

**Coaches' Perceptions of the Impact of 3D Coaching on Coaching and  
Student-Athlete Behaviors and Performance**

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## **Abstract**

The 3D Coaching framework was developed by Dr. Jeff Duke of the 3D Institute. To better understand how the 3D Coaching framework impacts coaches and athletes, the researcher investigated potential changes in the approach of high school coaches following a year of training in 3D Coaching. Additionally, the researcher elicited responses from eight coaches to evaluate their perceptions of change in athletes' behavior and performance within a year of implementing 3D Coaching. As a result of the study, three key findings emerged. The analysis of finding 1 revealed that all participants exhibited a detailed familiarity with the three dimensions encompassed within 3D Coaching despite having no prior knowledge of 3D Coaching before their training. Finding 2 revealed that high school athletes learned skills more quickly and were more determined to execute the learned skills after coaches established 3D Coaching. Finding 3 revealed an increased quality of coach-athlete relationships following the implementation of 3D Coaching. The implications of this study include the consideration for schools and athletic programs to utilize 3D Coaching as a comprehensive approach to training and supporting athletes. Also, 3D Coaching could be considered in additional settings such as business and professional sectors. Due to the study's limitation of research being conducted in a rural Missouri high school, it is recommended that the success of 3D Coaching be assessed in a variety of settings that span a wide demographic area. Finally, the utilization of post-training surveys for coaches and athletes could determine additional components of the framework's effectiveness and provide the necessary feedback to evaluate the impact of 3D Coaching on the intended population.

## **Dedication**

“The Lord himself goes before you and will be with you”, Deuteronomy 31:8. I would like to begin this dedication by thanking God for setting this path before me and sustaining me as part of His plan to make me a better person for His glory and those around me. I would like to thank my husband, Aaron, who for 25 years has consistently put my dreams before his own. I hope he realizes that the family and life we have built together is one of the best dreams that I live out each day. My children; Dylen, Haydn, and Lilly deserve an ovation for the way they have supported me. Little do they know that while I was teaching them about life, they were teaching me about love. Dylen, thank you for reminding me that I am capable of reaching my goals no matter what life brings. Haydn, thank you for the endless hugs and encouragement you gave by simply sitting in the same room with me during online class just so we could hang out. Lilly, thank you for making countless meals and delivering them to my computer desk so I could press forward. I pray that you will look back on this journey and be inspired to climb higher than I ever dreamed. I cannot go without mentioning my furry kiddo, Noel. She began this journey with me and faithfully laid in my lap with her head propped up on my desk, never leaving my side. The amount of love and support from all of my family and friends who checked in often to see how “the process” was going, is insurmountable.

Finally, I leave you with a special verse, Colossians 3:23: Whatever you do, work at it with all your heart, as if working for the Lord. A special lady models this in my life. May this work model it for others.

## **Acknowledgments**

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## **Chapter 1**

### **Introduction**

With over 50 million youth athletes participating in some type of sport in the United States alone, it is important to realize the impact coaches play in this process (Weinberg & Gould, 2011). According to Donaldson (2021), a coach can change a child's perception of hard work, competition, and most importantly, their perception of themselves. Additionally, the impact of a coach's guidance and the role coaches play in a student's life significantly contributes to the success of students who have the privilege of being mentored by such individuals. Cross & Fouke (2019) supported this theory by stating that coaches and educators should work collaboratively to help athletes achieve their full potential. Loy (2019) added that coaches can influence young athletes in ways that can go far beyond a single game, or even an entire season. High school athletes nationwide are impacted by instructors and coaches regularly, but the impact these coaches make can depend on the amount and quality of their training or lack thereof.

As an advocate for training coaches to support the whole athlete, Jeff Duke established 3D Coaching to provide a quality program and direction for coaches, sport administrators, athletes, and the public regarding necessary skills, knowledge, and research to support athletes (Duke, 2014). Duke's 3D Coaching framework consists of three dimensions: fundamentals, psychology, and heart. These dimensions are outlined in a pyramid, which serves as a visual reference for 3D Coaching. Due to the lack of published research on 3D Coaching, the researcher sought to explore the implications of the 3D Coaching model on high school athletes.

North (2018) asserted that coaches can have a significant impact on athletes' personal lives, goals, and how they perceive themselves and their community. One example of a coach significantly impacting an athlete in this type of manner is the relationship demonstrated between four-time winning Superbowl coach Andy Reid and his first-string quarterback, Patrick Mahomes. Although Mahomes and the Kansas City Chiefs have created nationwide headlines for their winning seasons, these headlines are not limited to what takes place on the field. During a July 2023 interview, Mahomes said that Reid teaches him a great deal, "not only in the quarterback position, but how to be a leader and how to be a great dad and husband" (Williams, 2023). The type of connection Reid created with Mahomes demonstrates the encouragement and collaboration found within transformational leadership, Givens (2008).

According to Cherry (2020), coaches who possess similar transformational attributes such as Andy Reid are generally energetic, enthusiastic, and passionate. These types of coaches and are not only concerned with being involved in the process; they are focused on helping every member of the team succeed. Hebard et al., (2021) says coaching leadership is an important factor in supporting team culture. Furthermore, coaches "align their community around a shared purpose of promoting student growth and development and hold themselves accountable to fostering healthy and transformative relationships." The significance of leadership skills similar to those of Andy Reid can be recognized as impactful in settings beyond the professional sector.

Take for example, a scenario that unfolds at the high school level involving two separate activities. It is the 4th period of a tied game between two opposing basketball teams with two minutes left. Both teams are eager to gain the lead before the buzzer

sounds, yet the teams demonstrate a stark contrast in their demeanor. One team is huddled together, eyes focused on the coach and one another. It is evident that words of encouragement are being exchanged as they pat each other on the shoulders one last time before they return to the court. On the opposite side of the court, players are pacing, looking at the scoreboard, and visibly frustrated as they attempt to listen to their coach yell out the mistakes that have brought them to this tight game. With adrenaline pumping, the first team huddles one last time and joins the opposing team. Both teams are there to win, have learned the same fundamentals of basketball, and are aware they are tied with two minutes left in the game; however, the two teams are nothing alike when it comes to the heart of that moment.

Down the hall, an academic team is taking a time out before the second round. Their coach speaks words of affirmation, reviews content, and snaps a few pictures of the team laughing together which will be included in the yearbook. In the next room over, the opposing academic team is being forced to review a packet of trivia questions. There is no doubt their coach is frustrated, considering the coach's tone and facial expression. The teams come back together for the last half of the match, both eager to win the championship trophy for their region. As the questions begin, one student on the opposing team repeatedly buzzes in before any of their teammates have a chance. The premature answers cause a setback in the score and a lack of team cohesion is evident. Their coach sits in a chair, keeps score, and rarely glances up. On the opposite side of the room, a team of students collaborated and seamlessly and pulled ahead. Their coach often nodded, smiled, or gave a thumbs up after questions were answered, even if a mistake was made.

Why was the demeanor of the students in each situation so vividly different? While the same sport or activity was being executed, the response of each team's skill and character did not align. What were the determining factors that led a basketball team to huddle together with a determined focus on their coach and teammates versus the team that was focused on the scoreboard and the laundry list of mistakes leading to defeat? Why did one academic team work together so easily and appear to enjoy their experience while the other demonstrated a lack of cohesion which ultimately lost them the match? Behind these teams were different coaches utilizing contrasting coaching methods. In this study, the researcher will examine the impact coaches have on their athletes, most specifically after implementing 3D Coaching.

## **Background**

With an estimated 50 million youth in the United States participating in athletics each year, millions of coaches and managers in youth sports interact with young athletes on almost a daily basis (Brinton et al., 2017). In Missouri, the Missouri State High School Activities Association (MSHSSA) is the governing body for high school activities. According to MSHSSA (2022), 580 high schools have registered activities with the organization. Additionally, MSHSSA (2022) stated that 171, 925 high school student-athletes participated in a sport or activity during the 2021-2022 school year. Additionally, Missouri school districts employed 438 coaches during 2021-2022 who interacted with these high school student-athletes.

The demographics for the researcher's study, referred to in this study as the P413 School District, includes one high school offering 26 MSHHA sponsored activities. Additionally, the district has 86 coaching positions that oversee these activities. The total

enrollment for high school students in the P413 School District during the 2022-2023 school year was 1,561 according to the Missouri Department of Elementary and Secondary Education (2022). Of these 1,561 students, approximately 1,200 students were involved in one or more coach-sponsored activities.

### **Statement of the Problem**

The effect of sports coaching on athletes has received increased attention (Potrac et al., 2013). However, while some researchers have investigated the ways in which the coach-athlete relationship impacts fundamental needs (Felton & Jowett, 2013; Riley & Smith, 2011), no studies have examined the way in which interpersonal coaching behaviors impact an athlete's performance or the coach-athlete relationship (Choi et al., 2013). To date, sport researchers have focused their attention on understanding the factors associated with fundamental, rather than impactful coaching (Becker, 2009). Duke (2014), of the 3D Institute sought to address this gap in literature by researching the impact of transformational coaching and creating the 3D Coaching model.

Determining who is a quality coach, a coach's influence on athletes, and athletes' interpretations of the coach are critical issues to be addressed through research (Gearity & Murray, 2011). While Duke (2014) adopted 3D Coaching to improve coaching and its impact on athletes, its effects have yet to be examined through research. Furthermore, Mattson (2015, p.8) concluded that "there is no statistical evidence" that supports the 3D Coaching model. Due to the lack of research, a discrepancy exists between the knowledge of the 3D Coaching model and the model's effect on athletes when adopted by high school athletic coaches.

According to Choi et al. (2020), in the field of sports, coaches play a significant role, fulfilling the most important position for the team as well as for the athletes. Coaches also have a decisive effect on the overall aspects of athletes' physical and psychological status and their performance levels. Given the lack of training for coaches in areas outside of the physical realm, there is a gap in addressing intrinsic motivation and the psychological impact on student-athletes. Duke (2014) asserted that his 3D Coaching model addressed this gap, however additional research on 3D Coaching is necessary for determining the ability of this model to reverse negative coaching behaviors and increase the intrinsic motivation encompassed within student-athletes.

### **Purpose of the Study**

There were two purposes that guided this qualitative study. First, this study was conducted to better understand high school coaches' perceptions of how their coaching style shifted, if any, after receiving a year of training in 3D Coaching. The second purpose of this study was to inquire about coaches' perceptions about changes in athletes' behavior and performance within a year of implementing 3D Coaching.

### **Significance of the Study**

Despite the implementation of 3D Coaching in schools and organizations throughout the United States, there is no research on how 3D Coaching affects the styles of the coaches who complete the training or how 3D Coaching impacts the performance and behavior of student athletes. The results of this study could improve the quality of 3D Coaching by providing research-based decision-making to support the design, implementation, and evaluation of 3D Coaching. Additionally, the results of this study

could provide a better understanding of the needs and expectations of 3D Coaching, resulting in a program that is more relevant and effective.

### **Delimitations**

Delimitations are “self-imposed boundaries set by the researcher on the purpose and scope of the study” (Lunenburg & Irby, 2008, p. 134). For this study, the researcher set the following delimitations:

1. This study was limited to a sample of high school athletic coaches in one school district in Southwest Missouri.
2. Participants in the study completed at least one year of 3D Coaching training.
3. The data collection for this study was limited to interview questions and does not include performance data.

### **Assumptions**

Lunenburg & Irby (2008) defined assumptions as the “postulates, premises, and propositions that are accepted as operational for purposes of the research” (p. 135). The following assumptions were made in this study:

1. The assumption was made that coaches responded to interviews in an unbiased manner.
2. The assumption was made that participants in the study responded to interview questions in an honest way.
3. The assumption was made that interview participants understood the interview questions and answered in an honest way.

## **Research Questions**

Creswell (2009) stated research questions (RQs) “shape and specifically focus the purpose of the study” (p. 132). The following research questions were addressed in this qualitative study:

### ***RQ1***

What are high school coaches’ perceptions of how their coaching style shifted, if any, after completing a year of training in 3D Coaching?

### ***RQ2***

What are coaches’ perceptions about changes in athletes’ behavior and performance within a year of implementing 3D Coaching?

## **Definition of Terms**

To ensure a shared conceptual comprehension of terminology embedded in this research, it is necessary to provide definitions for key terms. The following concise explanations and descriptions of key terminology are provided below.

### ***3-D Coaching***

According to Duke (2014), the 3D Coaching program trains the coach from a transformational leadership theory foundation aimed at coaching development and the discernment of the holistic dimensions of sport, which includes physical skill (body), psychology (mind), and the heart of athletes (relationships).

### ***Athletic Coach***

An athletic coach is defined as “a teacher who serves in a paid capacity as a head coach or assistant coach of a varsity or junior varsity high school interscholastic athletic team that participates in athletics” (Cauley, 2011, p. 9).



***Coach-Athlete Relationship***

The coach-athlete relationship refers to the connection between coaches and athletes which can contribute to performance enhancement and success (Jowett & Cockerill, 2003).

***High School Student Athlete***

A student in high school grades 9-12 who participates in a school-sponsored sports program (MSHSAA, 2017).

***Holistic Coaching***

Holistic coaching is an approach to personal or professional coaching that considers the entirety of an individual's life and well-being (Bogart, 2015).

***Intrinsic Motivation***

Intrinsic Motivation refers to behaviors engaged in freely and of personal choice (McLean et al., 2012).

***Laissez-Faire Leadership***

The Merriam-Webster Dictionary defined Laissez-Faire leadership as a philosophy or practice characterized by a usually deliberate abstention from direction or interference, especially with individual freedom of choice and action. (Merriam-Webster & Fogware Publishing, 2003)

***Motivation***

Motivation is defined as a driving force that makes individuals act, put forth objectives, and accomplish them. As a psychophysiological process, motivation controls human behavior and because of this people tend to stay motivated to set directions, act, and accomplish goals (Bhasin, 2022).

