College soccer also serves as a steppingstone to the professional level for many young American and international soccer players while pursuing their degrees. Many U.S. national team Hall of Famers attended universities as student-athletes, which often attributed to their professional success by developing a holistic foundation and a growth-mindset during collegiate career (e.g., Greg Berhalter and Eddie Pope, both former college soccer players). The unique combination of college soccer has led to a globalization, which in 2016 had increased the international soccer student-athlete population by 120% since 2000, partly because it provides an alternate pathway for players seeking elite level competition while continuing their education (Kirk & Weaver, 2019)

The sport of soccer has been growing in the United States ever since the North American Soccer League (NASL), the predecessor league of Major League Soccer (MLS), was founded in the 1960s and grew rapidly early on, after one of the founding members signed the Brazilian superstar Pelè in 1975. The infrastructure of professional soccer in the U.S. has been changing rapidly over the last decade. Until 2023, MLS will have added a total of 15 teams since 2009 – which almost doubles the number of teams that competed a decade ago (MLS, 2019). Furthermore, a new semi-professional league system has been founded in 2018, which as of today gives opportunity for more than 50 new teams to compete, with more teams expected to be join over time. Additionally, MLS recently launched a new elite youth development platform called *MLS NEXT*, encompassing 498 teams across 113 clubs, which will place player development at the forefront, while providing a healthy and supportive environment for the players (MLS, 2020).

Internationally, the United States have traditionally been able to produce a very small percentage of world class players that competed in European top leagues. However, American soccer talents like Christian Pulisic, Giovanni Reyna, and Weston McKenney, currently competing on the highest European level, show that it is possible for young Americans to make the transition to a world-class level. Interestingly, a common feature of today's internationally successful U.S. talents is they have left the United States early in their career to join either a European or South American youth development system, which are more notorious for developing world-class senior players. Furthermore, almost all U.S. players that ultimately reached world class level, spent at least some time of their youth development outside the United States.

College soccer has often been disregarded by professional teams due to its lack of professionalism (e.g. lack of sport specific resources). Not much attention has been paid to the holistic development (e.g. integration of athletic and non-athletic domain), which student-athletes experience at university and only a small number of professional environments provide. This study is designed to use a HEA and investigate if, and how the eight shared features found in successful ATDE's are present in the environment and facilitate player transitions to the elite senior level.

CHAPTER II: REVIEW OF LITERATURE

While there is a vast amount of research pertaining to athletic talent development, the literature review for this thesis focused on obtaining a thorough understanding of research that is relevant to developing an empirical model for the successful ATDE of an elite college soccer program.

The first section will outline the different research approaches that have been utilized to research athletic talent. The *talent discovery approach* and *talent development approach* are further broken down into empirical research results published in the respective area as well as the practical consequences that have come with each approach. Next, the *holistic ecological approach* is broken down into four sub-groups: (1) theoretical foundation, (2) descriptive and explanatory working model, (3) shared features of successful ATDE's, and finally (4) barriers for successful ATDE's. The next section of this literature review dissects literature pertaining to soccer specific ATDE's, to identify if, and how the discovered shared features of successful ATDE's are present in soccer specific ATDE's. The final section outlines information specific intercollegiate athletics, more specifically college soccer and its competing objectives within the environment. The information collected from the literature on these topics provides a concrete foundation for this study.

Research on Athletic Talent & Athletic Talent Development

Talent discovery and development of young prospects is an integral part of many sport organizations and sports teams today — not only because of its financial reward and publicity

associated with it, but also because of the outlook of enhancing the senior team by developing a highly skilled player (Larsen et al., 2020). Creating an environment that maximizes the number of well prepared and highly able prospects that are transitioned to the senior level will also enrich the quality and sustainability of the senior team — crucial in an era of ever-increasing standard of world-class performance (Martindale, Collins, & Abraham, 2007). Research in the area of athletic talent and athletic talent development has been conducted through a variety of lenses since inception.

Distinctive Research Approaches

Early studies focused on innate talent, and often had the aim to find prerequisites for athletic excellence by researching individual competencies associated with future athletic success. Studies in that line of research could be clustered together and labeled under *Talent Discovery Approach (TDA)*. A wave of research followed, utilizing a *Talent Development Approach*, attempting to emphasize the process of talent development and researching pathways that lead to elite performance (Côtè, Baker, & Abernethy, 2007; Ericsson, Krampe, & Tesch-Römer, 1993;). In several contemporary lines of research, we can see the most recent research focus shift, to a more contextual approach called *Holistic Ecological Approach (HEA)*, which highlights the importance of the entire environment in which the development takes place (Henriksen et al., 2010).

Talent Discovery Approach Research

Early research focused on the individual athlete, and individual competencies (i.e. physiological, psychological, psychosocial) that are associated with success in reaching elite level for prospective elite athletes. Researchers often used observations and interviews of world-class athletes, artists, and scientists in an attempt to discover common characteristics that led

them to reach world-class expertise in their respective fields (Bloom, 1985; Gould Dieffenbach, & Moffett, 2002; Holt & Dunn, 2004). The *talent discovery approach* was built on the notion that talent is innate and that a systematic assessment and selection of talented athletes will lead to a more efficient use of resources (Howe, Davidson, & Sloboda, 1998).

Gould et al. (2002) examined psychological characteristics associated with athletic success in Olympic champions and identified twelve psychological competencies that influenced the success of the athletes. While Gould et al. acknowledged that components immediately surrounding the athlete have a primary influence on the development of psychological competencies associated with athletic success, they did not research how to effectively develop those competencies and instead focus on finding other individual competencies associated with athletic success (Gould et al., 2002).

Holt et al., (2004) researched psychosocial competencies among elite male adolescent soccer players in Canada and England, in order to present a grounded theory of factors associated with soccer success. *Discipline, commitment, resilience, and social support* are the four psychosocial competencies identified as central to success in soccer development (Holt et al., 2004). *Discipline* includes the athlete taking responsibility of his career and the ability to make sacrifices for the greater good of his career and therefore the ability to delay gratification (Holt et al., 2004). *Commitment* entailed players' motives for playing the game as well as the ability of the player to envision his career and have an effective career planning and goal setting process (Holt et al., 2004). *Resiliency* is used to describe the ability to bounce back after adversity and *Social Support* describes the emotional, informational, and tangible support that can help younger athletes overcome obstacles and develop resilience (Holt et al., 2004).

Other studies designed around the individual athlete to identify sets of competencies that are associated with athletic success are used to assist sporting organizations in predicting what prospective athlete will most likely develop to elite level based on their innate athletic talent (Henriksen et al., 2010). A result of the research of competencies that are associated with athletic success was a heavy emphasis on the discovery of talented prospective athletes, selected based on the discovered associated competencies (Martindale, Collins, & Daubney, 2005).

However, researchers (Bloom, 1985; Gould et al., 2002; Howe et al., 1998) emphasized that many competencies associated with athletic success have been the result of a development process over time. In interviewing world class mathematicians, athletes, and other artists, Benjamin Bloom (1985) outlined early that no matter how innately talented an individual is, without a prolonged, intensive process of deliberate practice, the individual will never reach expert performance. Bloom (1985) developed a general pattern of learning and talent development that was divided in three key stages: (a) initiation stage; (b) development stage; (c) perfection stage. He also recognized that the research should not be limited to the individual, and rather include parents, teachers, coaches, and other factors influencing the development process (Bloom, 1985).

Researching prerequisites for athletic success, instead of developing effective practices for the development of athletic talent, illustrate where most financial resources were allocated within sporting organizations — the detection, identification, and selection of young prospective elite-athletes. However, the research focused on individual competencies associated with success in athletic talent development built the foundation for the line of research that is focused on the process of developing those competencies in prospective elite athletes (Côté et al, 2007).

Talent Development Approach

Research pertaining to the development of competencies associated with athletic success shifted the focus from identifying innate potential and competencies associated with athletic success in people, to identifying practices that facilitate effective development and successful transitioning of players to the elite-level (Côté et al., 2007; Ericsson et al, 1993). Research utilizing the *talent development approach* highlights the quantity and quality of training needed to reach elite-level performance over time and has outlined two distinct pathways that lead to elite-level performance (Henriksen et al., 2010).

Early Specialization & Deliberate Practice

The first pathway advocates for early specialization in one domain, where the focus lays on deliberate practice (effortful activities solely designed to improve performance) in that domain (Ericsson et al, 1993). Ericsson et al., (1993) discuss the role of deliberate practice in the acquisition of expert performance and discovered elite-level performance is closely linked to an individual's assessed amount of deliberate practice. They also discovered many characteristics believed to reflect innate talent are actually the result of intense deliberate practice continued for at least ten years, or 10,000 hours (Ericsson et al, 1993). While Côté et al. approved Ericsson's pathway to reach elite-level performance with years of deliberate practice, they also identified several negative consequences that come with early specialization (Côté et al, 2007; Côté, Lidor, & Hackfort, 2009).

Late Specialization & Early Sampling

Côté et al. (2009) highlight that early sampling allows children to learn emotional, cognitive, and motor skills through deliberate play activities in several sports, while mitigating the risk of early drop out/burn out and increased injuries. That's why the second pathway to

elite-level performance could be described as a healthier one, as it is characterized by a focus on deliberate play and enjoyment before specializing to one domain (Côté et al, 2007;2009).

The result of the research with the talent development approach was that researchers and practitioners started looking beyond the individual athlete's innate potential and shifted their focus towards developing effective development practices that will most likely lead to elite-level performance.

Shift towards an ecological approach

Shifting the research focus from the individual to the environment in which the individual is developing in, allows researchers to examine factors influencing talent development other than the process of coaching itself (Bloom, 1985; Gould et al., 2002). Since talent development is highly individualized, it requires more than unidimensional evaluation of coaches' behaviors, and more so an ecological analysis of the talent development environment of the prospective elite athlete (Martindale, Collins, & Abraham, 2005). Some factors influence the athlete directly such as parents, coaches, teammates, and mentors, and some factors have an indirect influence on the developing athlete such as national culture, sporting culture, and policies (Martindale et al., 2007).

Bloom (1985) discovered early that one major factor influencing the athletic talent development of an athlete that affects all performers throughout their careers, is the quality of the coaching environment. Martindale et al. (2005) recognized the influence the quality of the coaching environment, as well as other factors immediately surrounding the athlete can have on the talent development process. Martindale's research aim was to optimize the process of developing youngsters into senior elite athletes, by using an ecological approach to include all

aspects of the coaching situation, which he termed as the *Talent Development Environment* (Martindale, 2005).

Martindale and colleagues interviewed 16 UK coaches about the factors they believed to be crucial in talent development (Martindale et al., 2007). They recognized five characteristics that are commonly shared in effective talent development environments: (a) long-term aims and methods, (b) wide-ranging coherent support and messages, (c) emphasis on appropriate development rather than early selection, (d) individualized and ongoing development, and (e) integrated, holistic, and systematic development (Martindale, 2005). A systematic implementation of long-term goal setting strategies and effective coordination to ensure the integration of all factors was found to be central to the process of maximizing the long-term potential and effective talent development (Martindale et al., 2005).

Coherent messaging and support for athletes from other key influences, outside the sporting context were also identified as a reoccurring theme (Martindale et al., 2005). It has to be stressed how powerful the benefits of coherent messages can be when they synchronously come from parents, coaches, teachers, role models, elite athletes, and other influential parties in the network of the athlete. Martindale suggests key individuals in the prospective athlete's environment should be systematically educated about the long-term development plan and how to appropriately promote the desirable characteristics of the athlete (Martindale, et al., 2005).

Selection processes at younger age groups are often influenced by the objective to form a group of youngsters that helps the team win at that particular time. This does not de-emphasize early selection and rather de-emphasizes the long-term development of all player and emphasizes the early selection (Martindale, et al., 2005). The example of early selection illustrates how shifting the emphasis from long-term development to winning the games impedes on the

development of all players on the team. Studies have shown that over 90% of eventual world top 25 athletes have not shown talent at age 11-12 that would have indicated the achievements they eventually achieved (Bloom, 1985). An example for this phenomenon is England's football national team that until 2005 had only two players, Michael Owen, and Terry Venables, that made the national team roster at each age group until they reached senior national team (Martindale et al., 2005).

Martindale and colleagues created a talent development environment questionnaire (TDEQ), with the intention to research athletes' experience of the identified key features of an effective talent development environment (Martindale, Collins, Wang, McNeill, Lee, Sproule, & Westbury, 2010). A seven-factor structure was developed to maximize the effectiveness of a talent development pathway that included: (1) long-term development focus, (2) quality preparation, (3) communication, (4) understanding the athlete, (5) support network, (6) challenging and supportive network, and (7) long-term development fundamentals (Martindale et al., 2010). A follow-up study from Martindale confirmed the ecological validity of the TDEQ as well as the separation of results into high- and low-quality talent development environments (Martindale, Collins, Douglas, & Whike, 2013).

Researchers traditionally focused on the individual athlete and then shifted the focus to the microenvironment (e.g. direct influences on the developing athlete) to find ways to optimize the process of transitioning to the elite-level. Cross-cultural studies have later identified that the national culture, national sporting culture, and national sport systems are also important factors to be considered in the transitioning process of athletes (Stambulova, 2007).

Other research that also reviewed primary and secondary factors that influence the acquisition of sport expertise suggests that high values placed on a sport in a particular country,

can have a tremendous impact on sports achievement in that country (Baker & Horton, 2004). The researchers suggest that the success of ice hockey in Canada, downhill skiing in Austria, and table tennis in China, could all be due to the vast media coverage and high participation rates and therefore the sport culture in the respective country (Baker & Horton, 2004).

Stambulova (2007) further investigated the career transitions of young elite athletes to the senior level and found out that athletes making this transition face challenges covering various spheres of their lives (e.g. sport, studies, personal, work, relationships), for which the club can plan and assist the athlete. Martindale, Stambulova, and other researchers that used the *talent development approach*, understood factors in the environment (e.g. macro and microenvironment) of the developing athlete can have an impact on the result of the talent development process (Martindale et al., 2013). They were pioneers among social sport psychology researchers by employing an ecological approach to talent development research by focusing on all factors in the developing athletes' sport domain, including coaching (Henriksen et al., 2010). However, Martindale's research approach was not holistic as it focused exclusively on the sport domain and not on the broader development context in which the athletes find themselves in (Henriksen et al., 2010).

Holistic Ecological Approach

Danish researchers led by Kristoffer Henriksen developed a holistic ecological approach (HEA) to athletic talent development that includes the broader context of the athletic talent development environment (Henriksen et al., 2010). The HEA focuses on the whole environment and based on the capacity to transition prospective elite athletes to the elite level, can indicate which environments are more successful than others (Henriksen et al., 2010). The HEA integrates the rather opposing *talent discovery approach* and *talent development approaches* by

focusing on how an environment manages the balance between these two, and how this balance becomes a part of the environment's identity (Henriksen et al., 2010; Henriksen & Stambulova, 2017).

Henriksen et al. (2010) defined the *Athletic Talent Development Environment (ATDE)* as:

“A dynamic system comprising a) an athlete's immediate surroundings at the micro-level where athletic and personal development take place, b) the interrelations between these surroundings, c) at the macro-level, the larger context in which these surroundings are embedded, and d) the organizational culture of the sports club or team, which is an integrative factor of the ATDE's effectiveness in helping young talented athletes to develop into senior elite athletes” (Henriksen et al., 2010, p.160).

Henriksen et al. (2010) designed a case study of three successful ATDE's in Scandinavia, all of which had a successful track record in transitioning prospective athletes to the elite-senior level. With their research, they wanted to investigate features of successful ATDE's, as well as why certain ATDE's are more successful in transitioning young athletes to the senior elite level than others (Henriksen et al., 2010). Henriksen's goal was to investigate enough ATDE's to identify shared features among successful ATDE's that can guide practitioners during their daily work (Henriksen et al., 2010).

Theoretical Foundation for HEA

Henriksen et al. (2010) used three different theories to develop a descriptive and explanatory working model that he called athletic talent development environment (ATDE) and environment success factor (ESF), respectively. The ATDE working model is presented as a dynamic system describing the role and function of various different components and relations

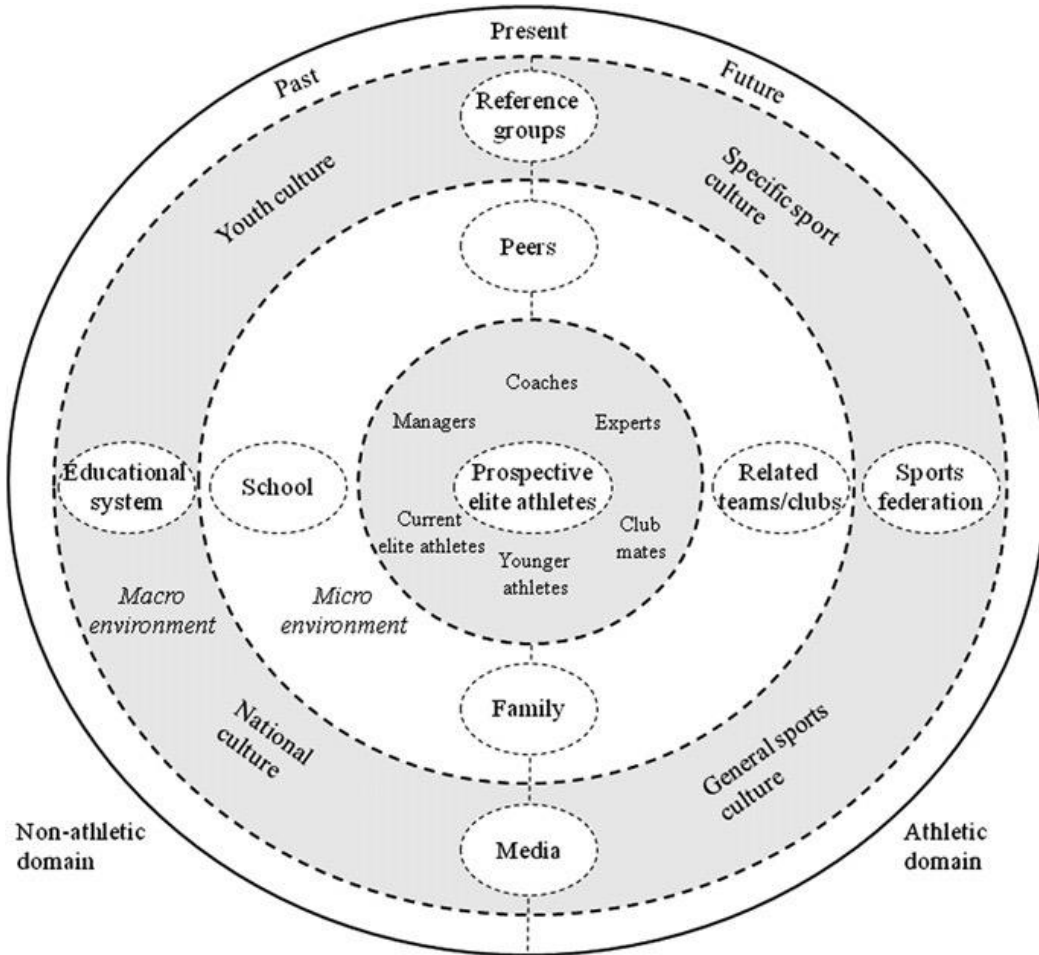
within a particular talent development environment (Henriksen, 2010). The ESF working model helps predict the success of the environment based on the interplay of different elements in the descriptive model (Henriksen et al., 2010). *Ecological theory* was used to seeing the ATDE as a series of nested structures, which include, but are not limited to, the immediate environment of the athlete (Bronfenbrenner, 1979; 2005). The *systems theory framework* helped Henriksen view ATDE's as systems with certain functions, components, relations, and that those systems as a whole, are qualitatively different from the sum of their parts (Patton & McMahon, 2014). Research in *organizational psychology* helped Henriksen and colleagues during the development of the ESF when they adopted the notion that organizational culture drives the socialization and conditioning of new members, provides stability, and adapts the organization to a constantly changing environment (Henriksen, 2010; Schein, 1992).

Descriptive Working Model: ATDE

Henriksen et al. (2010) outlined that the objective of any ATDE is to enable as many prospective elite-athletes to transition to the elite senior level. All ATDE's are different in a sense that certain components of the ATDE are more dominant and have a bigger influence on the environment than others. The prospective athlete is in the center of the model, directly surrounded by the micro-level, which is characterized by everyday communication and interaction (Henriksen et al., 2010). The microenvironment of the ATDE contains components of the prospective elite-athlete's lives that often involve direct interactions on a daily basis such as coaches, family, teachers, younger and older athletes, and mentors (Henriksen, 2010). The macro-level surrounds the micro-level of the ATDE and includes components that affect but do not contain the athletes as well as the values, cultures, and customs to which the athlete belongs (Henriksen, 2010). The macro-level often includes cultural contexts, such as general sporting

culture, national culture and specific sport culture. Furthermore, it includes the national educational system, sports federations and governance structure (Henriksen, 2010). Important to remember, some components clearly belong in one or the other level, whereas others transcend levels or domains (Henriksen, 2010). Additionally, the working model is separated into two domains: athletic and non-athletic domain. Where the athletic domain hosts components directly related to athletic activities, the non-athletic domain hosts all other spheres of the athlete's lives (Henriksen, 2010). Finally, the model's outer layer represents the past, present, and future of the environment, highlighting the perpetual dynamic of the ATDE and the constantly changing contexts between components influencing each other in a reciprocal manner (Henriksen, 2010). The model is holistic because it focuses on athletic and non-athletic influences on the environment, on both the micro and macro-level of the environment, and it includes the perpetual dynamic of the environment by including the past, present, and future of the environment itself (Henriksen, 2010). The ATDE model is illustrated in Figure 1.

Figure 1: The athletic talent development environment (ATDE) working model



Explanatory Working Model: Environment Success Factors Model

The ESF model was developed to predict the success of any ATDE. Henriksen et al. (2010) concluded the environment is a consequence of the unique interplay between the elements in the model. The main elements of the ESF are *preconditions of the environment*, the *process* (individual and team development), and *organizational culture*, which integrates all elements (Henriksen et al., 2010). *Preconditions* are the starting point of the model and include elements that are necessary for the talent development process but are not responsible for the success of

the environment. Contained in preconditions are coaching and management resources, practice equipment and facilities, and other financial factors (Henriksen et al., 2010).

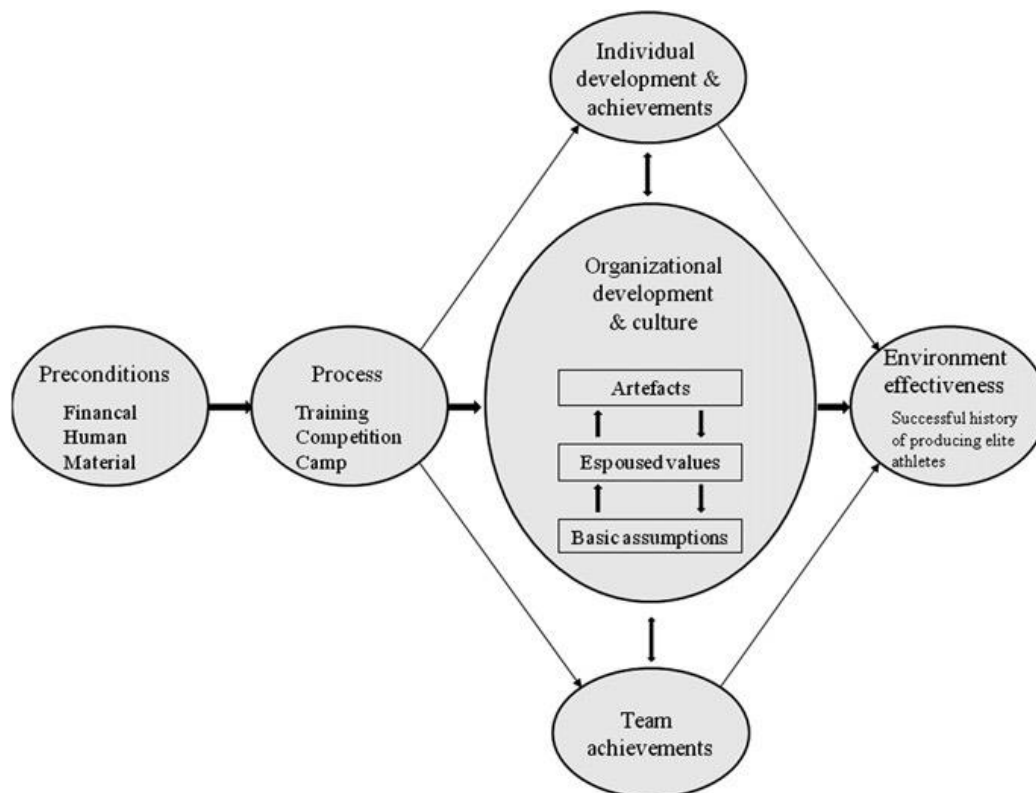
The *process* refers to all interactions with the environment, specifically, the countless hours of practice done to continue the athletic talent development (Henriksen et al., 2010). Consequently, it often includes daily practices, practice camps, competition, personal and professional development activities, and social events (Henriksen et al., 2010). *Individual development and achievements* and *team achievements* are the product of all the athletes' interactions with the environment, in the model referred to as *process*. Individual development refers to the athletic and non-athletic skills each athlete has acquired as a result of the process, which will help him achieve sporting success, and team achievements refers to the development of the entire team (Henriksen et al., 2010).

From organizational psychology, Henriksen et al. (2010) adopted the notion that the development process is mainly driven by the organizational culture, which has a great impact on the individual and team achievements and is also a central component of the ESF. Organizational culture is essential to any talent development environment because it guides the socialization of new members, provides a foundation that gives the organization stability in a constantly changing environment (Henriksen, et. al. 2010).

The organizational culture can be dissected in three distinctive levels; *cultural artefacts*, *espoused values*, and *basic assumptions* (Henriksen et al., 2010). *Cultural artefacts* are simple to observe but challenging to decipher because they can include traditions, manifestations, rituals, and building and organization charts (Henriksen et al., 2010). *Espoused values* exist in the minds of each member and can include visualizations of those core values to hold athletes accountable and for the public to see. Espoused values refer social principles or values the

organization agreed upon, but it is important to notice that they do not permanently correspond to the enacted values (Henriksen et al., 2010). *Basic Assumptions* can be defined as a previously espoused value that is no longer questioned by the athletes and taken as a non-negotiable. Basic assumptions are often not consciously recognized by players and have to be derived by the researchers because they do them without being aware of it (Henriksen, 2010). The ESF is illustrated in Figure 2.