### ***Pyramid of Success***

The pyramid of success is a visual representation of John Wooden's philosophy on achieving success and reaching one's full potential. The Pyramid of Success consists of a set of building blocks, or traits, that Wooden believed were essential for achieving greatness (Wooden & Carty 2015).

### ***Transactional Coaching***

Transactional coaching is a coaching approach that focuses on the specific behaviors, actions, and tasks required to achieve predetermined goals or outcomes. In transactional coaching, the coaching relationship is often task-oriented and results-driven, with an emphasis on clear objectives, timelines, and measurable progress (Chaudhry & Javed, 2012).

### ***Transformational Leadership***

Transformational leadership extends beyond the valuable social interactions that occur when leaders engage followers in a relationship with a shared purpose to transform and raise motivation, conduct, and morality (Simola et al., 2010).

### **Organization of the Study**

This dissertation is composed of five chapters. The first chapter of this study included a description of the study's background, a statement of the problem, the purpose of the study, significance, delimitations, assumptions, research questions, and a definition of terms included in the research. Chapter 2 includes a literature review aligned with the research questions regarding 3D Coaching. Chapter 3 details the study's structure and the approach for conducting research, including methodology. This encompasses the research design, setting, sampling procedures, data collection and analysis, the researcher's role,

and any study limitations. Chapter 4 provides the results of the study by highlighting three major findings followed by Chapter 5 which contains a summary of the study, findings related to the literature, and concluding remarks.

## **Chapter 2**

### **Review of the Literature**

This chapter presents an overview of the history of coaching including the establishment of the word “coach” dating back to the mid 1500’s. Following a historical synopsis of coaching, this chapter includes an overview of more recent coaching styles. It is important to garner an understanding of the connection between current desired coaching styles and the roots from which they came (Parker et al., 2012). For this reason, four specific coaching styles are detailed in Chapter 2 to provide context for the most common coaching styles disseminated throughout the world of athletics, according to Maryville University (2021). An overview of 3D Coaching is presented in this chapter with detail given to each of the three tiers embedded within the 3D Coaching model. Finally, a synopsis of positive and negative coaching, including the effects of positive and negative coaching on athletes concludes the chapter.

### **History of Coaching**

“Coach” can be traced back to the 1550s from the Middle French “coche”, the German word “kotsche”, and the Hungarian word “kocsi”, which literally translates “carriage of Kocs”, from the name of the village where carriages were made, according to the Online Etymology Dictionary. These areas were specifically known for their special carriages and carts pulled by horses and used to transport people between Vienna and Budapest. Over time, the word Kotsche, as the Hungarians pronounced it, was transliterated to “coche” by the French, eventually becoming the English word coach. In 1830, the term "coach" was first used in the academic world by Oxford University to refer to a tutor who helped a student. According to Oxford University, “coach” was

defined as slang for a tutor, and is a method of directing, instructing, and training people with the aim of achieving specific goals (Morrison, 2010).

It was not until the 1860s in England that the term was widely used in the world of sports. In 1861, the word “coach” evolved to include an athletic connotation and was defined as special instruction or training for an exam or athletic contest (Sommerkamp, 2018). Coaching became an official occupation for the first time in Britain, meaning individuals could assume the role of a professional coach. Coaching knowledge about training methods began to evolve, as did the understanding of the physiological responses to different training practices in the early-1900s (Palmer & Whybrow, 2019). The 1920s has been called the Golden Age of American Sports as well as the Age of the Spectator (Sumner, 2004). Due to the rise of mass media, radio broadcasts, and vast newspaper coverage, people had access to the culture of sports, including the athletes who embraced them.

The history of sports coaching provides perspective on the complexities of the coaching context and the forces influencing the coaching process (Jones, 2007). Knowing the past of coaching can give context to distinctive styles and philosophies, allowing for a better understanding of the purpose of coaching. According to Sommerkamp (2018), coaching is a creative partnership where a process is used to help people maximize their potential. Creative partnerships as described above surfaced in public high schools with the establishment of high school sports during the mandatory schooling movement in 1852 (Simpson, 2004).

According to Simpson (2004), the first state to make schooling required by law was Massachusetts with Mississippi being the final state to require schooling in 1917.

Due to mandatory schooling, students and families experienced an adjustment to how students spent and utilized their time (Friedman, 2013). Initially, it was thought that students could benefit from parks, however adults did not trust their children to be unsupervised creating a need for organized sports. Considering that sports were viewed as a vehicle to “prepare students for the new industrial society”, sports embedded within the high school setting became a widely accepted practice (Freidman, 2013). This evolution of organized sports increased the number of students who participated at the high school level during the 1920’s, thus creating a platform for high school athletic coaches.

In Missouri, high school athletic coaching became part of an official organization known as the Missouri State High School Activities Association (MSHSAA). The organization began in 1925 and existed as one of the last states to adopt a governing body to oversee the regulations and eligibility of interscholastic events (MSHSAA, 2023). The adoption of this organization provided high school athletic coaches with specific guidelines. According to the MSHSAA handbook (2023), “any athletic coach must meet the requirements for the applicable level of coaching that is intended, be contracted by the school for the role, and must be approved by the MSHSAA office” prior to assuming the coaching role. These specifications continue to guide high school athletic coaches across Missouri today.

In addition to the role of high school athletic coaches, as outlined in the MSHSAA handbook, coaches have also been identified as stakeholders that interact with and develop relationships with youth athletes. Additionally, a coach’s behavioral approach to working with youth athletes can affect a child’s sports experience (Blom et

al., 2013). Due to these expectations, coaches are tasked with taking a multidisciplinary approach to coaching effectiveness (Bush et al., 2013). Since the coach is regarded as the most influential person in the athlete's sports experience (Hodge et al., 2014), it is necessary for the coach to understand their leadership style in relation to how they interact with the athletes they serve. The relationship between athletes and coaches is at the heart of successful coaching (Asci et al., 2016); therefore, it is necessary for coaches to understand and be accountable for their coaching style and the impact the coaches' style has on the performance of their athletes (Cruz, 2022).

### **Coaching Models**

Coaching models or styles define how coaches conduct themselves while training, instructing, or advising their athletes (Mageau and Vallerand, 2003). According to Ohio University (2018), a team's success is measured by their season record; however, successful coaches understand that forming strong coach-athlete relationships through their coaching model is just as important as achieving wins. In addition to taking the authoritative role over a team or group of athletes, teaching technical skills, and attempting to lead their athletes to victory; coaches have the responsibility of motivating athletes, supporting them, and enabling them to fulfill their fullest potential (Hyun et al., 2016). This requires coaches to identify their specific coaching and leadership style which tends to exhibit its own specific behaviors and characteristics, resulting in different impacts on the athletes with whom they are associated (Marcone, 2017).

There are four popular designs that guide individual coaching styles: democratic, autocratic, laissez-faire, and holistic (Maryville University, 2021). The coach must identify the most suitable style for their team, considering the players' skills and

personalities. Coaches can adjust their leadership style to match the individual needs of their athletes and most of the team. The experiences that both the coaches and the athletes have are solely dependent on one another; furthermore, the communication and style put forth by the coach has high potential in creating and shaping their athlete's experience (Stebbing et al., 2011).

Different coaching styles can help teams reach their goals and perform well; therefore, coaches are tasked with combining different approaches to find which coaching styles correlate with athletes' psychological characteristics and behaviors (Horn et al., 2011). Ensuring this correlation leads to trust between the coach and athlete due to the athlete's sense of comfort around the coach. Once that foundation is built, the more likely your athletes will want to "go to war" for you (Vidic & Burton, 2010). Ultimately, coaches are tasked with identifying their coaching model and aligning it with athletes' needs whether it be through democratic, autocratic, laissez-faire, or holistic coaching.

### ***Democratic Coaching***

Democratic coaching, a style of coaching that puts agency into the hands of players and values sportsmanship, can lead to a healthy team culture where decisions are made together by coaches and athletes (Sharma & Singh, 2013). Mike Krzyzewski, the 12-time national coach of the year and former head of Duke University's men's basketball team, was an example of this style. His approach included allowing players to voice their thoughts, learn from failure, and encourage creativity. Krzyzewski went on to apply his democratic coaching methods with professional athletes leading United States Olympic teams to win multiple National Collegiate Athletic Association titles, an Olympic Gold Medal, and the World Basketball Championship. Krzyzewski attributed these successes



to his leadership skills which translate beyond the basketball court (Sitkin & Hackman, 2011).

Democratic coaching can be an effective way to manage a team since it allows athletes input in the direction of the team and encourages them to reach their goals. Under democratic leadership styles, athletes have more power to decide how they train and compete (Cruz & Kim, 2017). However, coaches must be mindful of not favoring the suggestions and opinions of certain athletes to maintain ultimate control over the team (Javens, 2019). This can ensure that the players will trust the coach and continue to share ideas that could improve the team's performance. This athlete-centered approach represents a shift away from the traditional view of coaching, which pegs the coach as the central figure in the partnership (Moen & Federici, 2014).

When done correctly, the democratic style of coaching creates a balanced relationship between the coach and the athletes, where both sides are respected, and all parties are given the appropriate amount of trust (Sharma & Singh, 2013). Not only does Democratic coaching directly and positively impact the quality of relationships between coaches and athletes, but it also allows coaches to build trust and a sense of respect with their athletes (Gao et al., 2021). Ultimately, a democratic coach has the final decision-making authority, but players have a responsibility to find a way that works best for them.

### ***Autocratic Coaching***

An autocratic style consists of the coach being the only individual who makes the decisions (Paddock, 2018). The autocratic approach relies heavily on micromanagement and a single leader who makes all decisions. For certain situations, an autocratic coaching

style may be the most effective. However, it can be problematic if coaches become too controlling. Since coaches assume complete authority, there is little space for team input or creativity. Autocratic coaching seems to contradict the teamwork, group input, and shared decision-making emphasis that exists in many modern work environments (Travis, 2018). According to the University of Kansas Sport Management Blog (2022), the autocratic style of coaching necessitates those coaches possess more expertise and experience than their players.

Autocratic coaching can be effective for meeting certain objectives, as the coach can provide direction, set up routines, and implement deadlines. This eliminates any ambiguity within the team, allowing individual athletes to concentrate on their tasks without having to make complex decisions. For the right athlete, the certainty of an assigned role and instructions on how to complete the role can lead to improved performance (Martin et al., 1999). When successful, this style of coaching builds a sense of trust in the coach, as the team can see that the goals they set can be achieved and repeated.

A coach who exemplified the autocratic coaching style is the Hall of Fame National Football League, Coach Vince Lombardi (Jenkins, 2005). Lombardi held to the conviction that success necessitated disciplined learning, perseverance, and dedication; his methods and approaches were the surest way to achieve victory. Lombardi set the tone for his team. He was in charge, demanding a commitment to hard work, teaching sound football, and instilling a philosophy of excellence and achievement in his players and staff which resulted in the validation of Lombardi's leadership style (Ellis, 2017).

Another example of a coach who executed the autocratic coaching style was Pat Summitt, a historical women's college basketball coach. Summitt was a firm believer in the power of a strict coaching style. Her refusal to let her team use the locker room for a month due to subpar performance was a testament to this coaching style. As head coach of the Tennessee Lady Volunteers for 38 years, her ambitious standards and relentless pushing of her players proved to be a winning formula. She never had a losing season, led the team to an NCAA record of 1,098 wins, won eight national championships, coached the 1984 U.S. women's national basketball team to a gold medal, and was a seven-time NCAA coach of the year (Associated Press, 2016).

Despite examples of success using an autocratic coaching style, if left unchecked, autocratic coaching can have an adverse effect, causing players to feel that their coach is domineering and oppressive, thus breeding discontent and sapping motivation when expectations are felt to be too taxing (Javens, 2019). Additionally, when players sense that their opinions are disregarded, their enthusiasm can falter, and the team will miss the potential benefits of innovative ideas. Though this approach can be effective in certain scenarios, autocratic coaching often overlooks the expertise and creativity of individuals, damaging team morale in its pursuit of following a rigid plan. However, in the right circumstances, the autocratic style can be the deciding factor between a defeated and triumphant team (Martin et al., 1999).

### ***Laissez-Faire Coaching***

Laissez-faire is another leadership style that is passive compared to authoritative leadership, which has been noted as more active and assertive (Eagly et al., 2003). Laissez-faire coaching is a less hands-on approach than other methods and is based on

trust and allowing athletes personal agency. The coach serves more as a consultant or adviser and is available to offer advice if necessary. This approach relies on athletes being self-motivated and responsible, so if they are not, it can be unsuccessful (Chaudhry & Javed, 2012). Coaches must have faith in their athletes' skills and discipline to make it work.

The laissez-faire style is at the extreme end of the democratic-style spectrum (Eagly et al., 2003). Laissez-faire leaders and coaches delegate decision-making powers creating favorable learning opportunities for followers (Ahmed Iqbal et al., 2021). The freedom to act without consulting a coach allows for immediate decisions based on intuition. Additionally, when athletes recognize their responsibility to succeed, it can lead to creative solutions and implementation of innovative strategies (Chaudhry & Javed, 2012).

A laissez-faire coaching style has been viewed as a high-risk approach, but when used wisely it can be effective (Carless, 2004). Players who demonstrate strong personal agency often excel in this environment, as this allows them to take ownership of their development. However, for athletes with less autonomy, this style can lead to low accountability, uninvolved behavior, and a lack of clearly defined roles, according to the Kansas University Sport Management Blog (2022). Coaches must be able to identify when it is appropriate to use this style and when it is not, as failure to adjust can result in a team that lacks focus and discipline.