Figure 2: The environment success factors (ESF) working model



Henriksen et al.'s (2010) objective with their initial case study was to uncover secret features of particularly successful ATDE's by providing empirical models of the environments under investigation, which allowed them to outline shared features that may influence the success rate of any ATDE.

Shared Features of Successful ATDE's

The HEA promotes a case study design to investigate and develop empirical versions of ATDE's around the world within their real-life context and taking a contemporary view of the functioning of the environment (Larsen, Alfermann, Henriksen, & Christensen, 2013; Larsen et al., 2020; Henriksen et al., 2017)

After other researchers around the world started developing empirical versions of the ATDE under investigation, Henriksen and Stambulova connected the independent research with the aim of outlining shared features of successful ATDE's. It became apparent many ATDE's shared features and principles, however, implemented them in a different way and therefore created a unique environment (Henriksen et al., 2017). The investigators outlined eight shared features of successful ATDE's: (1) Training groups with supportive relationships, (2) Proximal role models, (3) Support of athletic goals by wider environment, (4) Support for personal and career development, (5) Focus on long-term development rather than early success, (6) Integration of efforts (e.g. school, family, sport, life), (7) Strong organizational culture, and (8) Training that allows for diversification. In their research, they also included “opposite poles” to each of the discovered eight shared features, in an attempt to bolster the validity of the discovered eight shared features and provide further examples for researchers and practitioners about effective talent development practices.

While researching the shared features of successful ATDE's clearly showed certain commonalities between successful environments, it also showed how unique each ATDE is based on the type of sport, national culture towards that sport, and practice pattern associated with that sport (Henriksen et al., 2017). In a study researching a successful Track and Field environment, Henriksen used the HEA, as well as the ATDE and ESF model as the theoretical

framework to discover that a strong organizational culture, characterized by values like teamwork and co-operation, contribute to the success of the environment (Henriksen, Stambulova, & Roessler, 2011). Henriksen could also verify the findings of other researchers (Coté et al., 2009; Martindale et al., 2007), which had focused on the individual when researching talent development that for effective talent development, the emphasis has to be on appropriate development rather than early success (Henriksen et al., 2010).

In 2011, a study of a successful kayaking environment led by Henriksen, added that talent development is not only influenced by the immediate microenvironment, but also by the interrelation of different components (e.g. team, school, parents, friends), within the microenvironment (Henriksen et al., 2011). He emphasized that a strength of this particular environment was a well-developed, well-coordinated relationship between school, player, and club, which in turn allowed athletes to simultaneously pursue their academic and athletic ambitions, while minimized the risk of drop out or one-sided development (Henriksen et al., 2011).

Barriers to Successful Athletic Talent Development

To further test their hypothesis, Henriksen Larsen, & Christensen (2014) utilized the HEA by applying it to an ATDE that has had limited success in transitioning athletes to the elite senior level to investigate the validity of the above-mentioned features. They found that the struggling ATDE was characterized by features that are in opposition to those of successful environments, which include no integration of efforts among different parts of the environment and an incoherent organizational culture (Henriksen et al., 2014). They listed numerous key example's that they found had a negative effect on the effectiveness of the environment: (1) Lack of communication between different components in athlete's lives (e.g. schoolteachers and

coaches), (2) Lack of support of the wider environment (e.g. sport was unaware of exam schedules), and (3) Incoherence between espoused values, artefacts, and basic assumptions (Henriksen et al., 2014).

In their extensive literature review, Henriksen et al. (2017) highlight further features that adversely affect talent development as: (1) Lack of integration of efforts between components of the ATDE, (2) Incoherent organizational culture that left members of the environment with a sense of an unclear culture that provided not enough supporting guidelines to develop as an athlete, student, and human (Henriksen et al., 2017). Another study conducted by Larsen (2017) argued that short-termism in soccer, especially during a period of crisis and adversity, has a negative influence on athletic talent development by shifting the priorities of first team head coaches from developing young players, to securing match results by playing more experienced players (Larsen, 2017). Those findings support the idea that the previously suggested features of successful environments do indeed capture and possess qualities that less successful environments are lacking.

Soccer Specific ATDE's

With soccer being a popular sport throughout Europe, numerous researchers hypothesized that soccer specific ATDE's will have features that are unique to the sport. The research wave that used a HEA to highlight the central role of the environment as it affects athletic talent development also researched soccer specific ATDE's and developed empirical versions of successful soccer environments (Aalberg & Sæther, 2016; Larsen et al., 2013, 2020).

Larsen et al., (2013) conducted a case study of Danish professional Club *Aarhus AGF* to research successful talent development and discover unique characteristics of the environment, responsible for its success in developing elite level athletes. Their research was built on previous

studies applying the HEA, however, they had a hypothesis that an ATDE for team sports (e.g. football) would be significantly different from an ATDE in individual sports (Larsen et al., 2013). After developing empirical versions of the *Aarhus* ATDE and ESF, Larsen et al., (2013) outlined that the environment shares most of the eight characteristics associated with successful ATDE's and is particularly characterized by: (1) ATDE is centered around relationship between players and staff (e.g. coaches, assistants, managers) that assists players in creating balanced, holistic lifestyle (e.g. incorporate school and football), (2) provide opportunities to develop psychological and psychosocial competencies associated with success, and (3) ATDE has strong, open, and cohesive organizational culture, which players often refer to as "family environment", based on integrated values concerned with balanced lifestyle of players (Larsen et al., 2013).

Larsen et al., (2013) also noted certain barriers that are present in the ATDE and may reflect barriers to successful talent development in soccer in general such as: (1) Lack of proximal role models in transition from youth to professional squad, which Henriksen et al. (2010) already identified, often ease the transition of the athlete and can prevent a "culture shock", (2) Lack of support from environment to cope with transitions, and (3) Lack of explicitness (e.g. communication of expectations and demands to youth players).

Aalberg & Sæther (2016) researched an ATDE at Norwegian top-level football club Rosenborg BK and found similar results to Larsen et al. in 2013. Many of the eight features of successful ATDE's Henriksen et al. (2011) developed are present in the environment and the club seems to focus on giving players tools to be successful in the athletic and non-athletic domain (Aalberg et al., 2016). Furthermore, Aalberg et al., (2016) outlined barriers to successful talent development that were corresponding with characteristics discovered by Larsen et al. (2013) and highlighted an almost competitive relationship between the professional squad and

the development department due to the short-term success focus of the first-team squad and the therefore lack of focus on the development of homegrown players (Aalberg et al., 2016).

A recent study by Flatgård Larsen, & Sæther (2020) researching the ATDE of Norwegian professional club *Ranheim FC* produced two significantly different empirical models of ATDE and ESF from *Rosenborg BK* as developed by Aalberg et al. (2016). The researchers point out that the vastly different *preconditions* (e.g. economic preconditions discrepancy in available team budget —ten times higher for *Rosenborg* than for *Ranheim*) lead to a unique structure of the club with a greater emphasis on the development of homegrown players (Flatgård et al., 2020). *Ranheim FC* seems to have a greater focus on closing the gap between the senior and development team as well as systematically assisting players in transitions to the next age group by facilitating “playing up” throughout all age groups (Flatgård et al., 2020).

The latest research that applied a HEA to a soccer specific ATDE was published in 2020 and investigated *Ajax Amsterdam*’s development academy “De Toekomst”, which is one of the world’s most successful talent academies in developing elite-level players across Europe (Larsen et al., 2020). Larsen et al. (2020) investigated the organizational structure and culture of *Ajax Amsterdam* and found again that most of the eight features associated with successful talent development are present in the environment. In contrast to previous studies (Aalberg et al., 2016; Larsen et al., 2013), Larsen et al. (2020) highlight a coherence between the development teams and the senior team regarding philosophy, culture, and purpose. The organizational culture is found to have a very positive impact on the successful talent development in *De Toekomst* (Larsen et al., 2020). The *espoused values* as well as *basic assumptions* of the environment are emphasizing the development and transition of homegrown players to the senior team, while simultaneously providing support and minimizing costs for players that don’t make the transition

to the senior team (e.g. provide academic support, allow players to stay in own social environment, and also develop them into good citizens in society) (Larsen et al., 2020).

Larsen et al. (2020) argue that the HEA has potential to inspire coaches and practitioners to not only look at the prospective elite-athlete's individual development but also at organizational settings that have potential to increase the effectiveness of talent development environment.

Utilizing a HEA to investigate elite football environments in Europe has outlined similarities when it comes to barriers to, and characteristics of, a successful athletic talent development environment.

American College Soccer

It has to be stated that college soccer is fundamentally different than any previously investigated European soccer ATDE's, based on the competition model and the NCAA's mission to combine the athletic and academic domain of the student-athlete to maximize student athlete welfare (NCAA, 2020). There are several idiosyncrasies of a college soccer environment that range from soccer specific rule changes (e.g. 72-day regular season, unlimited substitution rule, two ten-minute overtime periods in case of a tie after regulation) to overall objectives of the environment (e.g. NCAA has required minimum grade point average to compete, and minimum progression towards degree based on academic year to compete), which ultimately create a unique environment, operating independently of the International Football Federation FIFA. This exclusive combination of elite athletics and higher education, has led to a globalization of college soccer that in 2016, has increased by 120% since 2000, partly because it provides an alternate pathway for players seeking elite level football while continuing their educational careers (Kirk & Weaver, 2019). Kirk & Weaver (2019).

Conclusion

While the research focus and the lens through which athletic talent is viewed has changed over time, Henriksen et al. (2010) built their HEA on research utilizing the *talent identification approach* and *talent development approach* and often found similar results (e.g. competencies associated with athletic success, processes to develop athletic talent) in their empirical investigations. Early research focused on individual competencies associated with athletic success (Gould et al., 2002; Howe et al., 1998) and was built on the notion that talent is innate and that a systematic assessment and selection of talented athletes will lead to a more efficient use of resources. Other researchers subsequently shifted the focus from identifying innate potential and competencies associated with athletic success in people, to identifying practices that facilitate the most effective way to develop elite-level performance (Côtè et al., 2007; Ericsson et al., 1993). Henriksen et al. (2010) then integrated those somewhat opposite research approaches to shift the attention to the broader development context in which the prospective elite athlete is developing. They concluded that certain ATDE's are more successful in developing elite-level athletes than others and outline the eight shared features of successful ATDE's by conducting numerous empirical case studies (Aalberg et al., 2016; Flatgård et al., 2020; Henriksen et al., 2010, 2011, 2014, 2017; Larsen et al., 2013, 2020).

The most recent case study, investigating the ATDE of world-class talent academy *Ajax Amsterdam*, highlighted how a good organizational structure and culture with a club can have a positive impact on the effectiveness of the talent development environment (Larsen et al., 2020). College soccer provides a unique environment for effective talent development by systemically integrating academic, athletic, and non-athletic domain of players to maximize the well-being of the athletes (NCAA, 2020). Although several researchers outlined barriers to successful talent

development in their elite European football environments, the challenges college soccer is facing are unique based on the multiple objectives due to the integration of academic and athletic efforts.

CHAPTER 3: METHODOLOGY

Case

This research study is designed as a case study to holistically capture the complexity of a single-bounded case: The university men's soccer program (Hodge & Sharp, 2016). The elite men's soccer program was founded in 1947 and is one of 28 varsity programs currently offered at the University. The university's men's soccer program consists of 32-36 players, which are referred to as *student-athletes* because of their dual role of being a student and representing the university as an athlete on the men's soccer team. Additionally, there are at least a dozen staff members around the team including five coaching staff members, three part-time athletic trainers, and an extensive support staff including academic support, sport psychologist, sport nutritionist, and student-athlete development staff. The student-athletes are embedded in an environment that aims to provide support in all domains of the student-athlete's lives by offering academic support programs, leadership and personal development programming, career development programming, strength and conditioning training, sport psychology & sport nutrition practitioners, and athletic training resources.

Many sports, including men's soccer have experienced on-going success on the conference and national level and produced many successful professional athletes across multiple sports. The men's soccer team has nationally been one of the leading schools in transitioning players to the next level domestically (e.g., MLS), and internationally (e.g.,

European top-leagues). The team competes in the Atlantic Coast Conference (ACC), which is traditionally the conference sending most teams, among all conferences, to the NCAA tournament, which determines the national champion. From 2008-2017 the program accumulated most NCAA tournament wins (23), most sweet sixteen appearances (9), most elite eight appearances (8), and most College Cup appearances (6), among all NCAA Division I program (University Soccer, 2018). Furthermore, 32 former University men's soccer players signed professional contracts while winning seven ACC titles as well as one national championship (2011) over the span of 10 years.

The NCAA mission is to maximize student-athlete welfare and protect the athletes physically and mentally (NCAA, 2020). College soccer is currently played in a 19 game, 72-day regular season during the fall semester from August to November, creating a match congestion that gives players an average of four days to recover in between competition. During the spring semester, the team's "non championship segment", soccer-specific practice time involving a ball is limited by NCAA rules to 4 hours per week for the first 6 weeks, followed by 8 hours per week for the next 6 weeks, with the aim of providing a balance between academic and athletic domain of the student-athletes.