College Football Hall of Fame Head Coach Lou Holtz emphasized principles over winning, thus demonstrating an example of laissez-faire coaching (Klinker, 2020). According to Holtz, not every person can reach the top of their field, but everyone can

become the best person they're capable of being. Additionally, Klinker (2020), detailed how Holtz believed each person has talents and abilities gifted to them by God, and there is an obligation to use those gifts to glorify God. Holtz firmly abides by three adages: do what's moral, do your utmost, and demonstrate that you care for people. Because of his devotion to personal responsibility, Holtz's laissez-faire coaching style prompted him to expect that all his college players, from redshirt freshmen to senior quarterbacks, should behave as mature leaders.

### ***Holistic Coaching***

Bogart (2015) stated that holistic coaching is a coaching style that includes aspects beyond the athlete's physical and mental states such as their emotional and spiritual states. Holistic coaching involves looking at the bigger picture of an athlete's life, not just their performance as a player. Holistic coaching recognizes the importance of personal growth in addition to optimal athletic performance and is focused on improving the lives of players through mentoring. The blending of mentoring and coaching roles represents a more holistic shift based on building upon individual strengths and self-efficacy (Rath & Conchie, 2008)

The holistic model is supported by the theoretical frames and research that address strengths-based leadership (Clifton & Harter, 2003; Rath & Conchie 2008), emotional intelligence (Neale et al., 2011), and courageous conversations and communication (Bloom et al., 2005). The main goal of holistic mentoring and coaching is to encourage the mentee's personal growth, focusing on enhancing their leadership strengths, emotional intelligence, communication skills, and team engagement.

The key to holistic vision is the dedication to developing the whole person. Holistic coaching aims to point out the importance of experiences being valued and connected with others (Koegel, 2003). A holistic approach to coaching also encourages players to discover themselves and their motivations, furthering their confidence and energy. The holistic coach is caring, supporting, holds knowledge of the sport, and takes into consideration the teams will when making the decisions. (Parker et al., 2012). This can have a positive impact on the entire team, as their teammates will be more inspired and motivated as well.

Holism in sports means the coach considers the full picture of an athlete and their lives. It is vital for the coach to recognize how stress affects an athlete, what motivates the athlete, understanding their values, and what wellness means for them (Törmälehto, 2018). A coach who wishes to employ a holistic approach to leading a team must first model the values and morals they want to impart to their athletes. The goal of holistic coaching is to build an atmosphere that encourages constructive practices in human growth (Mallett & Rynne, 2010). The outcome of this type of coaching may not be visible until much later in an athlete's career, even after they have moved on to a different team or coach.

National Football League Hall of Fame coach Tony Dungy embraced the holistic approach to coaching as he climbed the ranks from player to assistant coach to head coach. As a coach, Dungy went on to record 10 consecutive playoff teams and become the first African-American head coach to win the Super Bowl with the Indianapolis Colts. According to his autobiography, Tony Dungy's belief was simple; to optimize outcomes, you must build trust-based teams and intrinsic habits of excellence (Dungy & Whitaker,

2010). Dungy believed that trust and teamwork are fundamental in delivering change. Due to Dungy's holistic coaching philosophy, he impacted players beyond the field, leading to legacy stories stretching well beyond his own.

Warrick Dunn, who played for Dungy from 1997-2001, began a Homes for the Holidays program which helped 150 economically disadvantaged single parents and families achieve first-time home ownership (Lee, 2023). According to Dunn, Coach Dungy believed professional athletes had a responsibility to play hard and win but also to care about your community. Dunn recalled how Dungy inspired him to figure out his passion and make it part of who he was (Lee, 2023). Robert Blount, president of Abe Brown Ministries is another example of utilizing Dungy's impact to execute a legacy of holistic leadership. Blount (2023) modeled Dungy's focus on community by creating Abe Brown Ministries to break cycles of incarceration. Blount accomplished this by helping to renew the minds of incarcerated and formerly incarcerated citizens, motivating them to change their behaviors and achieve purposeful lives. According to Blount (2023), Tony Dungy is in the NFL Hall of Fame, but he could go in the Hall of Fame of life. Blount concluded that Tony Dungy is a virtuous man.

### ***3D Coaching***

The 3D Coaching framework was developed by Dr. Jeff Duke of the 3DInstitute (Duke, 2014). The 3D framework has been noted for empowering coaches to fulfill their transformational purpose. According to Duke (2014), sports are a great vehicle by which life skills can be taught and 3D Coaching focuses on more than just physical skills and game fundamentals. The 3D model looks at a player's state of mind, spiritual wellbeing, motivation, and values. Utilizing the 3D framework enables coaches to be intentional

about becoming fundamentally sound, provides coaches with appropriate skills to coach the mind, and focuses on developing the heart. (Duke, 2014).

Coaching requires practitioners to make decisions based on many dynamic situational factors (Jones et al., 2003). 3D Coaching goes beyond the cognitive activity and prompts coaches to pay attention to more than the physical skillset and fundamentals of the game. According to Duke (2014), 3D Coaching incorporates the body, mind, and spirit, inviting an exploration of specific skills and the personal goals that each team member has for being on the team. Furthermore, this method focuses on discovering and understanding the values and motivations that drive individual athletes.

Managers and coaches often use a combination of different leadership styles to create unique styles of their own, however 3D Coaching identifies as a holistic or transformational style of coaching and leadership. Transformational coaching is focused on the person. This coaching style communicates, the idea that coaches have a purpose to help athletes grow beyond the sport and as a whole person (Duke, 2014). A transformational coach is one who uses the coaching platform to impart life-changing lessons that can transform an athlete's life for good.

According to Givens (2008), transformational leadership theory was developed in 1978 by James Burns in his analysis of political leaders. Burns described transformational leadership as a process in which leaders and followers collaborate, encouraging each other to reach higher levels of motivation and morality. Burns' research was rooted in Maslow's theory of hierarchal needs, which suggested that people must first meet lower-level needs before striving for higher level needs. Bass (1985) built upon Burns' leadership theory, explaining that a leader should be someone who motivates



others to do more than they had initially planned. Bass proposed that this could be done by increasing the understanding and awareness of the desired result. Bass further suggested that leaders should inspire their followers to put group interests before the individuals' self-interests.

The major premise of transformational leadership is the leader's ability to motivate the follower to accomplish more than what the follower originally planned to accomplish (Krishnan, 2005). Transformational leadership is intended to give coaches insights into why individuals are on the team and define their ambitions. This leadership style has been recognized by researchers as a positive youth development that may not be facilitated by mere participation. Proponents of transformational leadership have asserted that sport programs should be intentionally structured to enhance overall athlete development (Bean & Forneris, 2016).

Transformational leadership has been connected to holistic coaching due to both theories being comprised of characteristics that produce outcomes in student athletes that reach beyond sports and make them better people and citizens (Flanagan, n.d.). Flanagan proposed that transformational and holistic coaching styles not only improve athletes' play on the field but cause athletes to feel more respected and create learned life skills for the future. When relating 3D Coaching to holistic and transformational approaches, Duke (2014) asserted that to use the 3D framework effectively, a coach must have a clear understanding of their transformational purpose. A growing recognition exists that effective coaching is not only about developing better athletes, but also about developing better people. To achieve this important goal, behavioral frameworks are needed to help

coaches foster high-quality interpersonal relationships through their interactions with athletes (Turnnidge & Côté, 2020).

Embedded within the 3D Coaching model is a pyramid consisting of three tiers. The first tier, also referred to as the 1st dimension, is focused on the physical body, where coaches are primarily acquainted with game fundamentals. This dimension consists of characteristics like strength, speed, technique, power, quickness, and cardiovascular endurance, and are accomplished primarily through repetition. According to Duke's Doctoral research, approximately 75% - 85% of coaches are 1<sup>st</sup> Dimension coaches (Duke, 2014). In other words, for most coaches, the primary focus of what is coached or taught with intentionality is physical body fundamentals.

The second tier, also referred to as the second dimension, moves beyond a concentration on the first level characteristics and transitions to a focus on the body and mind (Duke, 2014). The second dimension builds upon the first dimension by including all the first level's characteristics along with additional factors that promote a meaningful impact on athletes. These additional characteristics include a player's inclinations, sentiments, and self-belief. Moreover, this tier accentuates the significance of developing team loyalty and cohesion.

In the third and final tier or dimension, coaches combine the first two levels and advance by delving into an athlete's values, self-worth, identity, character, and significance. This third level of coaching is designed to help athletes reach a higher level and to foster personal growth and betterment. Ultimately, this is where all coaches should strive to be (Duke, 2014). According to Duke, (2014), when you understand and implement the process of coaching in all three dimensions, you have a key to unlock

hidden treasures and an environment is created where all have a chance to thrive, where risks are taken in a secure environment, and where success is measured in growth rather than merely results. Furthermore, the potential impact for the hundreds and thousands of athletes who are being led by a 3D coach is immense (Duke, 2014).

An example of an athletic coach who mirrors the characteristics of a 3D coach was John Wooden. Wooden was the first person inducted into the National Basketball Hall of Fame as a player and coach. His teams won 10 National Championships. Wooden sought to systematically improve his basketball teaching over three decades and encompassed the ideals of holistic coaching in his Pyramid of Success model (Ermeling, 2012). According to Wooden, to achieve what he called the peace of mind of “true success” depended on three conditions: the individual athlete having a reasonably objective assessment of personal capabilities, setting moderately difficult but achievable goals in performance context, and maximizing subsequent effort (Gallimore, 2014).

Components of Wooden’s Pyramid of Success parallel the 3D coaching model. For example, Wooden’s Pyramid of Success reflects four essential dimensions of athlete development: competence, confidence, connection, and character (Côté & Gilbert, 2009). While the 3D coaching model only reflects three rather than four dimensions, both models begin with competence themed characteristics and conclude with character-based attributes. According to Wooden, each tier in the Pyramid of Success is foundational to the next (Wooden & Carty, 2015). Similarly, Duke (2014), asserted that each dimension in the 3D Coaching model builds upon the next to impart life -changing lessons that can transform an athlete’s life for good.

## **The History of Positive and Negative Coaching on Athletes**

Researchers have suggested that coaches can and do influence moral characteristics such as honesty, integrity, respect for others, and fair play, both positively and negatively (Lupori, 2015). The bond between coach and athlete is a core part of sport and it entails the duties of both sides involved. Extended periods of time together can lead to interpersonal connections but may also cause problems and difficulties (Heird & Steinfeld, 2013), thus coaches can influence athletes' physical and psychological development, either favorably or adversely (Maitland, 2012). Sports coaches can shape an athlete's learning and performance which is why the efficacy of coaches is an important point of discussion when studying athlete development (Côté & Gilbert, 2009).

The effects of the relationships between coaches and athletes are widely acknowledged to be an essential factor in both desirable and undesirable outcomes in sports (Choi et al., 2013; Jowett, 2003). According to Rhind, et al, (2012), this athlete-coach relationship is at the very heart of coaching and coaches who fail to acknowledge the importance of this risk not developing their athletes to their full potential. Relationships between athletes and coaches that are successful have revealed a beneficial effect on the mental and physical health and contentment of the athlete; however, not all these connections are healthy, and sometimes they involve unequal power struggles, dishonesty, mistreatment, and exploitation (Sandström et al., 2016).

While every coach is unique in terms of personality, expertise, qualifications, capacity to communicate, approach to motivation, and leadership style (Baldrige, 2019), there is contrast in coaches' abilities to motivate and influence each athlete being

coached. Additionally, the expectations that coaches set, the biases they hold, and the feedback that coaches give can also determine, accelerate, or completely derail the trajectory of entire athletic careers (Loy, 2019). Exploring the effects of positive and negative coaching can provide a foundation for understanding how the various coaching styles either support or neglect the psychological needs of an athlete.

### ***Positive Coaching Experiences***

The coach-athlete relationship is a critical component in the life of athletes that influences their sport performance and their physical and psychological development (Jowett & Cockerill, 2003). Studies have indicated that athletes' perceptions of positive and effective coaching have more to do with a coach's behavior toward athletes than it does with a win-loss record. Horn (2008) supported this theory by stating that in sport coaching, a coach's win rate or the increases in positive psychosocial outcomes amongst athletes are often considered when evaluating a coach's effectiveness through research. Becker (2009) concluded that the efficacy of a coach's behavior is contingent on athletes building a relationship with their coach and understanding the coach's leadership philosophy.

The primary vehicle for cultivating positive coach-athlete partnerships is effective communication (Ayer, 2015). Understanding individual athletes' needs is critical for coaches. For instance, some players want feedback that reduces their anxiety, while others will thrive on information that drives performance (Loy, 2019). According to Gilbert (2017), communication is an effective coaching strategy for building and maintaining coach-athlete relationships. According to Yust (2008), when the coach nurtures a positive coach-athlete relationship, it allows for effective and efficient

communication to take place. Additionally, Yust (2008) described effective and efficient communication as a central part of the most successful individual and team performances.

In addition to communication, cooperative relationships with leaders and teammates in sports situations have a positive effect on team performance (Jung et al., 2019), and a disagreement among team members can have a negative impact on both individual and team performance. Coaches are responsible for creating a positive environment for their athletes. Athletes who have a sense of loyalty and mutual understanding with their coach are inclined to be less anxious about failing, which can consequently lead to improved athletic skill, contentment, and overall well-being. (Sagar & Jowett, 2015). Furthermore, these characteristics lead to the development of a strong work ethic, creativity, self-esteem, confidence, and more (Chen et al., 2010).

The training of youth sports coaches has been shown to result in attributes such as increased time, developmental outcomes such as self-esteem, and improved personal and social skills (Coatsworth & Conroy, 2009). Additionally, organized sports participation can provide physical, psychological, and social benefits, therefore; meeting a need for inclusion and delivering physical activity (Eime et al., 2013). Research shows that many athletes use physical training as a positive motivation to manage difficult situations (Stevens et al., 2012). In response to this, both sport organizations and parents have placed a greater emphasis on the importance of coaches providing mental health support for athletes (Mazzer & Rickwood, 2014). Overall, positive coaching experiences lead to increased physical, mental, and social benefits for athletes.