Research Methods and Instruments

Data will be triangulated from multiple perspectives (coaching staff, players, support staff, alumni) and three main sources: (1) qualitative interviews, (2) participant observation, and (3) analysis of documents.

Interviews

A semi-structured interview guide was developed, based on the predisposed categories from the ATDE and ESF models Henriksen et al. 2010 created, which was then modified by Larsen et al. (2013) for soccer specific ATDE's. The interview guide was then adapted to specifically ask questions covering the eight shared features of ATDE's as outlined by Henriksen and Stambulova (2017). The interviews lasted between 30 and 60 minutes and all interviews were recorded, transcribed, and before the data analysis process began. The sample size in this project is 13. The aim was to have a diverse population consisting of 8 players (2 from each year in school, and 4 domestic and 4 international student-athletes), 2 coaches, one administrator in the athletic department working closely with and around the men's soccer program, and 2 former players that graduated from the program in the past four years.

Participant observation

Second, in order to get a sense of the specific culture at hand and to obtain in situ observations, participant observations were used as a method (Thorpe & Olive, 2016). The observations took place at the practice fields, at competition, away trips, coaches offices, and academic offices. Altogether the observations covered more than 100 hours and included informal conversations with researchers and practitioners in athletic talent development, coaches, parents, administrators, elite players, and professors.

Review of Documents

Third, archives and documents were collected as data in the case study. The documents included the university webpage, NCAA webpage, documents describing the vision, rules and

structure of the athletic department, paintings, symbols, and statements about the elite college soccer program's goals, strategies, and values.

Data Treatment and Analysis

To protect the anonymity of the research subjects, the information received was not shared with anyone else outside the research team. The interviews were conducted via zoom and stored on an offline on a password protected personal computer as an encrypted audio file only in a way that the identity of participants could not be readily ascertained. No identifiable information was collected besides participants email address, name, and relation to soccer program. All electronic data was stored on computers or networks that are password protected. Additionally, names of participants will not appear on reports or publications. The participants were informed that the data collected is intended for research purposes only and would not later be used for other purposes. Thematic analyses were used to identify, analyze and report patterns within the data. During the fieldwork, initial descriptions and interpretations were written as jottings in a notebook and the observation notes were written out in full text afterwards. All interviews were recorded via zoom and transcribed afterwards.

The data analysis was reported through the six steps suggested by Braun, Clarke and Wheate (2016) for qualitative analysis that Larsen (2013;2020) used. The first phase of analysis consisted of transcribing, reading and re-listening the data in order to get familiar with the data. In the second phase, initial codes were generated from the data. The deductive coding was based on a node tree involved high-order themes, built from the categories of the ATDE & ESF model and the eight shared characteristics of ATDE's. In the third phase low-order themes were identified within the predisposed categories of the models. The fourth phase was an outlining of the environment's preconditions, processes, organizational culture, and outcomes. In this phase,

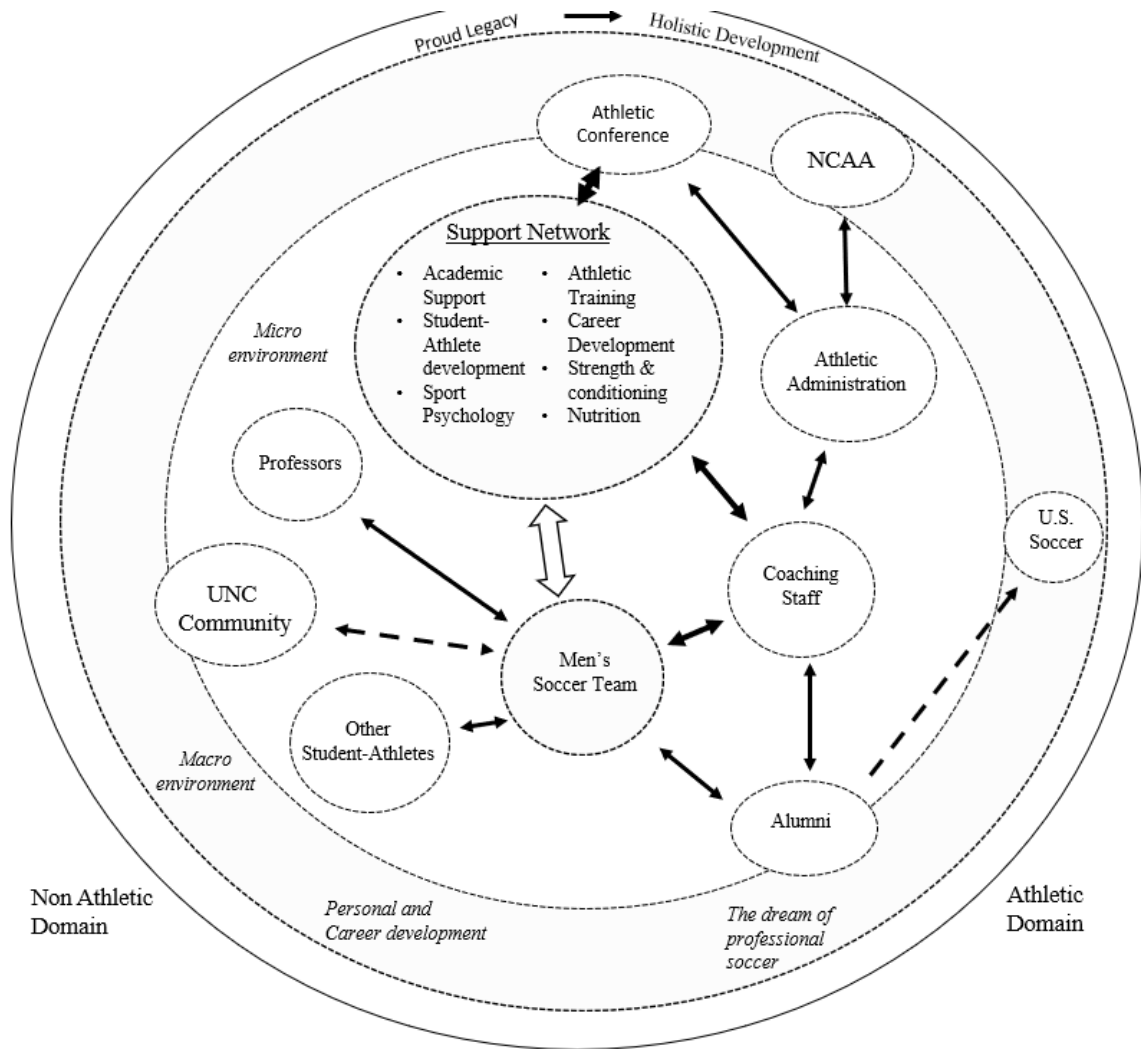
the basic assumptions, espoused values, and artifacts of the environment's organizational culture were explored. In phase five, subthemes and final categories were reviewed and the empirical models of the case as a summary of the analysis were developed. The sixth step was report writing and presentation of data, which is "an in-depth picture of the case using narratives" (Creswell, 2012 p. 191).

CHAPTER 4: RESULTS

In the following sections, the study followed the two objectives of the study (1) What ecological factors characterize an empirical version of the ATDE and ESF of an elite college soccer program? And (2) If and in what ways are the eight features of a successful ATDE present in the environment? The study will present an empirical version of the ATDE descriptive working model and ESF explanatory working model picturing the environment and the ways the eight shared features of successful ATDE's are present in the environment. The findings revolve around the organizational structure and culture of an elite men's college soccer program. The structure consisted of the macroenvironment surrounding the environment, the organizational structure and the different groups in the organization such as the men's soccer team, student-athlete support team, coaching staff, administration, professors, the University community. This model was constructed using the information gathered during the personal interviews with research subjects. Figure 3 provides a graphic representation of the empirical version of an ATDE including the major components and relationships in the environment.

Organizational structure of the environment

Figure 3: Empirical ATDE model of elite college soccer program



Micro-environment

The student-athletes daily life, schedule, and activities have been impacted since the Covid-19 pandemic started in 2020 and therefore these results are impacted by the changes that have come from it (e.g., social distancing policies). The micro-environment consists of

components in which student-athletes interact on a daily-basis and are believed to have impact on the student-athletes' development during their time on campus.

The suburban campus houses classroom buildings, athletic facilities, and dormitories, and many are located within walking distance from the center of the campus. One of the centrally-located athletic facilities is the soccer & lacrosse stadium, which was opened in 2019. It houses a state-of-the-art video room, conference rooms, athletic training room, and uniquely designed locker room for each team, displaying their respective core values. Most of the athletic facilities on campus, including the soccer/lacrosse field are of the highest quality to provide an elite environment for all student-athletes. The athletic department is committed to grow and develop and do the best they can, which can be seen by the frequent building renovations being launched. The men's soccer team is the starting point for examining the major influencing factors in the environment, as it is the center of the environment and this research revolves around it.

Men's Soccer Team

The men's soccer team consists of 32-36 student-athletes that were recruited by the coaching staff and met the academic admissions standard of the university. The players, coaches, and alumni often refer to the team as a brotherhood or family because of its inclusivity and the life-long friendships that it builds. The team has players from 12 different countries, exposing players to a variety of languages, cultures, and nationalities. The team consists of freshmen (first years), sophomores (second years), juniors (third years), seniors (fourth years), and graduate transfers (fifth years), which in many cases reside together. First-year players live on campus in dormitories that are shared with other student-athletes and for many it's the first time away from home. Players that have been with the program for a while serve as mentors and "older brother" for new players after they arrive.

The regular schedule of men's soccer players includes team practice, video sessions, weight training, treatment, classes (on campus or virtual), tutoring, and personal/career development activities. On top of the mandatory soccer related activities, players have free reign of their time and agree that the environment provides an infinite number of resources and things to do that help them develop. Alumni mentioned that the “college lifestyle” can have an impact on the commitment level of players to their athletic talent development. It comes down to the individual's intrinsic motivation to be resourceful or not. Some older players reported that they regret not taking advantage of the environment’s resources as much as they should have because they enjoyed being with friends and engaging in the college social experience.

Coaches

The coaching staff consists of the head coach, two full time assistant coaches, one volunteer assistant coach, one part-time director of operations and player development, and a variety of experts that are part of a wider support network for all student-athletes. All members have formal coaching education, elite-level coaching experience, played elite-college soccer during their career, and two staff members played professionally. On top of the day-to-day coaching responsibilities, staff members cover a variety of other tasks including recruiting, scheduling, tracking academic progress of players, community and alumni outreach, equipment management, and other administrative tasks. Coach A stated:

“The job of coaching is kind of a quote unquote coaching. It's more kind of a leadership position for student-athletes who are trying to improve both in their sport, but also get a college degree, and grow socially, academically, and athletically. So, we have a, kind of have a combined responsibility.”

Current and former players agree that the coaching staff is very clear with their demands of players and hold them accountable to a high athletic and academic standard (excellence is a core value), which is a “process” that never stops. A former player added when asked about the coaching staff:

“I think it was more than just winning or losing a game. We could go into a game and win 2-0 or 3-0, and we'll have a 40-minute meeting the next day about things that we could be doing better, things that that we can improve on.”

Alumni

Alumni are all former players of the soccer program, which build the biggest group of people that are part of the men’s soccer environment and now live all across the world. Men’s soccer has developed many successful soccer players, businessmen, doctors, lawyers, and other great men. The environment has visual artifacts of former players around the facility and in a shared internet folder, emphasizing and reiterating the legacy of the program. The vast alumni network the soccer program and athletic department has accumulated provides a great connection for many graduating student-athletes in their first steps after college.

Coaches often refer to former players and the dedication, love, and respect they had for this university and soccer program. Many former players have used their time in the environment as a "launchpad" in whatever career they aspired to go next. Many have gone on to play professional soccer in the United States, represented their country, and now serve as role models to current players. Countless other players have explored and are now successful in other careers and are willing to share their experiences with current players who are thinking about their next career step.

The soccer program actively tries to create opportunities in which alumni can share their experiences and learned lessons in an attempt to help current players grow (i.e. social injustices, career development, personal development). Additionally, many players stated that they have consulted alumni about a variety of things including which classes to take, internship experiences, and other life advice. Many alumni are also physically present in the environment and spend time engaged in informal conversations with players and coaches after games and practices.

Support Network

The support network that surrounds the men's soccer athletes aims to maximize the potential and experience of each student-athletes during their time in the program. The aim is to facilitate what could be considered holistic development. The support network consists of people, places, and procedures designed to nurture and prepare student-athletes for whatever career path they chose upon graduation.

The athletic training and strength and conditioning facilities are shared among all student-athletes (with the exception of basketball and football); the study-hall and all other personal programming activities are shared among all student-athletes. Human resources (i.e. athletic trainer, academic advisor, and strength staff) are only shared with one, sometimes two other sports to provide adequate care for each individual student-athlete.