### *Negative Coaching Experiences*

A negative relationship between coaches and athletes has been known to create dissatisfaction such as conflicts, poor communication, and lacking empathy from coaches, which can result in athlete burnout (Gustafsson et al., 2008). Athlete burnout can be combated with the strength of the athlete-coach relationship which can help the athlete get through this type of setback (Coykendall, 2014). According to Coykendall (2014), the inability of a coach to recognize or address burnout can lead to injury, failure to qualify for a major competition, and permanent withdrawal from the team. Attributes of negative coaching can also be associated with outcomes such as instilling a lack of confidence, dissatisfaction, poor performance, and withdrawal from sport (Maitland, 2012).

According to Biggin et. al (2017), coaches are critical to setting the organizational climate, and in turn, impact the level of stress experienced by their players. If mental skills are not taught and employed, physical improvement will eventually plateau and/or drop off (Caramanico 2011). Aside from physiological aspects capable of adversely influencing performance, there are many psychological components that can cause similar disruptive effects on athletes, like nervousness, distractedness, and low self-confidence. In fact, negative coaching behaviors can impede the development of relationship building skills in athletes including ineffective communication, lack of encouragement, and a negative outlook (Nicolas et al., 2011).

Several athletes struggle to find their identity outside of athletics, which is dangerous because it allows the athlete to gauge their self-worth based on their performance or playing time (Ford Health Staff, 2021). In response to this, coaches have

an obligation to address athlete self-efficacy. Coaches who neglect to address this obligation cause athletes to avoid difficult tasks, have low commitment, and are slow to come back from setbacks or failure (Holt, 2013). Considering motivation, self-efficacy, and fear of failure are all influenced by interpersonal relationships (Holt, 2013), the relationship between the coach and athlete plays a direct role in these factors.

Furthermore, a negative athlete-coach relationship can lead to athletes experiencing adverse cognitive and affective states, as well as dysfunctional behavioral patterns both on and off the field (Shipherd et al, 2018).

Recognizing the correlation between the athlete-coach relationship and the determinant of athletes' satisfaction, motivation and improved performance (Mageau & Vallerand, 2003), the burden is placed on coaches to undergo appropriate training to counteract the negative coaching behaviors that result in unfavorable outcomes. Due to a lack of training in addressing mental health issues in athletes, many coaches are concerned they may unintentionally engage in behaviors that negatively affect the mental well-being of their athletes (Mazzer & Rickwood., 2014). According to Stirling (2013), coaches who admitted to displaying abusive coaching practices said it was due to the practices being so typical in their sport. This behavior was attributed to witnessing others coach in the same manner, not receiving sufficient training, or because athletes tolerated these behaviors.

Regardless of the reason for negative coaching behaviors, coaches are responsible for not only participating in training to counteract and prevent these practices, but they are also responsible for implementing the training with fidelity. According to Falcão et al. (2012), being better prepared to promote life skills through sport, gaining a better



understanding of their players, and improving relationships with fellow coaches are all benefits of counteracting negative coaching behaviors. Furthermore, more effective coaches tend to use positive, supportive, and specific strategies while less effective coaches tend to use negative, harsh, and demeaning strategies (Flett et al., 2013). At the end of the day, despite which leadership style a coach employs, it can be assumed that being an effective coach is a desirable outcome, therefore the need for additional research to combat these issues is both timely and necessary.

### **Summary**

Chapter 2 provided a review of literature, exploring the history of coaching over time. Various coaching models were presented with a focus on four specific models that were identified as the most common coaching styles. In addition to outlining established coaching models, an overview of 3D Coaching was presented followed by a presentation of positive and negative coaching outcomes. The review of literature established the groundwork for subsequent studies and provided justification for the research questions in terms of coaches' perceptions of the impact of 3D Coaching on their coaching style and on athletes' performance and behavior.

## **Chapter 3**

### **Methods**

The first purpose guiding this qualitative study was to evaluate high school coaches' perceptions of how their coaching style shifted, if at all, after receiving a year of training in 3D Coaching. The second purpose of this study was to understand coaches' perceptions about changes in athletes' behavior and performance within a year of implementing 3D Coaching. This chapter includes the research design, setting, sampling procedures, instruments, data collection procedures, data analysis and synthesis, reliability and trustworthiness, the researcher's role, and limitations.

#### **Research Design**

A qualitative phenomenological research design was chosen for this study. Those who engage in this form of inquiry support a way of looking at research that honors an inductive style, a focus on individual meaning, and the importance of rendering the complexity of a situation (Creswell & Creswell, 2018). This research encompasses the opinions and results of a program that has never been researched. Phenomenological studies seek to not only discover the participants' perspectives but to focus on the "consciousness of the human experience" (McMillan & Schumacher, 2010, p. 346).

Additionally, phenomenological inquiry employs methods and processes for data collection that focus on revealing the meaning of an event and understanding the lived experience of the participants through personal in-depth interviews (McMillan & Schumacher, 2010; Patton, 2015). The perceptions of coaches obtained through this study will impact the evaluation and continuation of the 3D Coaching model in the P413

School District, and will serve as valuable information for school districts considering the implementation of the 3D Coaching model.

The use of qualitative interviewing as a naturalistic approach to research allows the researcher an opportunity to view issues through the lens of others who have first-hand experience with the research topic, according to Rubin and Rubin (2012). Utilizing the interview process provided an opportunity to secure participants' perceptions of how 3D Coaching affected their coaching style and the impact 3D coaching had on athletes' behavior. Furthermore, the interview process provided the ability to gain a deeper understanding of the participants' experiences with 3D Coaching through direct interaction, observation, and clarification of participant responses.

### **Setting**

The setting for this study was a high school in rural Missouri referred to in this study as the P413 School District. This district was selected due to its implementation of 3D Coaching at the high school level. The P413 high school houses approximately 1,500 students in grades 9-12. There are about 80 coaches serving students in the P413 School District at the high school level. Of these 80 coaches, approximately 20 of them have received complete training in 3D Coaching.

### **Sampling Procedures**

The focus of this study involved coaches in rural Missouri, specifically seeking input from those involved in secondary high school education. Purposeful, criterion sampling was employed to select participants, as recommended by Rubin and Rubin (2012), who stressed the importance of choosing knowledgeable and experienced individuals to bolster the research's credibility. Criterion sampling, as opposed to random

sampling, was utilized to ensure that all participants had experienced the study's phenomena in similar ways, based on specific criteria (Bloomberg & Volpe, 2016; Lunenburg & Irby, 2008). The following criteria were used to identify potential participants:

1. Participants must have completed a minimum of one year of training in 3D Coaching.
2. Participants must currently be implementing 3D Coaching at the time of the study.

### **Instruments**

Interviewing is often described as an effort to gain insight into the world through the perspective of another individual, resulting in a deeper comprehension of their lived experiences and the meaning associated with them, as noted by Creswell and Poth (2018). In this study, the researcher used interviews as the primary tool for collecting data about the experiences of coaches who have applied 3D Coaching in their practice. The researcher developed open-ended questions addressing the 3D Coaching framework and coaches' perceptions of its impact on students. The open-ended questioning was conducted in a semi-structured format, which allowed the interviewers to reword and ask additional or probing questions (Patton, 2015).

The interview questions closely aligned with the research inquiries of the study, outlined as follows:

### ***RQ1***

What are high school coaches' perceptions of how their coaching style shifted, if any, after completing a year of training in 3D Coaching?

**RQ2**

What are coaches' perceptions about changes in athletes' behavior and performance within a year of implementing 3D Coaching?

Subsequently, these formulated interview questions were subjected to a peer review process. Appendix E contains a comprehensive list of the study's interview questions and their respective alignment with the research questions of the study.

**Data Collection Procedures**

Before commencing the study, the researcher formally submitted a request to the Baker University Institutional Review Board (IRB) seeking approval for the proposed research. The researcher detailed the purpose, methodology, and participant selection for the study in the request to conduct research application (see Appendix A). The Baker University IRB committee approved the research application and granted permission to conduct the study on October 17, 2023. The researcher requested permission from the P413 School District via email communication with the district's athletic director (see Appendix B), and permission was granted on October 4, 2023.

Following the receipt of approval to initiate the study, the researcher initiated the process of identifying and reaching out to potential participants through email solicitation guided by the district's athletic director, as detailed in Appendix B. Before proceeding with the interviews, the researcher electronically distributed an informed consent form to each participant via email, requesting their signature and return. This consent form detailed the study's objectives, the interview's structure and format, sought permission for recording the interview, affirmed the voluntary nature of participation, and clarified that participants had the option to abstain from answering questions or withdraw from the

study at any time (see Appendix C). The researcher obtained a signed consent form from each participant and digitally stored them in an electronic file.

Once the researcher contacted each participant and secured their consent, individual interviews were done utilizing the Participant Interview Questionnaire (see Appendix E). Study participants were provided a visual model outlining the 3D Coaching model (see Appendix D). Additional follow-up interviews were conducted when necessary to enhance responses' clarity. During these interviews, participants were given the opportunity to share their experiences related to 3D Coaching. The recorded interviews were carefully examined and transcribed to ensure precision. Subsequently, each participant kept a copy of their respective interview responses. A process known as member checking was used by the researcher to confirm that the transcriptions faithfully represented the participants' intended messages. Both the transcript files and the interview recordings were electronically stored in a digital archive, making them readily accessible for reference during the analysis and synthesis phase of the study.

### **Data Analysis and Synthesis**

According to Creswell and Creswell's (2018) guidelines, the qualitative data analysis process involves a sequential series of steps. The first step involves the organization and preparation of the data for analysis, which encompasses tasks such as transcribing interviews, reviewing the material, taking notes, and categorizing the data. Outlining step two, Creswell and Creswell (2018) suggest thoroughly reading or examining all the collected data. This allows the researcher to grasp the overall concepts expressed by the interviewees, establish an overarching impression, and visually identify recurring ideas and patterns.

Step three requires the initial coding of the data, where the researcher breaks down the information into manageable sections and groups it into categories. In step four, the researcher is tasked with creating descriptions and identifying common themes, facilitating the development of similar themes or descriptions. Finally, in step five, the researcher identifies various descriptions and themes, including specific codes, anticipated codes, surprising codes, or unconventional codes (Creswell & Creswell, 2018).

During the first stage of this process, the researcher conducted a thorough transcription of the recordings, ensuring the retention of all pertinent details, such as significant mannerisms, pauses, inflections, and other relevant non-verbal cues, as outlined in the open coding approach by Bloomberg & Volpe (2019). To bolster accuracy and maintain quality standards, a validation technique referred to as member checking was applied.

The next stages entailed the examination and coding of data to uncover meaningful patterns of ideas. Following the guidance of Bloomberg and Volpe (2019), the researcher carefully reviewed interview transcripts, diligently noting significant and recurring ideas, some of which might only reveal their significance later in the data analysis process. The researcher engaged in close reading and annotation of the interview transcripts, focusing on emerging ideas that recurred across multiple interviews. These emerging ideas were then refined into concise codes, serving to connect common themes within participants' thoughts and to emphasize essential aspects of the data.

These condensed codes played a pivotal role in the following phase of the process: the development of emerging themes. As described by Creswell and Creswell

(2018), this stage involved utilizing the established codes to construct themes that encapsulated the key findings within participants' responses. In this study, the researcher harnessed the codes derived from the interview transcripts to discern thematic links among the participants' responses.

The final step of the process centered on articulating the emergent themes. These representations could take various forms, such as narrative passages, visual representations, figures, or tables, as per Creswell and Creswell's (2018) guidelines. In the context of this study, the researcher established connections through the emergent themes and composed a comprehensive analysis of the study's findings. This analysis underscored the commonalities observed in the lived experiences of the participants as they implemented 3D Coaching with their high school athletes.

### **Reliability and Trustworthiness**

In qualitative research, ensuring the trustworthiness and reliability of the study's methods is a fundamental requirement, as highlighted by Creswell (2009). Creswell emphasizes that achieving reliability and trustworthiness is attainable through rigorous application of ethical standards in qualitative research. The researcher implemented several strategies to bolster the reliability and trustworthiness of the present study. To enhance credibility, an audit of the study's interview questions was conducted. These questions underwent peer review to ensure they aligned with the research inquiries and maintained unbiased and accurate language. Following the feedback received, minor adjustments were made to refine the interview questions.

Another measure to bolster credibility involved employing member-checking to collect feedback from the participants. Each participant was provided with their transcript



for review to ascertain that their responses accurately represented their intended thoughts. To address concerns related to transferability and dependability, a comprehensive description of the study's methodology was provided. In terms of confirmability, the researcher practiced reflexivity. As outlined by Creswell and Poth (2018), reflexivity entails the researcher disclosing their biases and viewpoints from the outset, which could potentially influence the study. This transparency ensures that readers understand the researcher's position and perspective as they embark on their inquiry.

### **Researcher's Role**

According to Creswell (2009), qualitative research necessitates the researcher act as an interpreter, discerning meaning from data acquired through interactions with research participants. In this specific study, the researcher actively engaged in the creation, facilitation, documentation, and analysis of responsive interviews with participants. Creswell (2009), also noted that the qualitative researcher should disclose personal elements that might influence the ultimate interpretation of the study, including biases, values, and background. It is crucial for the audience to recognize that the researcher involved in this study may harbor certain biases related to the topic due to their prior exposure to 3D Coaching. The researcher participated in 3D Coaching training as an administrator in a separate district. Additionally, the researcher attended various community workshops where 3D Coaching was introduced and implemented across multiple local organizations.

According to Creswell (2009), effective qualitative research includes remarks from the researchers regarding how their background shapes their interpretation of the findings. Currently, the researcher does not work directly with any coaches who have

received training in 3D Coaching. To prevent any pre-existing notions or biases arising from the researcher's previous exposure to 3D Coaching, the researcher deliberately selected a setting that was previously unknown to the researcher. During the research process, the researcher aimed to be an impartial observer, gaining insights into the phenomenon by adopting the perspective of each interviewee.

### **Limitations**

The constraints of a study can be characterized as variables beyond the researcher's influence, which could potentially affect the interpretation of the results (Bloomberg & Volpe, 2016; Lunenburg & Irby, 2008). Additionally, Lunenburg & Irby (2018) acknowledged that although it is not feasible for the researcher to eliminate all study limitations, it is crucial for the researcher to recognize potential limitations to prevent any misrepresentation of the study's findings. This study does not imply the full representation of all high schools who have implemented training for 3-Dimensional Coaching. In this qualitative phenomenological study employing interview methodology, it is conceivable that the participants' mood or mindset might have influenced their perceptions and responses during the interview on the interview date. The results may not generalize to all high school athletic coaches in school districts in Missouri, or to other parts of the United States.

### **Summary**

This chapter offered an explanation of the research methodology and design employed in this study. It has provided a comprehensive explanation of the data collection procedures and the protocols for obtaining study permissions. Furthermore, it has discussed the study's limitations to alert the reader to aspects beyond the researcher's

control. Chapter 4 encompasses the presentation of the data analysis results, while Chapter 5 delves into the interpretations of the data and offers recommendations for future research.

## **Chapter 4**

### **Results**

This qualitative study was driven by two primary objectives. The first objective was to gain a deeper insight into how the coaching style of high school athletic coaches evolved following a year of training in 3D Coaching. Additionally, the study explored coaches' perspectives on changes in athletes' behavior and performance within a year of implementing 3D Coaching principles. According to Duke (2014), the principles outlined in 3D Coaching are organized into three dimensions. The first dimension of 3D Coaching is defined as the fundamental tier, and includes strength, power, cardiovascular, speed, quickness, technique, repetition, and tactics. The second dimension of 3D Coaching is defined as the psychology tier, and includes motivation, confidence, emotions, team cohesion, and goal setting in relation to the 21st century athlete. Finally, the third dimension is defined as the heart and consists of attributes that shape the lives of athletes. These attributes include identity, character, self-worth, values, significance, and purpose.

Chapter 4 includes a summary of the demographic characteristics of study participants and the results of the data analysis of the transcripts from eight interviews. The interviews consist of feedback from high school athletic coaches who trained in 3D Coaching and implemented the content for at least one year. Following the demographic and participant backgrounds are the results of the qualitative data analysis which includes three prevalent themes identified from the interview responses. In conclusion, Chapter 4 explained coaches' perceptions of the overall impact 3D Coaching had on coaches and their athletes.

## **Demographics and Participant Background**

The researcher interviewed eight study participants in October 2023. Of the eight high school athletic coaches interviewed, each held multiple coaching roles throughout their career. For this study, coaches focused on their current roles with their implementation of 3D Coaching while answering the interview questions. The coaching roles associated with interview participants were basketball, baseball, cheerleading, football, softball, volleyball, and wrestling. Additionally, the years of coaching for interview participants ranged from five to 25 years. All eight coaches indicated they had no knowledge of 3D Coaching prior to their training.

## **Results of the Qualitative Data Analysis**

The following sections in this chapter provide an overview of key themes identified from the interview responses. The researcher employed the open coding approach outlined by Bloomberg & Volpe (2019). This method involved identifying key words, phrases, sentences, or paragraphs in participants' responses and assigning provisional, descriptive labels to categorize the excerpts. Using these initial labels, the researcher developed a spreadsheet to systematically organize the excerpts and establish their preliminary alignment with the study's research questions.

Employing this structured framework, the researcher transferred relevant passages from participants' responses to the corresponding rows associated with each label. Subsequently, a comprehensive review of the completed spreadsheet enabled the researcher to identify, and merge related or redundant labels, leading to overarching findings that emerged from the participants' responses. Data analysis revealed three common themes that emerged from this study:

1. Each participant described a detailed familiarity with the three dimensions encompassed within 3D Coaching, despite having no prior knowledge of 3D Coaching before their training.
2. High school athletes learned skills quicker and were more determined to execute the learned skills after the implementation of 3D Coaching.
3. The quality of coach-athlete relationships increased following the implementation of 3D Coaching.

These themes represented shared perspectives of the coaching encounters among the eight participants. The following sections present the participants' insights into how the themes identified in these findings influenced them while incorporating the components of the three dimensions in 3D Coaching.

***Finding 1: All Participants Exhibited a Detailed Familiarity With the Three Dimensions Encompassed Within 3D Coaching Despite Having No Prior Knowledge of 3D Coaching Before Their Training***

Finding 1 addresses the second interview question, “How would you describe the key elements of 3D Coaching?” Each of the eight interview participants identified and articulated how the three dimensions embedded in 3D Coaching were integrated into their coaching practices after training. According to responses to the preliminary interview questions, none of the eight participants had any prior knowledge of 3D Coaching before training. All eight participants outlined key terms associated with each dimension and were able to elaborate on their experience with these terms. Furthermore, all participants could go beyond articulating the components of 3D Coaching by connecting them to their specific coaching styles after their training.

**First Dimension Attributes Identified by Participants.** According to Duke (2014), the first dimension of 3D Coaching is referred to as the fundamental level of the sport and focuses on the body and the physical aspect of coaching. Study participants were able to provide detailed familiarity with first dimension components and connected these components to their coaching styles prior to and following their training in 3D Coaching. Participants noted a change in their approach to this dimension following their implementation of 3D Coaching. The overarching theme for this finding was physical skills.

Participant 1 recalled that “the first dimension focuses on the body and physical portion”, and described strength, speed, and endurance as key components of the first dimension. While these components played an influential part in the coaching decisions of Participant 1, this participant acknowledged that “prior to the training I was focused on the athlete’s strengths as just an athlete, if they couldn’t fit the required boxes for success, then they didn’t get as much time as those that could.” This approach resonated with Participant 6, who recalled a focus on “skill work, X’s and O’s, strength and conditioning, program rules and procedures, practice reps, program promotion and so on.” Participant 6 recognized that, “Prior to being a head coach, I didn’t realize how much impact we can have on our players off the court.” Although both participants acknowledged a focus on physical skills over approaching students from a holistic perspective, they both commented on their change in mindset following their implementation of 3D Coaching. Participants 1 and 6 acknowledged a purposeful effort to think beyond the fundamentals of the sport and extend their coaching focus to all aspects of supporting their players.

Participant 2 noted a focus on “the foundation of knowledge including the techniques, skills, and drills” when describing the first dimension of 3D Coaching. In addition to Participant 2’s focus on skills, this component resonated with several other participants in the study. Participant 3 described how “skills, techniques, drills, and a foundation of knowledge” defined the overall theme of the first dimension. Participant 4 and Participant 8 also detailed skills as a major component of their interpretation of the first dimension. Participant 4 described their focus on skills in the first dimension by saying, “Physical training and skills were the main strategies I associated with the sport prior to 3D Coaching.” Participant 8 shared how “physical training, conditioning, skills, and technique” guided practices and performance. Participant 8 detailed how “the physical training piece is what guided me as a coach. If my athletes could execute the skill, that was our main focus.” Like Participant 1, Participant 8 focused on these first-dimension skills as the driving force for opportunity and acknowledgment prior to their implementation of 3D Coaching, ultimately affecting which athletes were called to perform and which athletes sat on the sidelines.

Participant 7 related the skills found in the first dimension of 3D Coaching as “the building blocks of the physical aspect of the sport.” Participant 7 detailed the building blocks as “strength, speed, and technique” and described how these building blocks created “the basic knowledge of the game.” As Participant 7 described, each participant in this study acknowledged the physical aspect of the first dimension and referred to the fundamentals in this dimension as their guiding force prior to 3D Coaching. Participant 4 supported this by saying, “It’s what every coach does to prepare their athletes.” Additionally, the participants in this study noted a deeper understanding of how the first-



dimension components are an important foundational piece of coaching, however, they are designed to serve as a fragment of the overall implementation of 3D Coaching.

**Second Dimension Attributes Identified by Participants.** According to Duke (2014), the second dimension of 3D Coaching is referred to as the psychology level, which focuses on the intellectual aspect of coaching in addition to the physical components located in the first dimension. Several participants were able to quickly associate the second dimension with the mind by elaborating on how the mental aspect of coaching affects the approach to athletes. Teamwork and setting goals were also identified by participants as imperative components of the second dimension which is supported by their personal accounts of integrating these themes.

***The Mental Aspect of Coaching.*** Participant 1 described the second dimension as that of the “mind and mental aspect” which complemented Participant 5’s description of the second dimension as “the mental knowledge involved in executing the sport.” Participant 2 supported this narration by detailing the second dimension as “the mentality of the sport” including “mental toughness and confidence.” Participant 4 added to the focus on the mind by describing the second dimension as “the mental aspect of your sport” and detailed how the components in the second dimension create “an understanding during game situations of possibly strategies.” Additionally, Participant 4 noted, “Most coaches will coach focus on the coaching strategies found in the second dimension to some degree;” however, it does not necessarily “carry the significance it could when considering the importance of incorporating this into the second dimension.” Participant 6 expanded on the mental aspect of the second dimension by describing it as “the mental and psychological aspect of coaching.” Additionally, Participant 6

commented, “Utilizing this dimension determines how you build confidence in the player and team, ultimately building team culture.”

**Teamwork.** Participant 8 captured the team culture described by Participant 6 by sharing how the second dimension of 3D Coaching houses more influential attributes such as “teamwork, performance, and confidence.” Even though physical training was the foundation for Participant 8’s former practices prior to implementing 3D Coaching, the participant shared, “Although I knew teamwork was an important part of coaching, I wasn’t sure how to balance the mental and emotional piece until I could see how each dimension connected.” Participant 3 detailed teamwork as an essential component of the second dimension by describing, “This dimension is where you teach the athlete how to be part of a team regardless of their performance as an individual.” Furthermore, Participant 3 characterized the second dimension as “building an athlete’s mental game while holding them accountable for their actions.”

**Setting Goals.** Participant 6 elaborated on the accountability mentioned by Participant 3 by identifying goal setting as a second-dimension trait. Furthermore, Participant 6 noted how decision-making and athlete interactions were guided by rhetorically asking, “Are you setting goals?” and “Is your locker room strong with team building activities?” Adding to this, Participant 7 described goal setting and establishing the tone for athlete interactions by “considering emotion, motivation, and goal setting to drive why we do what we do.”

Finally, Participant 3 incorporated multiple aspects of the second dimension mentioned by other participants by detailing how “this dimension teaches the skills,

drills, and techniques in a way that each athlete understands and succeeds in.”

Additionally, Participant 3 acknowledged,

It is knowing that not all athletes train the same, or understand the same, so you make modifications as necessary. The second dimension is not just about teaching the skill, it's about encouragement to try the skill, building confidence in the skill, being held accountable for actions, setting goals, and building team spirit and cohesion.

As a result of implementing the principles found in the second dimension, participants were able to demonstrate their ability to think beyond the physical realm and incorporate the psychology component necessary for coaching athletes.

**Third Dimension Attributes Identified by Participants.** Duke (2014) described the third dimension as “a spiritual journey that leads to internal transformation” (p.72), and included character, identity, purpose, self-worth, significance, and value as the core components. The third dimension is the last dimension to be addressed during 3D Coaching training due to the emphasis put on establishing the first two dimensions before building upon them. While participants detailed connections with the first and second dimension, it was the testimonies from the third dimension that confirmed how coaches were able to see results in themselves and their athletes following their implementation of 3D Coaching.

*The Heart of the Athlete.* The word “heart” was specified by multiple participants when describing the third dimension. According to Participant 1, “The third dimension is the heart of the athlete which focuses more on who the athlete is rather than the type of player they are.” Participant 3 attributed the “heart focus” of the third dimension as “vital

to the success of the individual.” Participant 3 elaborated on this focus by describing how the third dimension “is caring not only about the athlete while in relation to the sport, but caring for them as a person outside of the sport.” Participant 3 continued,

It’s noticing when an athlete is struggling in and outside of the sport and letting them know they can always come to me as a listening ear, a shoulder to cry on, to give advice, and to be an advocate for them.

Participant 5 noted the “heart and spiritual involvement” of 3D Coaching, and described the factors within the third dimension as “not the traditional coach points of view, so it can be overlooked as soft if you are on the outside looking in.” Participant 5 implemented the heart and spiritual focus by “making sure my athletes are good off the mat before we tackle the actual physical and mental strategy of the sport.”

Participant 1 connected with Participant 8’s heart-focused approach by understanding the importance of the third dimension and “focusing on athletes’ all-around success” rather than what is accomplished physically. This all-around success approach also resonated with Participant 7 as they detailed their own experience as a student-athlete and recognized,

We only lived in the first dimension, so it was rare to see the other two dimensions incorporated into our interactions with our coach or teammates. Now as a coach, I have experienced the effect of utilizing all three dimensions to find success.

Participant 7 noted that “Significance and purpose are the components of the third dimension that become the forever connecting pieces.”

*Coaching the Whole Athlete.* Participant 6 elaborated on the theory of “forever connecting pieces” by detailing that although the third dimension was the hardest to quantify, it is “why we do what we do.” Participant 6 communicated the desire for athletes to be “good human beings first and foremost, which includes an athlete’s role as a student, citizen, son or daughter, and teammate.” Participant 8 connected with this holistic approach to coaching by describing the purpose of the third dimension as “character-building and impacting others beyond themselves.” Participant 3 emphasized this approach by identifying the most important aspects of the third dimension as “allowing athletes to feel valued, respected, encouraged, and supported.” Furthermore, Participant 7 concluded, “Building a foundation of relationships comes before the fundamentals in the first dimension in order to be successful.”