Athletic Training

During the season, athletic training is integral to help student-athletes maintain their level of physical strength and increase their soccer specific skills, without risking injury. Players confirmed the wear of college soccer on their body and confirmed the necessity and importance of the athletic training staff in their development. Most players find their way once a day to the

athletic training facility, which is housed right beside the soccer stadium and shared with athletic trainers and athletes of other varsity sports. The facility includes recovery pools, an underwater treadmill, over a dozen treatment tables, and other rehabilitation and recovery equipment that athletes can readily use. Athletic trainers are available for the students almost 24/7 and also organize doctor appointments (or Covid-19 tests), if needed. The facility is often mentioned to be a place where connections with other student-athletes are started.

Strength and Conditioning

All sports share a two-story, state of the art weight room in the north stand of the football stadium, which is only a five-minute walk away from the soccer stadium and athletic training facility. The strength & conditioning staff leads most practice and game warmups, facilitates the team lift sessions, and is available for individual programming if desired. A periodization is used, and the time, duration, and intensity of workouts is adapted to the playing schedule of the week to keep athletes healthy.

Nutrition

Recovery products are provided after every session as well as one additional meal per day. The student-athletes can visit the *Fueling Station*, housed in the concourse of the football stadium and can pick up one meal a day that has been chosen by the nutrition specialists of the athletic department. Nutrition is a topic that is discussed in length to create good habits and a sense of understanding in the student-athletes, as many are independent for the first time.

Sport Psychologist

The athletic department also employs two full-time sport psychologists that are working with individual student-athletes and teams. The Covid-19 pandemic impacted the mental health of many student-athletes, especially student-athletes that had to be quarantined for 14 days by

themselves. Sport psychologists have become more important as mental health issues have become more frequent during the pandemic. The aim is to enhance the athletic success by maintaining the mental health among student-athletes. Furthermore, they aim to develop a psychological edge in student-athletes that could also be described as mental toughness or strength, which will also help student-athletes win more games during their time and help in their long-term development

Academic Support Program for Student Athletes (ASPSA)

Before student-athletes arrive on campus, the assessment process starts by using a calculator that uses high school grades, standardized test scores, and in some cases English proficiency tests to predict the GPA and level of academic support or assistance the athlete will need. Once a student-athlete is admitted to the school through the university admissions process, they have access to all athletic department sponsored academic support resources, in addition to the university wide services on campus. The ASPSA staff are housed in the second floor in the north stand of the football stadium, right above the weight room in a facility containing 28 study rooms, three study lounges, and employs over 90 tutors each semester for student-athletes. The academic development process of each student-athlete is very individualized and involves daily interactions between ASPSA advisor and student-athlete, weekly check-in meetings, and tutoring sessions, until the student-athlete performs consistently well in the classroom and shows enough ownership and self-discipline to work on their own. An administrator added “It goes, all the way back to, you know, to working through the admissions process and trying to evaluate the level of support that individual students, or a group of students, on each team will need. Whether it's the same student-athlete who we know on day one, will need no hand holding and will be motivated in the classroom, and on the field, and be able to do everything for themselves — then that's

great. But there's also going to be a cohort that probably does need more regular touch points, needs a more defined plan, will need assistance staying organized.”

While sport-specific coaches play an integral role in the integration of academics and athletics in the team environment, most of the day-to-day academic progress work is done by the athletic academic advisor for the men's soccer team. She also works with the men’s basketball student-athletes and serves as an academic advisor to athletes as well as a liaison between players, professors, and coaches. Many players highlight the supportive role their academic advisor has played in their academic journey. The head coach highlighted that the ultimate development goal is that the student-athlete develops independence and takes charge of their own development (i.e. consult the major-specific academic advisor of the school) that he doesn’t need to lean on any support anymore.

Student Athlete Development

The student-athlete development staff consists of three full-time workers dedicated exclusively to the non-athletic or human development of the athletes. The student-athlete development program focuses on three areas: leadership development through the Leadership Academy, community outreach, and career development.

Workshops were all hosted virtually since the Covid-19 pandemic started, but typically are hosted in-person. The *Leadership Academy* is structured from the first year to final year and hosts monthly workshops where student-athletes from different teams discuss leadership principles, using the athletic department core values as a foundation. A coach described it as the "free class you get to take over four years" in which you not only "learn how to lead yourself, but also how to be a team leader at the end of your college career.” An administrator added that often those psychological and psychosocial skills and competencies learned through personal

development are transferrable to other areas of the student-athlete's life. The community outreach component is a way for student-athletes to give back to the community they play in and beyond. The men's and women's soccer teams have organized a fundraiser for the local pediatric cancer hospital. Both teams raised over \$15,000 to support a group of children they invited on the stadium pitch during a game, which some players called an “unforgettable experience”.

Finally, the staff provides resume workshops, career fairs, and interview preparations for each individual student-athlete. The university also has a career network platform that provides ample resources and networking opportunities for all students to use in addition to the athletic department career development efforts.

Professors

The relationship between professors and student-athletes varies by player and depends on many factors that could not be assessed further. However, most student-athletes reported positive relationships with their professors and some even described them as great. The professors are understanding of the athletics responsibilities of players and players are urged by their academic advisor to communicate in advance. This shows respect and leads mostly to professors being open to accommodate, without giving student-athletes an advantage over regular students. One player highlighted that it is a two-way street, and if a player shows interest in a topic, class or major most professors are willing to help them succeed. Another player added that it's not mere the support and understanding of professors in the academic realm, but also an interest in the student-athlete as a person outside their classroom. A freshman shared:

"I had a mid-term coming up on Monday and I emailed my teacher ‘I have an away game. I'm leaving tomorrow, and I'll be back late on Sunday, and I just wanted to ask if you could move it back a day or something.’ And she was like willing to do that and, like

at the end of the email, there was no need for her to do that, but she was like ‘good luck, I hope you do well, and make sure you come back with a win.’ It’s, like everybody is just supportive here.”

Campus Community

The close proximity of athletic facilities, classrooms, and dormitories provides ample opportunity for men's soccer players to meet and get to know other students and student-athletes. Players find it helpful to live and speak with other student-athletes of the same age that have similar struggles. A freshman described the supportive relationships further

“I live in (name) dorm and like there are other athletes here and I’ve made friends with some guys on the track and field and lacrosse team, and you can see that every sport has its own I guess difficulty. And as a freshman it's hard to, you know, adjust to the pace of college soccer.”

The coaches and alumni in this study confirm that relationships with other student-athletes can be very impactful because you can relate to each other well.

Players report that class activities often lead to new connections and relationships with regular students. Some say it provides more meaning to play for the institution, if you know people in the audience on a personal level. Other players mentioned that it is impressive how many people care about our team and season, within the local community and far away.

The university community reaches far beyond the city limits and wearing the university jersey holds a lot of meaning to players. Most wear their university gear with pride and report that they are frequently asked about the success and progress of their season. The same can be said for the team travel through airports and restaurants — public interest is big, and this

institution seems to be recognized across the country and in Europe, as an international player stated.

Administration

The athletic director and the rest of the athletic department administration and staff are responsible for coordinating marketing, fundraising, gameday operations, and all other efforts that help maximize the student-athlete experience. The athletic department provides a vast number of resources to help student-athletes balance their workload and allow for personal, athletic and academic growth. It has to be highlighted that this institution provides one of the broadest athletic departments' offerings in the country. An administrator commented:

"At (university) I think we do it at the highest level, so the athletic talent here is probably what you'd consider elite across the board. So, we've got an opportunity to do it at a great academic institution, so really for the student athletes who want to continue to develop athletically but also achieve academically at the highest level. Those two things, you know, have kind of driven us, here at (university) you know, to create a broad-based program. You know, we sponsor 28 sports, which is among the highest in the country and you know, give as many student-athletes as possible, the opportunity to continue to compete and go to school."

Furthermore, the athletic department administration serves as the connection between the student-athletes, the athletic conference, and the college governing body, the NCAA.

Athletic Conference

Most universities are part of an athletic conference in which the varsity teams compete against each other. The conference structuring is largely driven by revenue-generating sports as well as the academic and athletic profile of an institution. The subject university is a member of

an athletic conference that is nationally known for athletic success, including men's soccer. The annual schedule of the team is a mix between in-conference games and non-conference games. The regular season is followed by a conference tournament (knock out system) and national tournament (knock out system). Players and coaches believe that the level of competition during conference games is challenging, which helps prepare the team well for the national tournament. The athletic profile of the conference creates a greater focus on athletic accomplishment and athletic talent development, compared to other conferences. This has led to a shift in focus of teams and coaches to identify opportunities that help develop athletic talent as effectively as possible. For example, in 2017, teams of the conference located in proximity created and participated in a pilot project by U.S. Soccer called *U.S. Soccer Spring Cup* where teams scheduled competitions in the spring semester, compared to only having five friendly-matches.

Macro-environment

NCAA

The NCAA is the governing body for all intercollegiate sports and consists of the presidents and administrators of membership institutions that vote on most legislative changes. Most of the NCAA legislation is broad-based legislation, meaning it is in place for more than one sport. Broad-based NCAA legislation impacts the ATDE under investigation in many ways including limiting the player pool due to eligibility requirements, regulating practice opportunities, and structuring of competition. Coach added:

“One of the barriers, and I would say for all NCAA sports in general, but certainly in, men's soccer, is the NCAA sports one size fits all component. Where the specificity of each sport is not fully taken into account when you try to come up with rules, regulations or best practice, and then put all under the same umbrella. Then there's some of it may

work and a lot of it doesn't. So, the fact that we're maybe having to comply with similar guidelines, or best practices as sports that are very different in nature, you know, that many times compromises what's best for a soccer athlete. And you know, you do your best with workarounds, but they're inefficient. And so, I think the efficiency of making it come to life is a massive barrier.”

U.S. Soccer

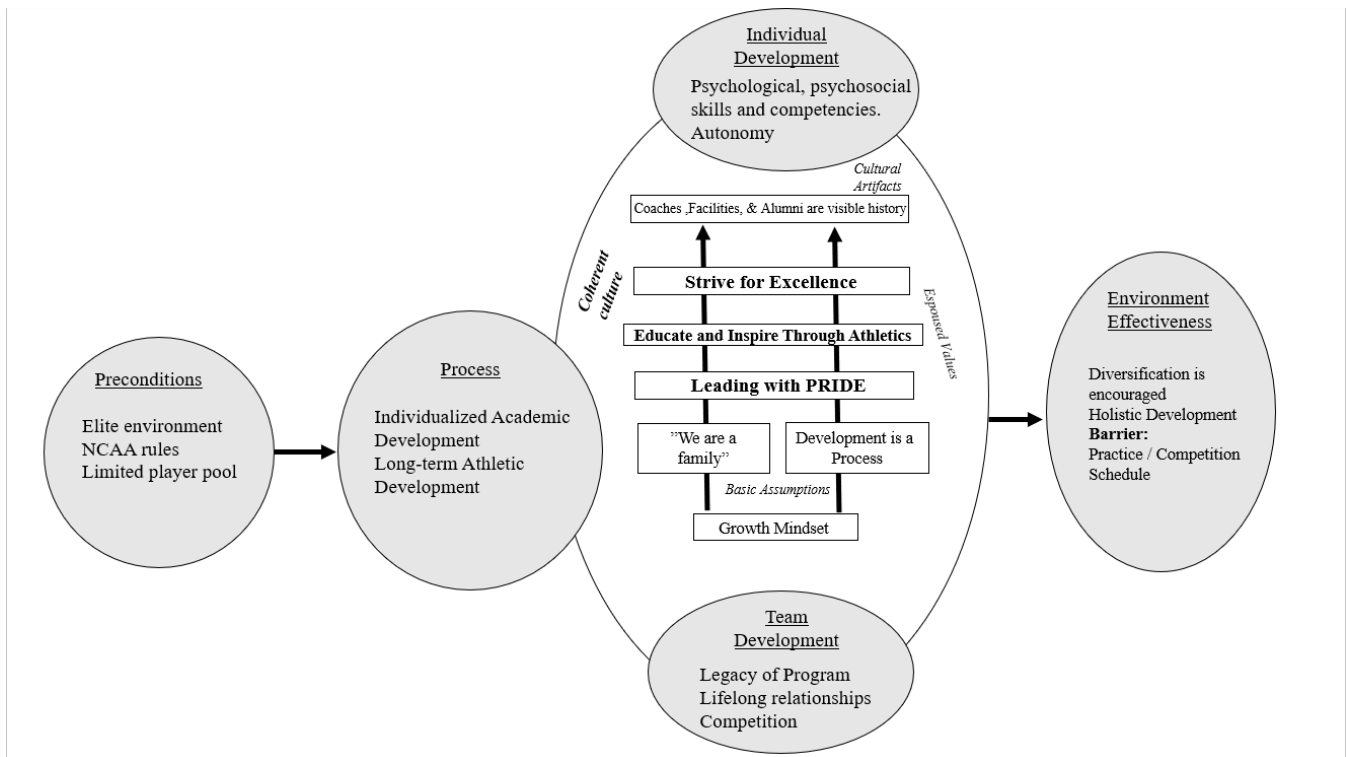
Many former players of this program went on to represent the U.S. National team, including a 2019 graduate and the current coach of the U.S. national team. Coach A described there is no established connection between college soccer and the U.S. Soccer federation. College soccer is not part of the U.S. development pyramid and there is no formal relationship that informs and educates college administrators of best practices in soccer specific development.