*Encouragement As a Driving Factor.* The third dimension was described by Participant 2 as “encouragement, work ethic, drive, determination, and selflessness.” Additionally, Participant 2 stated that

It is normal to have one or two dimensions you implement a lot, and perhaps one that you tend to not touch as often; however, the encouragement piece in the third dimension creates an intentional balance of all three.

Participant 3 also identified encouragement as a “critical factor” in the third dimension, as did Participant 5, who connected the level of coach encouragement to the “trust and work these kids put in for us.”

*The Spiritual Aspect.* Participant 4 specifically referred to the third dimension as the “spiritual dimension.” Participant 4 shared,

It's the missing link to making sports a great experience for your players. It connects your faith in something bigger than yourself to your experiences on the field. To me, it is how I can connect my faith as a Christian to my role as a coach. It is 100% relational. Building relationships was something that I always knew was important, but the 3D model really connected the dots for me of how I can forge those relationships and then use that influence to help my athletes be more successful and have a better experience.

**Finding One Summary.** According to participants, the first dimension of 3D Coaching created a foundation of physical skills to guide coaching practices. These skills entailed components such as strength, speed, endurance, repetition, and technique. While these components were found by participants to be essential to athlete success, the second and third dimensions were also detailed by participants as vital to athlete performance. Participants attributed the mental aspect of coaching in addition to teamwork and setting goals as crucial attributes of the second dimension. Together, these attributes allowed participants to envelope coaching fundamentals with psychology. Finally, the third dimension was identified by participants as the “heart” of 3D Coaching by focusing on the whole athlete, providing encouragement, and connecting to the spiritual aspect.

***Finding 2: High School Athletes Learned Skills More Quickly and Were More Determined to Execute the Learned Skills After the Implementation of 3D Coaching***

Finding 2 addresses the sixth and seventh interview questions, “What is your perception of athletes’ ability to learn skills quicker following your implementation of 3D Coaching?” and “What is your perception of athletes’ ability to work harder in their specific role as an athlete following your implementation of 3D Coaching?” While each

participating coach is responsible for implementing a foundation of skills pertaining to the sport they coach, there was a notable difference observed between the amount of time required for athletes to master skills prior to implementing 3D Coaching versus the timeline of skill mastery following the implementation of 3D Coaching. Additionally, coaches observed an increase in athletes' determination to apply the skills they learned.

**Taking a Positive Approach.** As athletes conquered the challenge of learning new techniques, Participant 1 found success in being purposeful about a positive approach to coaching. Understanding the need to motivate athletes in an impactful way, Participant 1 acknowledged "I realized I had to change the ways I was encouraging students so they wouldn't give up after the first few days of the season." Following 3D Coaches training, Participant 1 recognized the need to use "a more positive approach." Participant 1 continued, "It's allowing the athlete to feel valued and heard while getting them to understand that as a coach I would never put them in a position to fail." In correlation with this, Participant 1 shared,

This season we had one new swimmer who struggled with technique of the strokes. He always had negative things to say about his abilities. I encouraged him to not compare himself to others, and to slow down and take it one lap at a time. Without him realizing it, by listening and slowing down, he was able not only to achieve the skill, he also vastly improved his time in his races. The joy and excitement on his face when he achieved his goals was priceless.

Participant 3's approach aligned with Participant 1 as both adhered to seeking a positive approach with athletes in order to drive their determination to quickly garner new skills and implement them appropriately. Participant 3 observed,

Due to the time I took to build positive relationships with students, they trust that we care for them and want the best for them, so they tend to be really focused and they truly listen when we are instructing them.

Participant 3 added, “this allows them to pick up on new techniques and strategies quicker.”

**Being Intentional.** Participant 2 provided evidence of being intentionally focused as a coach when addressing athletes. The participant said, “I tried to be an intentional coach that was pouring into my athletes, not just in volleyball, but as a human, friend, daughter, and player.” Participant 2 placed an emphasis on taking these strategies to a higher level following the implementation of 3D Coaching by focusing on “a deeper level of intentionality” and aiming to be “more well-rounded and direct in my approach with student athletes.” Taking an intentional approach also resonated with Participant 1 when addressing athletes. Participant 1 recalled, “I noticed some of my motivational statements were received in a negative connotation.” This prompted Participant 1 to reflect, adjust, and become more intentional about communicating positively with athletes.

Participant 7 found that modeling intentionality for athletes resulted in athletes striving to perform unconditionally. This was detailed as Participant 7 reflected “athletes work harder for someone they know can guide them no matter what.” Additionally, Participant 7 integrated intentionality into coaching by seeking to embrace a growth mindset with students. Participant 7 noted, “Understanding the significance of diving into dimensions that focus on psychology and heart created a desire in me to ensure that students were also intentional about focusing on psychology and heart when learning new skills.” This resulted in athletes’ abilities to successfully recall and implement newly



learned skills. Furthermore, Participant 7 concluded “my athletes found success and failure were easy to manage when you truly embody the growth mindset.” Reflecting on a concrete example of intentional growth mindset, Participant 7 shared,

I had a baseball player who worked with another coach for about an hour on swing specific drills trying to bring his swing to a more powerful slot. The other coach became frustrated with the kid because they were not connecting and the time in the drills was lost due to frustration. I kept the kid after practice, and we talked about what goes through his mind every at bat and how he could utilize routine thinking to eliminate focusing on frustration. We adjusted the drill and with a few days of practice his swing improved.

Taking an intentional approach also became a priority for Participant 1, evidenced by the process taken to teach and model techniques for athletes on the swim team. Participant 1 shared, “My goal is to find a different approach during the off season to help the athletes overcome the negative mental challenges in hopes they have a successful season the following year.” Through intentionally prioritizing new approaches, Participant 1 observed an increase in athletes’ capability to learn new skills and demonstrate them “with confidence.”

Participant 2 also found intentionality to be a successful factor in athlete performance. Participant 2 shared,

If an athlete is taught with intentionality from all three dimensions, I think you will find how to motivate the kid. Every kid is different, but each dimension helps you find what makes them react, flip their switch, and motivates them.

Furthermore, Participant 2 concluded,

Athletes who feel like you love them and care about them off the court will respect you and work hard for you because they know when you push them to learn skills or are hard on them, they know it's because you care.

**Building Trust.** Building trust and clearly defined roles were characteristics that Participant 5 noted as motivation for athletes to learn skills quicker. The second dimension of 3D Coaching specifically mentions trust as a motivational factor. Due to Participant 5's implementation of second dimension principles, "players buy into their roles, compete at higher levels, and play free of fear." Similarly, Participant 6 found that implementing training in all three dimensions, including a focus on trust, led to athletes learning fundamentals because "they trusted it would benefit them", rather than assuming the mindset that "fundamentals like footwork were just necessary for practice." Additionally, Participant 6 found that "it became important to move past that first dimension and go deeper into the importance of second dimension aspects such as trust to become better as a player and a team." This coincided with Participant 3's observation, "With the trust we built with the athletes, they want to perform better for us. They know that we work and sacrifice just as they do, so together we work hard to help them realize their goals."

Participant 4 elaborated on this concept by stating that "athletes gain a deeper sense of pride in mastering skills for the sake of the whole team when they trust you and become accustomed to the significance and purpose of their performance." Participant 4 added,

I never had a problem with my athletes striving to perform for themselves, but after I became intentional about spending time in all three dimensions with a

focus on trust, my athletes became focused on performing as a team and they began to step outside of their siloed mindset. This caused them to push themselves harder and faster to be better for themselves and their teammates.

**Coaching the Individual.** Participant 4 and Participant 8 both noted a significant difference in their approach to coaching after realizing the importance of coaching athletes as individuals following their training in 3D Coaching coupled with their own personal experiences from their perspective as a student athlete. Participant 4 recalled,

As a kid, I remember my coaches would communicate about practices, how we needed to perform, and when game day came, they would show up with a mindset to execute what we practiced. Aside from my ability or lack of ability to play very well, I don't think they knew a single thing about me outside of the sport.

As a child, Participant 8 played sports and interacted with a variety of coaches, however, none of them took time to connect with Participant 8 as an individual. Participant 8 recalled, "I grew up with coaches who never knew anything about me as a person. They pushed me as an athlete, but never as a person."

These experiences coupled with training in 3D Coaching created a desire for both participants to reflect on their own coaching styles and become intentional about coaching athletes as individuals rather than addressing them as another player on the team. Participant 4 shared,

Students come to me when life outside of the sport is not going well and I can take that into account during practice and games. This wouldn't be possible if I hadn't made it a point to connect with them individually.

Because of these connections, Participant 4 noted that “athletes are motivated to learn skills quickly because they know they are fulfilling their individual goals.”

Additionally, Participant 4 shared,

I feel like I can enjoy my time with the girls when we can take a break from the fundamentals and share a laugh. They know I am invested in them as individuals, so they can let their guard down but also work hard knowing that they all have their own personal strengths or areas for improvement. Without making individual connections, I don't think they would have the ability to improve and perform well as a team.

Participant 8 related to this second-dimension focus of 3D Coaching by seeking to view athletes as individuals who come from different backgrounds and experiences.

Participant 8 shared,

I still see coaches who function like the coaches I had as a kid. My experience and my training in 3D changed my view on kids, especially those who did not grow up like me. I became better with more kids, more struggles, different issues, and because of this, my team worked hard to learn skills quickly and efficiently, impacting the entire team in a positive way.

**Finding Two Summary.** Taking a positive approach, being intentional, building trust, and coaching the individual were all attributed to athletes learning skills quicker and executing the learned skills with determination. Participants were able to apply their own personal experiences to their 3D Coaching training in order to administer impactful coaching styles. These coaching styles reflected a willingness to view athletes as individuals and create meaningful relationships which caused deeper levels of trust

between athletes and coaches. Intentionality was an additional component in guiding coaches and athletes in their decision-making. As a result of these approaches, athletes learned skills quicker and were more determined to execute the learned skills after the implementation of 3D Coaching.

***Finding 3: The Quality of Coach-Athlete Relationships Increased Following the Implementation of 3D Coaching***

Finding 3 addresses interview questions four and five, “How would you describe your coach-athlete relationship prior to implementing 3D Coaching?” and “How would you describe your coach-athlete relationship following your implementation of 3D Coaching?” All eight coaches acknowledged their desire to have positive relationships with their athletes prior to implementing the knowledge and strategies acquired during their 3D Coaching training; however, all eight coaches also recognized an increase in the quality of relationships they shared with their athletes following their implementation of 3D Coaching.

Participant 1 characterized their coach-athlete relationship prior to implementing 3D Coaching as “always having a great coach-athlete relationship with most of my athletes”, and proudly sharing, “I am still in contact with many of my former athletes and have enjoyed watching them grow throughout their adult life.”

Like Participant 1, Participant 3 noted positive relationships with student athletes prior to 3D Coaching training due to a focus on “trust-building and creating connections”, however, Participant 3 identified “more in-depth relationships with my students after the training.” Participant 3 elaborated by saying, “my athletes knew I wrestled before them

with success, so as I coached them, they knew that I knew what I was talking about so there was some trust right out of the gate in my ability.” Following 3D Coaching training,

Participant 3 noticed,

In addition to the established trust that was built, and them knowing I want the best for them, there is this realization in them (athletes) that they understand we work and sacrifice just as much as they do, so together we work hard to help them realize their goals. They trust I want the best for them, so if there’s a situation where they need to rest and get better, they feel confident in the fact that they do not have to push through an injury. Knowing I care about them, they give their all knowing that I have their back.

Participant 1 related to this by commenting,

After recognizing how all three dimensions work together to support athletes, I became more intentional about connecting the relationship piece with the training piece. As a result, my relationships with my current and former athletes have become deeper and I can tell I have made a difference all the way around with them.

The quality of coach-athlete relationships also blossomed into a deeper connection beyond the practices and season for Participants 3 and 4. Participant 3 described,

Due to the life lessons sprinkled throughout our practices and season, we {coaches} became someone that they often look to for life experience. This allows us to share our victories and defeats from both life and athletics and allows them {athletes} to learn from us.

Participant 4 provided a similar response by commenting, “Prior to my training in 3D Coaching, I felt my relationships with the athletes were always positive and I wanted them to succeed.” Following the implementation of 3D Coaching, Participant 4 described coaching as “more about ensuring athletes could be proud of themselves rather than just mastering a skill and instilling a realization that their actions impact others around them.” Participant 4 added,

The quality of the relationships with my athletes became much more “real” in the sense that they knew I was invested in much more than just the activity they were doing. They knew I cared about them as individuals and as a team. Because of this, we were all tightly connected and went the extra mile to work hard for each other.

Participant 5 also noted a focus on relationships as they described,

I have always been a relational coach. I played for a tyrant in high school and so I always thought there was a better way to motivate kids. 3D Coaching just helped me take it to another level. One where I now had an intentional way of influencing my players and our team culture in a positive way. Prior to 3D I built relationships, but it was still centered on the sport. Now my relationships are focused on the student-athlete first and the game second.

As a result of 3D Coaching training, Participant 5 noted, “I am now doing it the way I have always wanted to do it, but didn’t necessarily know how.” Participant 5 described the perception of the team as “about each other and our culture” rather than about the sport. The training also affected the way Participant 5 approached discipline and consequences by explaining, “I now approach discipline from the angle of shaping the

person verses saying things like “you violated this rule, and this is your punishment.”

Covenants play a significant role in Participant 5’s approach to shaping athletes following 3D Coaches training.

My student-athletes have more input into our culture. Every year we sit down and write out covenants that each team member signs off on and they become our measuring stick for success. Our covenants supersede any team or individual goal, meaning we will not compromise our foundational beliefs to get ahead. But they are also the driving force that should push us individually and collectively towards our goals. Examples of covenants would be: Be great teammates, Embrace Adversity, or 100% effort, every play, every day! We then measure our daily success based on if we meet those standards. If we succeed today, we will celebrate it. If we fail today, we learn from it.

Overall, Participant 5 attributes 3D Coaching for creating an opportunity to take coaching beyond the sport and creating “an opportunity for young people to learn about hard work, dedication, commitment to something bigger than themselves.” This concept resonated with Participant 7, who sought to build life-long relationships with athletes, providing them with a “foundation for good decision-making.”

Prior to implementing 3D Coaching, Participant 7 described their quality of relationships with students as, “good seasonal relationships, but often times not knowing the child well enough.” This is a stark contrast to the description of relationships post 3D Coaching training, as Participant 7 described how after 3D Coaching training, “my kids are “my kids” and I make it my personal goal to build the lifelong positive relationship



with them through everyday coaching.” This relational piece impacted Participant 7’s observation of athletes’ ability to work through successes and failures, explaining,

I believe athletes want to work harder for someone they know can guide them through challenging times and failures. When there is solid relationship built with them (athletes), they handle failure better and truly embody the growth mindset.

Participant 6 added to the focus on relationships by describing a more meaningful connection with athletes after implementing 3D Coaching,

I think 3D Coaching just amplified to me that while wins and losses are important; the items we hold vital from the second and third dimensions are that much more important. Obviously if I am not doing my job very well at the first dimension, I would not be in this position. We may lose more than we win but I can sleep at night knowing that we as a staff do our best to reach those most important items of the heart at the third dimension.

Also, Participant 6 noted that practices could be restructured after implementing 3D Coaching due to the increased trust factor in correlation with the deeper level of relationships. A supporting example of this restructuring was described by Participant 6 as,

Students understand that each drill of practice has its purpose, but our players now understand that conditioning before and during the season is to reach goals in sport and in life. We can make practice chaotic on purpose, having them face adversity, knowing that they will learn where it can take them.

In addition to athletes embracing challenging circumstances, Participant 7 carried this notion into their interactions with parents. Participant 7 described a correlation between

the increased quality in relationships with student-athletes to an increase in positive relationships with parents. Participant 7 described an “up-front” approach with parents by communicating the components of 3D Coaching, including the designated outcome for their children. Participant 7 recounted,

I have specifically been questioned by parents as to why I am doing things the way I am or what my coaching philosophy is and after explaining the “why” behind my methods, most parents have understood and bought into the process.

Participants evaluated their coach-athlete relationships prior to 3D Coaching in comparison with their relationships following the implementation of 3D Coaching and found success in building deeper connections with athletes. The result of these connections led to stronger levels of trust, improving team culture, and creating opportunities for athletes to obtain life-long skills through the process. Additionally, coaches garnered support from parents while implementing 3D Coaching by using transparent communication about 3D principles to foster a level of buy-in. Overall, the quality of coach-athlete relationships increased as a result of implementing 3D Coaching.

### ***Additional Findings***

In addition to the findings directly related to the research questions, there were two accompanying themes that emerged. Both themes focused on celebrated successes for coaches and athletes following their experience with 3D Coaching. The first theme that resonated with participants was the connection of skills taught in the second and third dimension of 3D Coaching which were applied by athletes in other areas of life. These areas include academic achievements, personal goal setting, and the acceptance of 3D Coaching strategies by students and parents. The second theme of celebrated successes

identified coaches' observations and connections with student-athletes following graduation.

**Successes Connected to Skills Taught in the Second and Third Dimensions.**

Participant 7 celebrated the success of the entire baseball team holding academic honors during 2023 and having the 3rd highest GPA as an overall team in the state, saying, "Our push for full circle effort has really allowed our athletes to understand why the classroom is so important." Similarly, Participant 2 noted the ability of their players to "work through struggles in a variety of areas until something finally clicked for them." These examples highlight the goal setting and motivation components of the second dimension of 3D Coaching in addition to the value of purpose outlined in the third dimension.

Participant 6 concluded this theme by noting students' ability to focus on personal goal setting to become a better overall individual outside of the game,

I take pride in the fact that while we haven't won a conference, district, or state championship in my 4 years as the head coach, our players and parents trust and respect that we are making their kids better.... They will all leave our program knowing the importance of being a great person, having high morals, and always treating everyone they encounter with respect and compassion.

**Successes With Athletes Following Graduation.** Participant 1 shared,

As a coach of high school age children, I don't always see the life lessons the athlete learns immediately because as a coach, we don't always get the pleasure of having that instant gratification. However, I do have the pleasure of saying that I have a few former athletes who have now become coaches due to their experience

with me. Watching them succeed in this endeavor has been the highlight of my career.

Participant 3 elaborated on this same concept by describing,

My most celebrated success is the fact that these kids graduate and go on to become productive members of the community with a heart for giving back. They still stop by and see me and bring their families. To this day many still come to me for knowledge and input in their lives for major decisions they have to make. The fact that they continue to trust me means the world {to me}.

Participant 4 acknowledged, “Students still connect with me despite me not coaching them anymore because it was never just about their role as an athlete, 3D Coaching made it about building life-skills and relationships.”

Participant 6 related to this experience by expressing,

I remind my athletes that they will be spouses, parents, employees or employers much longer than athletes. Because of this, my most celebrated success is watching my players and athletes move on to become successful adults later in life.

Participant 8 concluded this theme by taking pride in the fact that “I still get calls from my former players, so it solidified that I was doing things the right way.”

**Summary of Additional Findings.** As a result of these additional findings, it is evident that athletes who have trained under coaches who implemented 3D Coaching can apply learned skills in other areas of life. Additionally, coaches are recognizing long-term effects of 3D Coaching on their athletes such as overall life success and continued quality coach-athlete relationships post-graduation.

## **Conclusion**

The eight coaches who participated in this study not only described a detailed familiarity with the three dimensions associated with 3D Coaching following their training but perceived that their athletes learned and implemented skills quicker because of the implementation. Additionally, these coaches presented detailed accounts of how the quality of coach-athlete relationships increased after 3D Coaching was put into practice. Furthermore, the researcher noted additional findings as each participant shared celebrated successes following their experience with 3D Coaching. As a result of 3D Coaching, athletes and coaches were able to find success in their performance, achievements, relationships, and overall life skills.

## **Chapter 5**

### **Interpretation and Recommendations**

The analysis of the findings from eight interviews with coaches who implemented 3D Coaching after receiving at least one year of training were discussed in the preceding chapter. Chapter 5 builds upon these findings by offering interpretations and recommendations. The chapter commences with a summary of the study, encompassing an outline of the research problem, purpose statement, research questions, methodology, and key findings. The subsequent section delves into the findings associated with the literature relevant to the study's topic. The conclusion section of Chapter 5 encompasses implications for action, recommendations for future research, and concluding remarks.

#### **Study Summary**

The following sections offer a synopsis of the study. Initially, there is an overview of the problem, establishing context to underscore the central issue addressed in the study. Following that, there is a presentation of the study's purpose statement and research questions. Subsequently, there is an outline of the research methodology employed in the study. Ultimately, this section concludes with a discussion of the major findings of the study.

#### ***Overview of the Problem***

The increased attention on the impact of sports coaching on athletes has been the focus of various studies. While some researchers have explored how the coach-athlete relationship affects fundamental needs, no studies have examined the impact of interpersonal coaching behaviors on athlete performance or the coach-athlete relationship. Previous research has mainly focused on understanding factors related to

fundamental coaching, rather than exploring coaching's broader impact. Duke (2014) aimed to address this gap by researching the effects of transformational coaching and introducing the 3D Coaching model. Choi et al. (2020) emphasized the significant role coaches play in sports, affecting athletes' physical, psychological, and performance aspects. Additional research surrounding the effects of 3D Coaching on coaches and athletes could contribute to more effective coaching practices, which can lead to increased athlete performance. Additionally, coaches can fulfill their transformational purposes and develop strategies that help athletes feel successful on and off the field.

### ***Purpose Statement and Research Questions***

There were two purposes that guided this qualitative study. First, this study was conducted to better understand high school coaches' perceptions of how their coaching style shifted, if any, after receiving a year of training in 3D Coaching. The second purpose of this study was to inquire about coaches' perceptions relating to changes in athletes' behavior and performance within a year of implementing 3D Coaching. The following research questions were addressed in this qualitative study:

**RQ1.** What are high school coaches' perceptions of how their coaching style shifted, if any, after completing a year of training in 3D Coaching?

**RQ2.** What are coaches' perceptions about changes in athletes' behavior and performance within a year of implementing 3D Coaching?

### ***Review of the Methodology***

This study followed a qualitative phenomenological research design. The researcher developed open-ended, semi-structured interview questions for use in the study. The research was conducted in a rural school district in Missouri where high

school coaches underwent training in 3D Coaching. Purposive sampling was utilized to select study participants. Following participant selection, the researcher conducted interviews using open-ended questions. The researcher analyzed the interview transcripts to identify common themes, resulting in the identification of three major findings outlined below.

### ***Major Findings***

Finding 1 in the study revealed that all participants exhibited a detailed familiarity with the three dimensions encompassed within 3D Coaching despite having no prior knowledge of 3D Coaching before their training. All eight participants described fundamental terms linked to each dimension and could elaborate on their experiences with these terms. Additionally, they were able to articulate the components of 3D Coaching and connect them to their individual coaching styles following their training. Finding 2 revealed that high school athletes learned skills quicker and were more determined to execute the learned skills after the implementation of 3D Coaching. Coaches who underwent training noted a significant difference in the time athletes needed to master skills before and after implementing 3D Coaching. They also observed a heightened determination among athletes to apply to skills they had learned. Finally, Finding 3 described how the quality of coach-athlete relationships increased following the implementation of 3D Coaching. As a result, athletes who trained under coaches using 3D Coaching applied their skills beyond sports. Coaches have witnessed long-term effects such as overall life success and strong coach-athlete relationships after graduation.



## **Findings Related to the Literature**

This section offers an analysis of the study's findings concerning the literature presented in chapter two, which outlined a history of coaching and how 3D Coaching relates to this literature. Limited research was found on 3D Coaching, including how it might correlate with other coaching styles presented in chapter two. Despite the lack of research on 3D Coaching, there were some overarching themes that connected 3D Coaching with additional coaching styles.

### ***Connecting 3D Coaching With Holistic Coaching***

Of the four coaching styles examined in Chapter 2, 3D Coaching resonated strongly with the holistic coaching model. Holistic coaching encompassed several factors which connected to the elements of 3D Coaching, specifically targeting an overall approach to coaching athletes as individuals. According to Becker (2019), in alignment with holistic coaching, athletes expressed a desire to play for coaches who willingly serve in a variety of roles that go beyond the playing field. This supported the second finding in the study, high school athletes learned skills quicker and were more determined to execute the learned skills after the implementation of 3D Coaching. Participant 7 elaborated on this connection by sharing how “athletes work harder for a coach they trust to guide them.”

Additionally, Becker (2009) revealed that athletes often view their coaches as teachers, mentors, and friends. The 3D Coaching model parallels this philosophy by creating a framework that seeks to develop strategies that help athletes develop holistically. This holistic approach to 3D coaching becomes evident as coaches often take on the role of an authority figure whose influence on young people helps shape their

value systems and impacts the trajectory of their lives (Duke, 2014). Participant 3 specifically attested to the success in taking on the role of a teacher and mentor when sharing the “importance of caring for athletes as individuals outside of the sport” in correlation with the “trust and work kids put in for us.”

Diving further into the realm of holistic coaching, former longtime coach John Wooden established a legacy of holistic coaching values embedded within the coaching model, Wooden’s Pyramid of Success. According to Wooden & Jamison (2018), being a role model is the most powerful form of educating. Duke (2014) expanded on this theory by stating that 3D coaches realize the power of the coaching platform to inspire, motivate, and produce positive change in the coach’s sphere of influence. Additionally, Duke (2014) recognized that 3D coaches were fundamentally sound, skilled at coaching the mind, focused on developing the heart, and clear on their transformational purpose.

Fulfilling the transformational purpose outlined in both holistic and 3D Coaching allowed Participant 1 to witness how “pushing athletes to step outside of their comfort zone always achieved more than they imagined for themselves.” Additionally, Participant 1 noted, “continued relationships with former athletes” as a result of this approach. Components of holistic and 3D Coaching played a role in Participant 5’s use of covenants to transform athletes’ approach to the culture of the team. The use of covenants became “the driving force that should push us individually and collectively towards our goals” according to Participant 5.

Wooden’s pyramid of success proved to have additional commonalities with 3D Coaching as the structure of each program was examined and found to be coextensive due to the pyramid framework comprising each platform. Wooden’s reliance on

fundamentals, focus on character building, and steadfast discipline embedded within four dimensions created a structure for achievable success (Wooden & Jamison, 2018).

Likewise, fundamentals, psychology, and heart are the central themes outlining three tiers, also referred to as dimensions, in the 3D Coaching model. Similar to the victory Wooden found in obtaining achievable success through the implementation of the program's four dimensions, Duke (2014), also found achievable success through the implementation of all three dimensions of 3D Coaching. Both models begin with competence themed characteristics and conclude with character-based attributes.

### ***The Relationship Between Democratic Coaching and 3D Coaching***

According to Sharma & Singh (2013), democratic coaching empowers players, prioritizes sportsmanship, and cultivates a positive team culture where decisions are collaboratively made by coaches and athletes. This approach highlights the coach's role in providing an inclusive environment for athletes. 3D Coaching incorporates this same inclusive approach by recognizing the intrinsic value of each individual who makes up the team. According to Duke (2014), to maximize performance as a team, it is important to help your athletes think "we" instead of "me." While it is true that individual selfishness can destroy team unity, as a coach it is important to recognize and affirm the intrinsic value of each individual on the team. Participant 7 shared how using an "every kid matters" technique created a "family mentality" for the team which reflected the democratic approach to coaching in relation to the implementation of 3D Coaching training.