The structure of the environment is centered around the student-athletes, and the relationships within the environment. This includes the support network provided by the athletic department, professors, and other people helping the student-athletes balance their academic, athletic, and personal responsibilities. The coaching staff serves in a combined leadership role, where they take responsibility of the academic, athletic, and personal development of players and seek to find ways to connect with each individual student-athlete. The level of interest in utilizing the resources provided within the environment depends on no other than the individual student-athlete. Coaches, players, and alumni agree that while the organizational culture can assist in guiding new and existing members of a group, it can't guarantee making members more resourceful, only the growth-mindset of players does.

Organizational Culture of an Elite Men's College Soccer Program

Research in *organizational psychology* helped Henriksen and colleagues during the development of the ESF when they adopted the notion that organizational culture drives the socialization and conditioning of new members, provides stability, and adapts the organization to a constantly changing environment (Henriksen, 2010; Schein, 1992). Below, I present the empirical ESF model of the environment (Figure 4) and the major factors related to preconditions of the environment, the development process, the organizational culture, the individual and team development, and finally the effectiveness of the environment.

Figure 4: The ESF empirical model of an elite college soccer program



Preconditions

Elite Campus Environment

The subject university was recently ranked a top-3 public university by the *Wall Street Journal* and is not only known for its academic rigor and research focus, but also its athletic achievements. An administrator commented about the quality of the environment:

"At (university) I think we do it at the highest level, so the athletic talent here is probably what you'd consider elite across the board, and we've got an opportunity to do it at a great academic institution. So really for the student-athletes who want to continue to develop athletically but also achieve academically at the highest level. Those two things you know have kind of driven, here at (university) a broad-based program. You know we sponsor 28 sports, which is among the highest in the country and you know, give as many students as possible, the opportunity to continue to compete and go to school, you know and be able to do both at the same time."

Not only the academic and athletic background of the university is elite, but also its facilities including the soccer field, which houses the offices and locker rooms of the men's and women's soccer team as well as the women's lacrosse team. The two floors of the building also house the conference rooms, video room, and a lounge with sofas for coaches and players (or prospective players) to chat and an additional training room.

Furthermore, the men's and women's soccer programs choose between two full-size grass pitches, two artificial turf pitches, and one indoor turf facility. The practice fields, athletic training facility, weight room, and study lounges are available to student-athletes during most times of the day, with experts of the support network being readily available.

Individuals working at and around the athletics department are often long-term employees, that live out the core values of what it means to be a member of this community. Many long-term coaches and administrators serve as visual artifacts of the environment's success. The quality and quantity of human resources the student-athletes can use to further their academic, personal, or athletic career is great. The support network includes nutritionists, athletic trainers, academic support, student-athlete development staff, coaches, alumni, professors, and more. Interviewees mentioned many times that it comes down to each individual realizing the resources around him and use them to grow in whatever field they chose. In many sports, including men's soccer, graduating elite student-athletes strive to have the option to choose to continue their athletic career professionally or start their non-athletic career.

NCAA Rules of College Soccer

Players and coaches agree that the level of soccer might not be the highest in the world, but it is challenging and competitive enough to develop each player on the team. Competing in college soccer comes with numerous conditions for prospective student-athletes, which dramatically decreases the player pool. Other idiosyncrasies of the environment include the amateurism model, integration within an academic institution, and competition/practice schedules. Players have to meet certain standards and overcome barriers (e.g., amateurism, GPA requirements, financial burden) in order to become a student-athlete in an elite college program.

Certain institutions have tougher admissions requirements than others, as well as offer a different overall experience for student-athletes based on their academic and athletic profile, and conference affiliation may include different expectations, standards or rules that impact the member institutions' programs. Additionally, each Division I college soccer team only has 9.9 athletic scholarships that can be distributed amongst all of its players, which creates a sense of

parity amongst men's soccer programs. That significantly impacts the type and quality of player the coaching staff can recruit. Coach A added, "you rarely get a player you need or want, and more who you can get". Recruiting requires a detailed long-term planning process that is also impacted by a lot of volatility in the prospective student-athlete's decision to sign a professional contract.

Process

Academic Development

The academic support staff for student athletes assesses the academic background of every incoming student-athlete and estimates before arrival, the amount of resources needed for each individual student-athletes. The typical academic journey of a men's soccer player lasts four years, after which he graduates with a university degree. The daily life during the four years is structured in an attempt to effectively integrate sport, academics, and personal life. Practice times are adjusted to accommodate the class schedule of all players. Professors show understanding when players need accommodations due to time conflicts with their athletic responsibilities. Furthermore, student-athletes are held accountable to a high academic standard by their coaching staff and academic advisor as part of their core values -- *Respect* also pertains to respecting academic opportunities. Coach B described the typical academic development of a men's soccer player:

"Our guys, compared to maybe a student who's not on a sports team are very fortunate, because we set up tutoring and these kinds of things. And study hall to make sure they get off to a good start. And as they get used to things, then the leash can be taken away a little bit, and they can study in Starbucks if they've earned it. So, we're in a place where

they get their study-hall hours until they've, yeah like I said, prove that they can manage their own time, and they're committed to their academics."

Coaches track the academic progress of players and hold players accountable with sanctions for not meeting team expectations. Players reported not being allowed to train or play if they drop below the agreed upon team standard. In rare cases, if players fall below the NCAA grade point average requirement, players are deemed ineligible for competition until the grade point average resumes above the standard.

Coach B also added that one goal is to teach psychological skills that lead to more autonomy and ownership of the development process in players with their supportive practices. He explained some of their academic programming goals the following

"So, there's a foundation in place to help you. Until you get that trust from the coaches and academic advisor, you're going to stay on that program to make sure that you can work individually. Otherwise, we're going to keep checking up on you and at some point, in life, I think what that produces is that, yeah, you get sick and people always looking over your shoulder. So then do the work otherwise you're going to stay in that that cubby and have study hall at mandated times."

Athletic Talent Development in College Soccer

Coach A summarized the qualities of the environment in developing athletic talent specifically the following:

"I'll the suppose standard of competition is reasonably high and I think that provides a benefit towards athletic growth. You know, it may not be the highest in the world, but it's high enough that provides challenge in terms of the performance and competition. And I think probably the other major asset that we can provide the college environment is a

somewhat of a safety net for the athletes. Because we are not as tied to winning and losing in a financial sense, we can commit little deeper to our player pool or athletes, so that they are given a little bit more time to grow, succeed, and we're not under as much pressure to move players out and move new players in to gain immediate results. That being said, there, there is a certain amount of pressure on results as well, but I think the balance is pretty nice, which allows the athletes, the opportunity to in some regards I guess fail, without as severe consequence, as you might have in a more professional environment.”

The environment gives players the opportunity to continue to develop their athletic talent while also progressing in their non-athletic career, without the time pressure of having to perform immediate results as the coach pointed out.

The athletic talent development in an elite college soccer environment is unique because of the NCAA rules and legislation in place for student-athletes. For example, student-athletes are not permitted to train with their college coaches outside the spring or fall semester unlike basketball, tennis and other sports. In many cases, the idiosyncrasies and unique rules of the college environment limit the potential that college soccer environments hold. The coaches and administrators mention broad-based rules (across different sports and divisions) as a contributor. Most broad-based rules are geared towards a lower common denominator compared to rules geared towards elite development that is widely acknowledged as best practices in soccer development. During the championship segment of the season, which is typically the fall, most teams play 19 games in 72 days. Coaches and players reported the match congestion shifts the focus during practice on recovering from previous games and preparing for the next game. The match congestion presents challenges for coaches to create individualized athletic talent

development opportunities without jeopardizing the health and safety of student-athletes. During the championship segment, coaches focus on keeping players healthy and fresh, while winning as many matches as possible and hopefully qualify for the NCAA tournament.

During the spring semester, the team's "non-championship segment", soccer-specific practice time involving a ball is limited by NCAA rules to 4 hours per week for the first 6 weeks of the semester, followed by 8 hours per week for the next 6 weeks. This doesn't provide a real opportunity for soccer development. During this period, the athletes' continued athletic talent development depends heavily on their intrinsic motivation and severely limits coaches opportunities to work on soccer specific development. Particularly during that time, players that are not consistently playing find it helpful to have older players on the team as mentors. Their advice is often helpful because they have been in their shoes and had to climb the hierarchy within the team. When asked about of the current college soccer model's impact on the development of players, a Coach A added:

"So, I think that's a major challenge. What ends up happening is the training and the matches tend towards feast or famine type programming. So, you know, you're all on, and then you're all off, and then you're all on again, and then you're all off in terms of your matches and training. As opposed to having a more balanced, spread out, or I don't know if it's spread out, but more balanced is just the best way to put it, type training and match environment."

This would also align well with the international soccer schedule, where teams play one game a week, and have a balance in between games that allows for development of athletic talent beyond recovering and preparing for games.

Individual development

The coaching staff, academic staff, professors, other student-athletes, and the rest of the university community expect a certain level of excellence in everything each player does. That culture breeds a certain performance and behavioral standard particularly for student-athletes, which coaches often describe as “building good habits”. Student-athletes recognize that building habits now, in order to be successful in the environment, will allow them to be successful upon their graduation as a contributing member of society.

The environment provides personal, academic, and professional development opportunities in nearly every area. The best phrase that describes a student-athlete’s experience is holistic development. Holistic in a sense that the environment provides opportunities and resources to develop athletically, academically, personally, professionally, and socially. However, it comes down to the individual student-athlete and their intrinsic motivation to take ownership of their own development. Many players have reported great relationships with professors, coaches, alumni, and other people within the environment. Players also all added that it required them taking action and seeking help, advice, or simply an opinion of someone else. Some players come to the environment with a growth mindset and some players develop throughout their time as Coach B described:

"When you get here, you're probably just trying to focus on learning to lead yourself and by the end you're trying to be a captain and how do you lead others with your behaviors? And so there's so many things that are trying to help our guys succeed, that if you fail and I don't mean that in a negative or nasty way, but if you fail, that probably means you just weren't appreciating what people are trying to do for you and taking advantage of those resources”.

Both, coaches and players agree that the environment develops and cultivates a growth mindset of individual players and eventually demands it.

Furthermore, the competitive and volatile nature of an elite environment requires student-athletes to develop psychological and psychosocial competencies such as discipline, commitment, grit, teamwork, leadership, and time-management — something coaches and players agreed is a very individualized process. Rarely are players coming into the environment equipped with all the tools and competencies it takes to have a long-lasting professional and post-soccer career.

Team development

Players often reported the team being like a family or brotherhood, where relationships are supportive, and the players are there for each other. Coaches believe this feeling evolves from the realization of players to work for something that is greater than themselves and committing to the process of living together by the core values. Doing their part to continue the successful legacy of the program often is the start of a player's journey towards selflessness and leading others. During the Covid-19 pandemic, the team, coaches, and support staff held presentations about themselves to give the rest of the team a chance to know more about them while social distancing. While players and coaches don't remember all of the details, it provided a great foundation to build strong relationships on. It is clear that the men's soccer players are connected through many factors outside the athletic domain. A senior men's soccer player further expanded

“We do say we are a family; we are brothers, I truly believe that because we see each other every day at practice but I mean it doesn't just stop there, we live together, we eat

together, we really do everything together. So, and I think that just helps build the culture and build you know our chemistry on the field.”

The coaching staff is very particular when it comes to team culture and what it means to become a great team. The coaches highlighted most players want positive and supportive relationships on the team but being part of a winning team also means pushing each other to and beyond the current capacity. It requires not only emotional intelligence but also social and psychosocial skills to be part of an elite performance team, where there is a constant dichotomy between competing fiercely and maintaining positive and supportive relationships. Coach B further explained:

“We keep saying that the bigger picture is more important, but while they're here they want to win. So, how do you balance that? And that becomes tricky because you have to demand, and you have to push otherwise they probably can't achieve the things they want to on the field. That might create some tension, but I think about the championship team I was on, and we had a lot of tension, but it helped us win and it helped us come together as a group, and so, and that wasn't necessarily mean that we didn't like our coaches, it was just more, you know, it was okay to have disagreements, it was okay to have some conflict”.

Not all players are able to find the right balance between supportive and competitive relationships, something coaches and alumni report being integral in the workplace after university. Coaches and players acknowledge that today's players often come with the desire to play professionally and get frustrated when their development curve or their playing time does not reflect their expectations. Coaches and alumni report that incoherence between expectation

and reality, sometimes leads to individual student-athletes moving to more professional environments or to transfer universities.

The head coach often refers to the teams and players responsibility to ‘give back’ to the community. Since student-athletes represent the university, and it a public university, each player and coach has the responsibility to serve the community. That can range from reading books and leading discussions with elementary school students, to researching, discussing, and contemplating topics impacting minority groups. Part of last year’s efforts revolved around societal issues involving racial inequality and systemic racism that became so prominent during 2020. The team created a Diversity, Equity and Inclusion council and organized informational video calls with alumni to get informed about societal issues, and then be of help. An international men’s soccer player mentioned it as a great learning opportunity that allowed them better to understand each other and be good and respectful teammates.

Organizational culture

Cultural Artifacts

Players, coaches, administrators, and alumni agree that the campus itself, including its athletic facilities, public places, and sacred locker rooms serve as cultural artifacts in the environment. There are also many elite coaches, players, administrators, and people surrounding the athletic department, that serve as visual manifestations of the embodied core values through their achieved success. The athletic success of all teams is visible at all athletic facilities, including shared facilities such as athletic training, the academic support program, and strength and conditioning facilities. The soccer/lacrosse facility houses the four teams that have earned a total of 31 (of 53) national championships, which are displayed inside and outside the building, representing the rich history of all programs. It also includes a *wall of champions* on the locker

room tunnel, displaying all championship teams and impactful alumni of each program. Player 7 is a freshman and described the building and design in the following way:

“We share the same building with women's lacrosse, men's lacrosse and women's soccer and you see each sport and what they've won, and then you go down, you see. As each sport have like a NCAA tournament trophy there and then you walk towards your locker room -- I call them the legends of the men's soccer program --you see their pictures and like you see that and everyone has a description to him and why they deserve to be on the wall. And if you take time to read it like, the first time I took time to read it, it is one of those things where you don't really get goosebumps and it's just like you just have this weird thing going on your head like I'm actually like in this thing, like. I could also be an award sometime, if I follow the steps and all that.”

Leaving your mark on the program is a great motivation for many players and the *wall of champions* is showing current players a pathway to athletic success every day they walk into the locker room. Many former players that are also listed on the *wall of champions* have used video calls to speak to the team and serve as role models in a non-athletic way. Players report the vast alumni network serves as a visual representation of possibilities for life after college which is helpful in visualizing their future careers.

Espoused Values

The organizational culture of the university and the athletics program is interconnected and leans on each other. The University adopted the acronym RISE (responsibility, innovation, service, and excellence) to help students, faculty, coaches, administrators, support staff, and student-athletes remember the core values of the institution during their daily work. The athletics culture has been coined by many legendary coaches over the years and maintained the vision and

mission to “*Educate and inspire through athletics*”, which is the contemporary tagline, in combination with “*Together we win*”. The second tagline was added in 2018 by the athletic director to shift the focus from the process of educating and inspiring through athletics to the people involved in the process (i.e. coaches, student-athletes, administrators, and the community). In their strategic plan, athletics leaders emphasized the importance of working in sync as a department to achieve the broad-based excellence that is desired (i.e. to position all programs among the top three on conference and top 10 on national level in athletic and academic rankings). Most varsity teams have adopted acronyms that lean on the university’s and athletic department’s core values yet fit the sport-specific culture more appropriately. The frequent turnover of student-athletes requires the core values to be constantly reiterated and updated.

The men’s soccer program has developed the acronym PRIDE (passion, respect, integrity, discipline, excellence) and made it a big part of their locker room design in the most recent facility renovation. The coaching staff, players, and alumni often refer to the men’s soccer program as a family environment in which every member should aim to live by the team’s core values of PRIDE and to hold teammates accountable to those values. Most players agreed that the core values have had an impact on their daily life. Player 8 came as an untraditional mid-year addition to the team and commented about his integration process:

“When I originally came in, the communication of the core values wasn't quite as direct as I thought it would be. I was kind of left on an island in terms of understanding and really embracing the core values, but I think, as I spent more and more time in our locker room, and they have the core values posted and they have the acronym on the wall. I feel like spending time in there and just seeing those words and seeing what they stand for

and seeing what they mean have really helped me embrace them and help me practice them in my real life. I feel like once I started to practice them, it almost becomes a habit, and it becomes a part of me I guess you could say. So, I feel like just the more you see it, the more you can visualize it, the more you embrace it and make it a part of yours yourself.”

Effectiveness of Environment

The time student-athletes spend interacting in the environment, is not only focused on either only athletic or non-athletic talent development. The environment encourages the players to diversify their skillset by providing time and opportunities to develop outside their sport, yet it requires individuals to be growth minded and take advantage of their development. While this college environment is great for holistic development of players, the current college soccer schedule does have an impact on player recruitment and player development as Coach A stated:

"I think if that [College Schedule] were to improve, I think the college environment would be one of the best developmental platforms for an athlete or soccer athlete that you could find. There's really a lot of advantages to it, but that one is kind of a deal breaker in terms of, you know, it just makes it really challenging to do. There's still, like I said, there's workarounds but they're extraordinarily inefficient and they don't complete the resolve the issues.”

If and in what ways are the eight shared factors of successful ATDE's present in the environment?

After researchers around the world started developing empirical versions of the ATDE under investigation, Henriksen and Stambulova (2017) connected the independent research with

the aim of outlining shared features of successful ATDE's. Many ATDE's shared features and principles, however, implemented them in a different way and therefore created a unique environment (Henriksen et al., 2017). While the research on ATDE's is extensive, none of the research has included environments in U.S. intercollegiate athletics. Although the environment is inherently different, many of the eight shared features discovered by Henriksen et al. (2017) are also present in the environment.

Training groups with supportive relationships

All players and alumni described the relationships in and around the elite college soccer program as supportive and family-like. While a competitive standard is demanded due to the nature of the high performance environment, the players Players reported having supportive relationships with teammates, other student-athletes, professors, support staff, coaches, alumni, and other people in the environment.

Proximal role models

The environment does not provide the typical role model that has been referred to in previous research on ATDE's (Larsen et al., 2013, 2017, 2020). There is no "first team" where current players have the chance to experience a higher playing standard. Many players and coaches mentioned the impact a relationship with alumni can have on the development of men's soccer players. Players use former players as a blueprint for success in the environment and describe alumni as mentors and role models. Their knowledge of the environment can be valuable for current students in navigating their time in the environment. Connecting with former players that have similar academic, personal or professional preferences, is reported valuable in the selection of majors, professors and classes, and internships. Student-athletes also mentioned

people in their non-athletic domain as role models (professors, experts, family members) and how they are guiding and mentoring them in development.

Support of athletic goals by wider environment

Student-athletes and coaches agreed that the university environment is supportive of their sporting goals. Through the student-athlete advisory council, institutional administrators get informed about issues student-athletes are experiencing and try to address them. Players highlight the support and understanding they have been receiving from their professors, academic advisor, and all other people in the environment. Players also mentioned that the connections with and support of regular students at the university can be motivating and inspiring.

Support for personal and career development

The coaching staff in combination with the support network try to provide as broad and deep of an experience for each individual student-athlete as needed. Personal development is an individual process that begins for some sooner than for others. Older players and alumni mentioned they wish they would have used more of the resources during their time in the environment. The student-athlete development staff that is part of the support network, provides ample resources including career fairs, major exploration workshops, and networking events for career development, in addition to the university-wide offered career services.

Focus on long-term development rather than early success

A key theme the coaches mention that college soccer is designed to be a four-year journey that provides more time, even for slower developing or later maturing players compared to a professional environment. The head coach described the lack of pressure to achieve immediate success as a safety net for players. The focus of the coaching staff and support

network is to help maximize the human potential of the student-athletes, to prepare him/her for life.

Integration of efforts (e.g. school, family, sport, life),

The NCAA's mission to "maximize the student-athlete experience" demands an effective integration of athletic, academic, and personal domain. This means the goal of the environment is to provide as much support as needed in the process of balancing many different responsibilities. If academic standards are in jeopardy, the coaching staff works in collaboration with the academic advisor on a plan to assist the student-athlete. Coaches believe that all areas of the student-athletes lives impact their development, therefore they aim to provide support for every area.

Strong organizational culture

The organizational culture of the university, the athletics department and the men's soccer program are what can be considered strong and coherent. It is coherent in a way that all three mission and vision statements (institution, department, and team) lean and build on each other. It is strong because it demands of each member to strive for excellence, in other words, be the best version of yourself, every day. The coaching staff sees it as their responsibility to maintain the culture by holding players accountable to the core values and therefore achieve a coherence between espoused and enacted values. Something that is a continuous process with mature players leaving and new players being added to the team on an annual basis. A coach also stated that the core values are constantly changing based on evolving societal norms.

Training that allows for diversification

The schedule of student-athletes is structured to accommodate their athletic and academic and personal responsibilities. Players reported that coaches and professors are understanding and

respectful when it comes to time conflicts with the other domain. Furthermore, players outline the college environment encourages student-athletes to explore and develop other interests outside their athletic career as the environment provides the inherent combination of athletics and academics. Many players this freedom to explore their interests and have been resourceful. They took advantage of the resources the environment offers, used this as a launchpad into whatever career they aspired to pursue after exploring different passions or interests.

CHAPTER 5: DISCUSSION

The purpose of the study was to provide a holistic description of an elite college soccer program, to examine factors influencing the environment's success in developing future elite players, and to analyze if and in what ways the eight features of successful environments are present in the environment. This study contributes to the research on ATDEs by expanding it to include the organizational structure of elite college sport and career transitions of athletes. This study contributes to the existing literature from a holistic ecological approach. Looking into community and culture of an elite college soccer program expands the knowledge about successful talent development environments in team sports. Although each successful ATDE is unique, the present study shows that the men's college soccer environment shares a number of factors contributing to their success.

U.S. collegiate athletics is inherently different from European football academies due to the integration of higher education and elite level athletics. This combination of athletic and academic domain inherently brings competing objectives within the environment, which student-athletes have to juggle, and coaches' performance is measured on. Previous research utilizing a HEA to develop empirical ATDE and ESF models, have focused on the transitioning of athletes to the elite senior level as a "successful outcome" as those players contribute to the first team and could bring a financial reward with it. College coaches must maintain focus on multiple team objectives (e.g. graduation rate, academic standing, recruiting, fundraising, sport specific) with transitioning student-athletes to the elite senior level as one of them. Coaches not only refer to

alumni that continue their athletic career as “a success” but also to the countless alumni that went on to different fields and careers.

Culture

As Larsen, et al. (2020) outlined in Ajax Amsterdam's academy, a big facilitator of the environment's success is the strong and coherent organizational culture. The college soccer coaching staff clearly understands their role as organizational leaders of the team, and the wider environment. The men's soccer core values (PRIDE) demand *excellence*, or better said the best effort an individual can give on a consistent basis. A senior described the team culture as very clear and added that if players slack and don't give their best, they are going to stick out, because everyone else is trying their best. Another teammate added that competitiveness of the environment is what makes people go to their limit and ultimately gets them to their maximum and allows them growth. This relentless pursuit of excellence invariably leads to players investing more resources (time, focus, energy) in their development, and therefore become better than they would be without being pushed to their limit. A Coach A added about the development process:

“That development applies to athletics or economics. So, you tend to find successful people have certain qualities in terms of work ethic, commitment, ability to concentrate and delve into topics at a deeper level. That applies to whatever field they choose. So, we try to develop those concepts that will apply to whatever field, they long term are going into, knowing that also applies to the sport and to soccer. So that will give them the best chance to deepen their skill set and to deepen their competency in sport. To have some of these traits, this ability to commit, concentrate, work, at an extremely high intense level,

both mentally and physically for long periods of time, analyze, self-coach, and commit to something bigger than themselves.”

The competitive culture requires players to develop psychological and psychosocial skills that prepare and will assist them in future environments. This culture appears in stark contrast to the supportive relationships’ players describe within and around the team. This dichotomy and the high expectations in the daily life in the environment, require the student-athletes to develop social and psychosocial skills to navigate those not always easy situations. Additionally, some players never acclimate to the standards required by the environment and subsequently their experience is inherently different from players embracing the core values.

Supportive Community

The support network provided by the athletic department and university serves as a tremendous help for student-athletes. It aims to cover all areas of the student-athletes life from nutrition over athletic training to academic development in an attempt to provide a supportive athletic, academic, and personal development environment for the student-athletes. With all the resources involved in the student-athletes development, including people and relationships between people, it is important to have an effective integration of efforts. The tight knit relationships between coaches, academic advisor, student-athlete, and professor makes the dual-career (student & athlete) very efficient and effective. Martindale et al. (2007; 2009) have highlighted the importance of coherent messaging in the development process and Henriksen et al. (2017) emphasized the integration of efforts (e.g., athletics, school, and family).

The athletic department attempts to integrate all efforts (e.g., academic support, sport specific coaches, administration, athletic training, etc.) by providing effective and efficient ways of communication for the student-athlete (e.g., department wide communication platforms).

Student-athletes agree that the resources in the environment are endless and it comes down to whether the individual has a growth mindset and realizes those opportunities or not. The support network provided by the athletic department naturally extends to other people in the environment, including other student-athletes, professors, and alumni.

Barrier to effective development

Coaches and players mentioned the challenges that arise from the current college soccer schedule in terms of development opportunities. Interviews and observations pointed out that during the championship segment, practices are mostly designed to balance the starters workload and prepare for the next match. Researchers including Martindale et al. (2007) and Larsen et al. (2020) outlined the importance of individualized and ongoing development with a focus on long-term development, rather than short term success (e.g. win the next game). During the championship segment, college soccer teams try to win as many games as possible and to increase the chances of qualifying for the national tournament. This takes the focus away from long-term development of all players and shifts it on winning the next game. That leads to practices being designed to develop areas that have a chance to yield the greatest chance of winning the next game, such as set-pieces, and tactical adjustments instead of individualized player development activities.