Like 3D Coaching, democratic coaching is an athlete-centered approach that according to Moen & Federici (2014), signifies a departure from the traditional coaching

perspective which positions the coach as the central figure in the partnership. Democratic coaching not only directly and positively influences the quality of relationships between coaches and athletes but also enables coaches to establish trust and foster a sense of respect with their athletes (Gao et al., 2021). Participant 2 illustrated the establishment of trust and respect outlined in democratic and 3D Coaching by sharing,

I think athletes who feel like you love them and care about them off the court and not just about how they perform will respect you and work hard for you most the time. They know that even when you are hard on them or push them, it's because you care.

In relation to this, a 3D coach who deliberately fosters an environment of love and encouragement can assist athletes in cultivating a hopeful outlook for the future, which in turn empowers them in the present (Duke, 2014).

### ***Conflicting Approaches Between Autocratic and 3D Coaching***

According to Travis (2018), autocratic coaching conflicts with the emphasis on teamwork, collective input, and shared decision-making. Autocratic coaching limits athletes' internal decision-making and may lead to a tense or strained relationship with the coach (Jin et al., 2022). Since coaches have total authority when utilizing an autocratic approach, there is limited room for team input or creativity. This approach to coaching directly conflicts with the 3D Coaching goal to promote relationships and a transcendent cause (Duke, 2014). Furthermore, Duke (2014) asserts that 3D coaches should strive to create an environment where individuals gift to one another the basic need for authentic community. Participant 8 vividly recalls “coaches who yelled from the sidelines” and did not create an environment for athletes to feel involved in the decision-

making process. Participant 8 added, “When players feel like their opinion matters to their coach, they want to play harder for their teammates and the coach, not just themselves.”

### ***The Contrast Between Laissez-faire and 3D Coaching***

Laissez-faire coaching can be associated with democratic coaching which exhibited shared values with 3D Coaching; however, laissez-faire coaching does not resonate with 3D Coaching due to its place at the extreme end of the democratic-style spectrum (Eagly et al., 2003). While there are benefits to using a democratic coaching approach, laissez-faire coaching is viewed as a high-risk approach to coaching (Carless, 2004). Additionally, laissez-faire leadership is conceptualized as the avoidance or absence of leadership (Avolio & Bass, 2002). Considering the strong emphasis on leadership outlined in 3D Coaching, the laissez-faire approach presents itself as a stark contrast. Duke (2014) presents the role of coaches as that of an authority figure whose influence on young people helps shape their value systems and impacts the trajectory of their lives. Participant 6 reiterated this sentiment by sharing, “every moment is a lesson for their future life.”

### **Conclusions**

This section outlines the study's findings regarding the impact of 3D Coaching on coaches and athletes. Additionally, the section provides an overview of how these results may shape future actions. The implications for action are followed by recommendations for future research and concluding remarks.

### *Implications for Action*

The results of this study support the following three actions. The first initiative merited by this research is the consideration of athletic programs to utilize 3D Coaching as a comprehensive approach for growing athletes as players and individuals. A comprehensive approach is crucial in enhancing an athlete's performance, as the intricacies of sport and competitive activities demand that coaches attend to the complete well-being of the individual, which includes considering cultural, emotional, and social aspects in addition to the athlete's performance (Jones & Turner, 2006). According to Nelson et al. (2016), coaches are responsible for addressing athletes' individual needs for well-being, health, and performance. Coinciding with this theory are the foundational elements of 3D Coaching which include fundamentals, psychology, and heart (Duke, 2014). As demonstrated by participant responses, the effect of utilizing the comprehensive approach embedded in 3D Coaching resulted in athletes learning skills quicker, along with the determination to execute the learned skills. Additionally, the quality of coach-athlete relationships increased, which positively impacted athletes in a sustainable manner.

The second action step supported by this study is the evaluation of coaches and overall program implementation. According to Phillips (2007), gathering student-athletes' perceptions through coaches' assessment leads to an enhanced experience for all involved, fosters player development, and creates a stronger bond between the coach and the player. The researcher recommends that student-athletes are administered a survey to evaluate the effectiveness of their overall experience with 3D trained coaches.

Furthermore, this research should be utilized as a driving factor to continuously assess 3D Coaching and implement the framework with fidelity.

In addition to athlete feedback, it is necessary to evaluate 3D Coaching from a stakeholder perspective, specifically from an administrative level. Districts and organizations that utilize 3D Coaching have an obligation to assess the effectiveness of individuals who use the 3D model to guide their actions and decisions. As a result, the researcher recommends that coaches who have been tasked with implementing 3D Coaching are evaluated on their ability to execute learned content.

The final recommendation for subsequent action is to explore the role of 3D Coaching in additional settings such as the business and professional sector. Research suggests that organizational coaching can foster change effectively by providing support and guidance that organizations require (Fleddermann, et al., 2023). Enhancing the understanding of successful coaching implementation through 3D Coaching could boost organizational effectiveness and overall success by adapting each dimension to the specific needs of the organization.

### ***Recommendations for Future Research***

The results of this study indicate the potential for further research on the implementation of 3D Coaching. The study's findings represent a small rural district in Missouri, however, 3D Coaching is utilized nationwide and should be assessed in a variety of settings that include both rural and urban areas. Additionally, this study conducted research using perceptions of coaches at the high school level, but could include research at the middle school or elementary level. Furthermore, it is recommended that 3D Coaching be implemented and analyzed at the collegiate level to

promote a sense of longevity for the framework that flows consistently between entry-level and seasoned athletes.

Additional research recommended to support this study includes the utilization of post-training surveys, administered to both coaches and athletes. Surveys in the form of questionnaires are very useful tools that allow large populations to be assessed with relative ease (Jones et al., 2013). Deploying surveys to coaches following their training in 3D Coaching will provide the feedback needed to ensure training consistency and provide the ability to measure the success of the program. Additionally, survey feedback provides the ability to evaluate the need for refresher courses or additional training needs. Finally, providing athletes with surveys produces an opportunity to receive feedback and evaluate the effectiveness of 3D Coaching on the intended population.

### **Concluding Remarks**

This qualitative study addressed two main objectives. First, the study aimed to provide a more profound understanding of how the coaching style of high school athletic coaches developed after a year of training in 3D Coaching. Secondly, the study examined coaches' viewpoints regarding changes in athletes' behavior and performance within a year of implementing 3D Coaching principles. Participant responses indicated that employing the framework of 3D Coaching led to athletes acquiring skills more rapidly and demonstrating the determination to execute these skills. Furthermore, the quality of coach-athlete relationships improved, positively impacting athletes in a sustainable manner. Research on 3D Coaching was minimal prior to this study and it is recommended that additional research be conducted to enhance the quality and effectiveness of the initiative.



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## Appendices

## Appendix A. Baker University IRB Approval Letter



### *Baker University Institutional Review Board*

October 17, 2023

Dear Mindi Richardson and Jim Robins,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at [skimball@bakeru.edu](mailto:skimball@bakeru.edu) or 785.594.4563.

Sincerely,

A handwritten signature in cursive script that reads 'Scott A. Kimball'.

Scott Kimball, PhD  
Chair, Baker University IRB

Baker University IRB Committee  
Jiji Osiobe, PhD  
Tim Buzzell, PhD  
Susan Rogers, PhD

## Appendix B. Participant Email Solicitation Letter

mail - 3D Coaching Interview Participation

### 3D Coaching Interview Participation

Richardson, Mindi

To:

Good afternoon,

My name is Mindi Richardson and I am a doctoral candidate for Baker University. After speaking with \_\_\_\_\_ High School, I am seeking participants to take part in a research study about 3D Coaching. Your participation in the study is completely voluntary and would entail an interview process lasting approximately 30-45 minutes. The interviews would be conducted via Zoom at a time convenient for you. During the interview, if there is any question that you prefer not to answer, you are not obligated to answer. After the interview, I will email you a written transcript of your interview. You will have an opportunity to review your transcript and provide any needed corrections. If you choose to participate, your interview will be assigned an anonymous code (e.g., Participant 1) to ensure anonymity and confidentiality. There is no compensation for your participation in the study.

The purpose of my study is to gain an understanding of high school coaches' perceptions of how their coaching style shifted, if any, after receiving a year of training in 3D Coaching. The other purpose of this study is to understand coaches' perceptions about changes in athlete's behavior and performance within a year of implementing 3D Coaching.

For your convenience, I am attaching a copy of the interview questionnaire as well as consent to participate in the study. I greatly appreciate your time and consideration. Even if you agree to participate, you are free to withdraw at any time without penalty. If you have any questions about this process or the study, please feel free to contact me.

Thank you again for your consideration,  
Mindi Richardson

## Appendix C. Participant Informed Consent

Consent to Participate in the Following Study:

### **Coaches' Perceptions of How Their Coaching Style Was Affected and How Student Behaviors and Performance Changed After Implementing Training in 3D Coaching**

Baker University supports the practice of protection for human subjects participating in research. The following information is provided so that you can decide whether you wish to consent to participate in the study.

This study focuses on high school coaches and their perceptions about student behaviors following the implementation of 3D Coaching.

Your participation is voluntary and will take approximately 30-45 minutes. The researcher will be taking notes throughout the interview. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

If there is any question that you prefer not to answer, just indicate to the researcher that you prefer not to answer. After the interview, I will email you a written transcript of your interview. You will have an opportunity to review your responses and provide any needed corrections.

After completion of the study, you will be sent a summary of the findings and will have an opportunity to review the findings and share comments with the researcher. If you choose to participate, your interview will be assigned an anonymous code (e.g., Participant 1) to ensure anonymity and confidentiality.

There are no risks or discomfort associated with this study. You will not receive any compensation or benefits for participation. Your signature below indicates that you agree to participate in the research study.

\_\_\_\_\_  
Signature of individual agreeing to participate in study

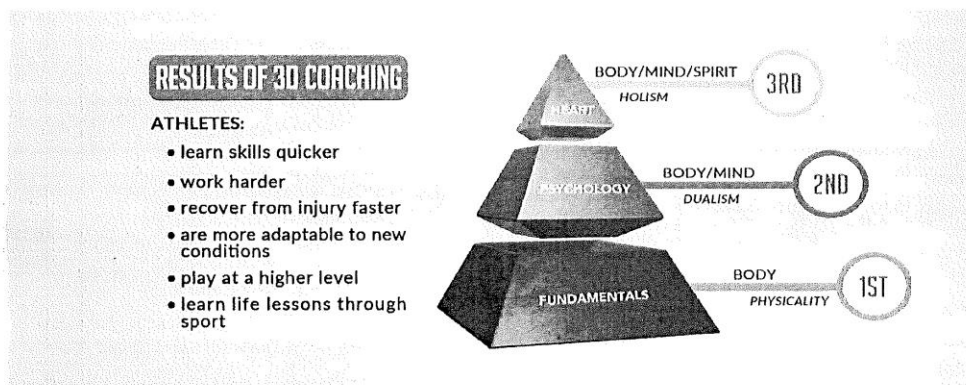
\_\_\_\_\_  
Date

Please initial one:

\_\_\_\_ I agree to a recorded Zoom interview

\_\_\_\_ I do not wish to participate in a recorded Zoom interview

### Appendix D. 3D Coaching Visual Overview



**3<sup>rd</sup> Dimension** **3D DIMENSIONAL COACHING™**

**HEART**

- Identity
- Character
- Significance
- Self-Worth
- Value
- Purpose

@3DCoaches

**2<sup>nd</sup> Dimension** **3D DIMENSIONAL COACHING™**

**PSYCHOLOGY**

- Motivation
- Confidence
- Emotions
- Team Cohesion
- Goal Setting

@3DCoaches

**1<sup>st</sup> Dimension** **3D DIMENSIONAL COACHING™**

**FUNDAMENTALS**

- Strength
- Power
- Cardiovascular
- Speed
- Quickness
- Technique
- Repetition
- Tactics

@3DCoaches

## Appendix E. Participant Interview Questionnaire

### Coaches' Perceptions of How Their Coaching Style Was Affected and How Student Behaviors and Performance Changed After Implementing Training in 3D Coaching

#### 3D Interview Questions

##### **General Information:**

Which specific sport(s) do you coach?

What ages/grade levels are the athletes you coach?

How many years have you coached?

##### **Research Questions:**

1. What type of knowledge about 3D Coaching did you have prior to receiving the training?
2. How would you describe the key elements of 3D Coaching?
  - 1st Dimension?
  - 2nd Dimension?
  - 3rd Dimension?
3. What strategies have you specifically implemented as a coach after receiving 3D Training?
  - How do these strategies differ from your approach prior to your training in 3D Coaching?
4. How would you describe your coach-athlete relationships prior to implementing 3D Coaching?
5. How would you describe your coach-athlete relationships after implementing 3D Coaching?
6. What is your perception of athletes' ability to learn skills quicker following your implementation of 3D Coaching? (Specific Examples)
7. What is your perception of athletes' ability to work harder in their specific role as an athlete following your implementation of 3D Coaching? (Specific Examples)
8. What is your perception of athletes' ability to recover from injuries faster following your implementation of 3D Coaching? (Specific Examples)

9. What is your perception of athletes' ability to adapt to new conditions following your implementation of 3D Coaching? (Specific Examples)

10. What is your perception of athletes' ability to play at a higher level in their specific athletic role following your implementation of 3D Coaching? (Specific Examples)

11. What is your perception of athletes' ability to learn life lessons through sport following your implementation of 3D Coaching? (Specific Examples)

12. What challenges do you face when implementing the fundamentals of 3D Coaching? (Specific Examples)

13. What is your most celebrated success after implementing the training you received on 3D Coaching?