Larsen, et al. (2020) further explained how Ajax Amsterdam aims to prepare players as well as possible by exposing them to what is expected of them on the elite senior level (e.g. competition that resembles a professional schedule). The current college schedule does not provide a competition and practice schedule that facilitates effective long-term development, nor does the "feast or famine" schedule resemble the professional schedule. College soccer is currently played in a 19 game, 72-day regular season, creating a match congestion that gives

players an average of four days to recover in between competition. If the match congestion in college soccer is compared to the match congestion in the MLS, which entails 34 regular season games in 238 days, players in college have an average of 42% less time to recover in between competition. It has previously been concluded that there are physiological consequences that arise from playing two soccer matches a week versus one soccer match a week (Dupont, Nedlec, McCall, McCormack, Berthoin & Wisløff, 2010). While they found that physical performance (total distance covered, high-intensity distance covered, and sprint distance) was not significantly affected by the number of matches per week, they discovered that the injury rate increased significantly from 4.1 injuries per 1,000 hours of exposure to 25.6 injuries (Dupont et al., 2010).

Studies outlining the globalization of collegiate athletics, more specifically college soccer, shows how unique the college athletics environment is in comparison to other soccer environments around the world. The game of college soccer, as well as the type of soccer player playing in college soccer has changed. Most players on the elite college soccer team have the ambition to play professionally upon graduation. While the goal of the environment is not exclusively to develop athletic talent in players and rather integrate it with an academic and personal development, it is a big driver for elite athletes of various sports to choose their schools. The current college soccer schedule is inefficient and poses a barrier to successful athletic talent development. The scheduling format is determined by the NCAA and directly contradicts the focus on long term development. It is a decade old playing and practice model designed to provide a balance for student-athletes by having one championship segment (fall semester) where competitions are played, and one non-championship segment (spring semester) where coaches are limited to only 5 friendly matches and the focus is on the academic side.

Elite environments, which typically only play one game on the weekend, have long ago shifted to a periodization model, where the entire year is mapped out into micro-, meso-, and macro-cycles for effective long-term development purposes. The season starts with an adequate time for pre-season (typically 6-9 weeks), which allows to build the fundamental fitness, tactics, and acclimatize to the environment. College soccer typically allows for 21-days of training, prior to the first day of competition in the fall. During the season, the one-game a week schedule allows for sufficient recovery time in between games and even offers occasional rest periods for players with minor injuries. Furthermore, a more balanced schedule would also allow the strength and conditioning staff to continuously work with players, without having to be concerned about overworking players, which often leads to immediate injuries. Third, it would provide the opportunity for the coaching staff to work with players that don't play regularly. When you play two games a week, coaches have to expect injuries and non-starters need to be as fresh as possible, meaning coaches don't train them to their capacity in between games to be able to use them during games if needed. Finally, the overall structure and level of practice would change, if coaches have 5-7 days in between games, where they can reflect and focus on areas that will help players grow individually, and as a team. Over time, this process will not only influence the results of the team, but also amplify the development of each player. The negative physiological consequences outlined in previous studies have already shown the adverse effects the college soccer schedule has on the student-athletes' bodies. The results of this study have outlined that coaches have difficulty finding workarounds the current NCAA schedule that limits practice and playing opportunities. A practice/competition schedule that would be aligned with the long-term development of players and mirrors the professional schedule could have a tremendous impact on the development of future college soccer players. I

believe the expertise and experience of U.S. soccer employees could have a positive impact on college soccer as an athletic talent development platform and assist elite college soccer coaches and administrators in their efforts to maximize the potential the environment holds in developing athletic talent in players, as part of their holistic development efforts.

An informative relationship between U.S. soccer and college soccer could bring benefits to both college soccer and the U.S. national team. It has to be said, that U.S. Soccer Federation and the MLS have little authority in the college environment, which is ruled by the NCAA but their political power and expertise, could help a generation of college soccer players experience more efficient athletic talent development.

Future Studies and Limitations

This is the first study utilizing a holistic ecological approach researching an elite college soccer environment, therefore a logical future study would be research utilizing a HEA in other college sport environments. The aim could be similar to this study with the objective to present a detailed description of the environment that provides opportunities for practitioners and researchers to learn from. An aggregate of these studies over time could provide interesting insights. Furthermore, cultural leadership takes place all the time, and coaches are not always aware of their roles as cultural leaders. Thus, when researching talent development environments, the role of the coaches also needs further attention. Future studies could also include investigating the integration of school, sports, and personal life in European football academies. Elite college athletics provides a great example how an effective integration of efforts can lead to a successful holistic development and prepares student-athletes for life after their sporting careers end. Research could provide insights into how European academies could

facilitate the social development of athletes, while pursuing their athletic goals in order to help transition players successfully in careers after football.

This study followed the categories from the ATDE and ESF model. This is important to note because the *effectiveness of the environment* is determined based on the success in transitioning players to the senior elite level. Yet, the environment defines success also as student-athletes transitioning in a non-athletic career. Future studies could look at using a model that encapsulates both, the transitioning of players to the elite senior level in their sport, and their non-athletic accomplishments. This particular case study is based on a limited amount of observation data gathered from personal interviews from a sample of the extended team population, which from the perspective of ethnographical work would be considered a limitation because the observations were not “long-term immersion” in the cultural life of other people in order to grasp how they live (Atkinson, 2016). However, my role in the environment allowed me to develop trusting relationship with players, coaches, administrators, and alumni, and I was able to gather considerable additional insights that informed the interviews. Additionally, the data is specific to this particular environment and conclusions may not be applicable to other programs at other institutions, or at different competitive levels within college soccer.

Conclusion

The present study of an elite college soccer program complements previous studies of individual and team sports and provides important insight into the way in which holistic ecological analysis of talent development in a team sport may be carried out. The present studies illustrate how a support network can be designed around future elite level players that effectively integrates efforts and facilitates long term holistic development. The organizational structure of the environment, in combination with a strong and coherent organizational culture, lead to the

success of the talent development environment. The competition and practice schedule of the environment present a major barrier to long-term athletic talent development of players and adaptations could make the environment even more successful in developing senior elite level players.

REFERENCES

- Aalberg, R. R., & Sæther, S. A. (2016). The Talent Development Environment in a Norwegian top-level football club. *Sport Science Review*, 25(3–4), 159–182.
- Baker, J., & Horton, S. (2004). A review of primary and secondary influences on sport expertise. *High Ability Studies*, 15(2), 211–228.
- Bloom, B. (1985). *Developing Talent in Young People*.
- Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.
- Côté, J., Baker, J., & Abernethy, B. (2007). Practice and play in the development of sport expertise.
- Côté, J., Lidor, R., & Hackfort, D. (2009). ISSP position stand: To sample or to specialize? Seven postulates about youth sport activities that lead to continued participation and elite performance. *International Journal of Sport and Exercise Psychology*, 7(1), 7–17.
- DFB – Präsidium (2018). *Beschlussvorschlag zum Ergebnis der Beratungen zu Tagesordnungspunkt 12 „Projekt Zukunft“*
- Dupont, G., Nedelec, M., McCall, A., McCormack, D., Berthoin, S., & Wisløff, U. (2010). Effect of 2 Soccer Matches in a Week on Physical Performance and Injury Rate. *The American Journal of Sports Medicine*, 38(9), 1752–1758.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363–406.
- Flatgård, G., Larsen, C. H., & Sæther, S. (2020). *Talent development environment in a professional football club in Norway*. 8–15.
- Gould, D., Dieffenbach, K., & Moffett, A. (2002). Psychological Characteristics and Their Development in Olympic Champions. *Journal of Applied Sport Psychology*, 14(3), 172–204.
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Successful talent development in track and field: Considering the role of environment. *Scandinavian Journal of Medicine & Science in Sports*, 20(s2), 122–132.
- Henriksen, K., Stambulova, N., & Roessler, K. K. (2010). Holistic approach to athletic talent development environments: A successful sailing milieu. *Psychology of Sport and Exercise*, 11(3), 212–222.

- Henriksen, K., Stambulova, N., & Roessler, K. K. (2011). Riding the Wave of an Expert: A Successful Talent Development Environment in Kayaking. *The Sport Psychologist*, 25(3), 341–362.
- Henriksen, K., Larsen, C. H., & Christensen, M. K. (2014). Looking at success from its opposite pole: The case of a talent development golf environment in Denmark. *International Journal of Sport and Exercise Psychology*, 12(2), 134–149.
- Henriksen, K., & Stambulova, N. (2017). Creating Optimal Environments for Talent Development. In J. Baker, S. Cobley, J. Schorer, & N. Wattie (Eds.), *Routledge Handbook of Talent Identification and Development in Sport* (1st ed., pp. 270–284). Routledge.
- Henriksen, K., Storm, L. K., Kuettel, A., Linnér, L., & Stambulova, N. (2020). A holistic ecological approach to sport and study: The case of an athlete friendly university in Denmark. *Psychology of Sport and Exercise*, 47, 101637.
- Hodge, K., & Sharp, L. A. (2016). Case studies. In B. Smith, & A. Sparkes, *Routledge handbook of qualitative research in sport and exercise* (pp. 62-75), New York, NY: Routledge.
- Holt, N. L. (2002). A Comparison of the Soccer Talent Development Systems in England and Canada. *European Physical Education Review*, 8(3), 270–285.
- Holt, N. L., & Dunn, J. G. H. (2004). Toward a Grounded Theory of the Psychosocial Competencies and Environmental Conditions Associated with Soccer Success. *Journal of Applied Sport Psychology*, 16(3), 199–219.
- Howe, M. J. A., Davidson, J. W., & Sloboda, J. A. (1998). Innate talents: Reality or myth? *BEHAVIORAL AND BRAIN SCIENCES*, 45.
- Huggins, R. A., Curtis, R. M., Benjamin, C. L., Sekiguchi, Y., Wasserman, E. B., Klossner, D. A., Adams, W. M., Arent, S. M., Jain, R. K., Miller, S. J., Armistead, M. J., Borchik, S. M., D’Andrea, C., Landry, A. P., & Sylvester, T. (2018). *Influence of Match Congestion, Load and Wellness on Injury Risk in Collegiate Men’s Soccer*. 1.
- Ivarsson, A., Stenling, A., Fallby, J., Johnson, U., Borg, E., & Johansson, G. (2015). The predictive ability of the talent development environment on youth elite football players’ well-being: A person-centered approach. *Psychology of Sport and Exercise*, 16, 15–23.
- Kirk, R., & Weaver, A. (2019). Footballers, migrants and scholars: The globalization of US men’s college soccer. *Soccer & Society*, 20(6), 781–794.
- Larsen, C. H., Alfermann, D., Henriksen, K., & Christensen, M. K. (2013). Successful talent development in soccer: The characteristics of the environment. *Sport, Exercise, and Performance Psychology*, 2(3), 190–206

Larsen, C. H. (2017). *Bringing a knife to a gunfight: A coherent consulting philosophy might not be enough to be effective in professional soccer*. 12.

Larsen, C. H., Louise, S. K., Pyrdol, N., Sæther, S. A., & Henriksen, K. (2020). A world class academy in professional football: The case of Ajax Amsterdam. 33-43.

MacNamara, Á., Button, A., & Collins, D. (2010). The Role of Psychological Characteristics in Facilitating the Pathway to Elite Performance Part 2: Examining Environmental and Stage-Related Differences in Skills and Behaviors. *The Sport Psychologist*, 24(1), 74–96.

Martindale, R. J., Collins, D., & Daubney, J. (2005). Talent Development: A Guide for Practice and Research Within Sport. *Quest*, 57(4), 353–375.

Martindale, R. J. J., Collins, D., & Abraham, A. (2007). Effective Talent Development: The Elite Coach Perspective in UK Sport. *Journal of Applied Sport Psychology*, 19(2), 187–206.

Martindale, R. J. J., Collins, D., Wang, J. C. K., McNeill, M., Lee, K. S., Sproule, J., & Westbury, T. (2010). Development of the Talent Development Environment Questionnaire for Sport. *Journal of Sports Sciences*, 28(11), 1209–1221.

Martindale, R. J. J., Collins, D., Douglas, C., & Whike, A. (2013). Examining the ecological validity of the Talent Development Environment Questionnaire. *Journal of Sports Sciences*, 31(1), 41–47

MLS Press Release (2019, October 21). *MLS expansion boom continues at unprecedented rate in modern sports*. MLSsoccer.Com.

MLS Press Release (2020, September 8). *MLS NEXT elite youth development platform officially unveiled ahead of inaugural season*. MLSsoccer.Com.

Nesti, M., Littlewood, M., O'Halloran, L., Eubank, M., & Richardson, D. (2012). Critical Moments in Elite Premiership Football: Who Do You Think You Are? *Physical Culture and Sport. Studies and Research*, 56(1), 23–32

Patton, W., & McMahon, M. (2014). *Career Development and Systems Theory: Connecting Theory and Practice*. Springer.

Schein, E. (1992). *Organizational culture and leadership*.

Slater, L. V., Baker, R., Weltman, A. L., Hertel, J., Saliba, S. A., & Hart, J. M. (2018). Activity monitoring in men's college soccer: A single season longitudinal study. *Research in Sports Medicine*, 26(2), 178–190.

Stambulova, N. (2007). *The transition from junior to senior sports: A summary of six Swedish studies*. 126–127.

Thorpe, H., & Olive, R. (2016). Conducting observations in sport and exercise settings. In B. Smith, & A. Sparkes, *Routledge handbook of qualitative research in sport and exercise* (pp. 124-139), New York, NY: Routledge.