CULTURE FOR LEARNING: A THEORETICAL MODEL OF LEARNING

THROUGH EFFECTIVE ATHLETICS COACHES

by

James Benjamin Johnson

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Education in Assessment, Learning, and School Improvement

Middle Tennessee State University

December, 2020

Dissertation Committee:

Dr. Kevin Krahenbuhl, Chair

Dr. Lando Carter

Dr. Gary Kiltz

This dissertation is dedicated to my father, Mike Johnson, who passed away just a month prior to completion. He was a man of integrity that valued hard work and loved his family. He spent countless hours in service to his family, his church, and his community. He lived by a rule: do your best. I hope this would live up to his standard.

ACKNOWLEDGEMENTS

I would like to thank Middle Tennessee State University and the College of Education for the honor to complete a lifelong dream of earning this degree. The debt of gratitude that is owed to each professor will never be repaid.

I would also like to thank Dr. Kevin Krahenbuhl, Dr. Lando Carter, and Dr. Gary Kiltz for your invaluable support. This dream would not have been a reality without each of you.

I want to thank my family, as they are my foundation.

I want to thank the love of my life, Kim, as she has stood by my side throughout this entire process. She makes me a better person and amazes me every day.

Finally, I would like to thank God for the blessings and perseverance to earn and fulfill this dream.

ABSTRACT

A theoretical model of learning as seen by effective athletics coaches is nuanced with methods of performance improvement strategies but also inherently influenced by overarching cultural aspects to create an environment conducive to maximize learning. This grounded theory qualitative research study generates the *Culture for Learning* theoretical model of learning. The model can have potentially profound impacts on learning and performance by providing the necessary aspects of a culture set to maximize learning based on expectations, accountability, and relationships allowing for performance and improvement strategies to exist and flourish. The literature review covers theories of learning, practice methodology, improvement strategies, and essential components for a defined culture. Topics include behaviorism, the humanistic theory of learning, cognitive learning theory, fundamental skill acquisition through repetition, analysis with feedback through the use of performance analysis, environment, goal setting, motivation, and relationships.

Theoretical sampling was used to select coaches to generate a theory of effective learning in athletics. The participating athletic coaches were defined as *effective* as they have a high percentage of wins or have shown trending improvements from year to year based on their teams' win/loss record. They are from different states, and sports domains as well as having different levels of experiences and have won numerous district/region championships, state champions, conference championships, and national championships. The collection and analysis of interview, observation, and document/artifact data were analyzed through open, axial, and selective coding using constant comparison, member checking, and analytic memoing to ensure the accuracy of the findings.

Future implications include leaning on the *Culture for Learning* theoretical model to impact classrooms, schools, and districts with learning strategies, cultural aspects used to motivate and empower students and teachers, and policy implications for assessment and standards' adoption. District and school leaders could also lean on athletic coaches to provide insight into developing relationships, increasing the opportunity to maximize learning in classrooms within schools. The *Culture for Learning* can be used to improve learning in classrooms when the culture is conducive to doing so, as the athletics coaches' theoretical model displays.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Culture for Learning: A Theoretical Model of Learning Through Effective Athletics

Coaches

CHAPTER I: INTRODUCTION

Background

Ericsson (2008) claims individuals can improve their performance by practicing

and receiving coaching toward a specific goal along with a high degree of motivation.

Practice and coaching must be intentional toward a specific target and specific to a

domain. These domain-specific skills are developed using a formula that could be highly

effective in performance improvement. The formula is deeply entrenched in creating

world-class musicians and artists, hall of fame athletes, elite military servicemen and

servicewomen, world-renowned surgeons, and even history's most creative thinkers

(Coyle, 2009, Sawyer, 2013, & Ericsson & Pool, 2016). Yes, they all possess

extraordinary talent, but through Ericsson, Krampe, and Tesch-Romer's (1993) deliberate

practice and the science of expertise, we can begin to understand that they were not

genetically predetermined to be experts; they are made (Ericsson, Prietula, Cokely,

2007).

Athletics provides an opportunity for expert performance and learning to exist at

superior rates. However, this is not consistent throughout all athletics. Some coaches tend

to produce learning at much higher rates and levels than do others. Does an explanation

exist to address learning in this capacity? How do such high rates and levels of learning

and performance come to fruition? Why are some coaches able to produce such rates and

levels of learning leading to expert performance and others are not? While the science of

expertise is clearly outlined to attain mastery and expert performance, learning can still

be lacking among some athletes. Learning can be seen through the formula for expert performance through theories of learning that include aspects of behaviorism, cognitive learning theory, and the expertise theory of learning. A fundamental element of these philosophies of learning also exist. The humanistic theory undergirds learning by aiming to understand the motivations involved in learning. By exploring and focusing on motivation as it relates to learning, an additional layer in the generation of expert performance and mastery can be uncovered.

As previously noted, expertise and mastery are not just moot points or levels of performance or learning individuals reach, but a journey toward extraordinary levels of performance. Are mastery and expertise the same entity? In Ericsson and Pool's (2016), *Peak,* "mastery" in the index specially states to "see expert performers" (p. 301). Based on this, it could be assumed that mastery and expert performance have, indeed, the same description for the highest level of performance. Athletics fields, music and art studios, the military, businesses, and the creative mind utilize deliberate practice for this journey, or quest, to expertise or mastery. Performance can regress as individuals become stagnant after reaching an acceptable level of performance or fail to maintain practices without continually resetting goals and striving for mastery (Willingham, 2009 & Ericsson & Pool, 2016). Constant progression toward expert performance is imperative. A missing but essential link that could have profound effects on the progression is for individuals to have a desire to improve and avoid stagnation continuing to improve and travel on their journey of learning.

The attainment of expert performance can be achieved through acquiring high levels of domain-specific knowledge and skill through planned and monitored practice,

mental representations, and analysis of performance; also it includes having clearly defined performance goals that are set just outside the individual's comfort zone with a highly intentional focus and motivation on obtaining those goals (Ericsson, et al, 1993, Ericsson & Ward, 2007; Ward, Hodges, Starkes, & Williams, 2007, Ericsson, 2008, Schunk, 2016, Schonbrun, 2018, & Ericsson, 2020). The formula also includes the opportunity for repetitive practice, constant assessment on that repetitive practice, along with feedback on those repetitions in efforts to continuously improve. Feedback is employed by coaches to reinforce and correct errors, described as "...simple, direct feedback after every attempt - correct or incorrect, success or failure" (Ericsson & Pool, 2016, p. 17). While exceptionally superior performances exist, they do not simply happen. While the formula for these superior performances exist, why are the rates of performance and learning not higher for all athletic coaches and across all domains of athletics?

There seem to be aspects that are absent from particular teams for high rates of learning leading to expert performance. What are the missing essential components of learning and performance for improving in athletics? Some athletic coaches are able to navigate these missing links and nullify deficiencies in learning, but many do not. Why are some athletic coaches able to mitigate these missing components while others are not?

Another imperative aspect of performance improvement that is nuanced with this formula is a foundational culture that is erected upon providing individuals an environment to learn, acquire skills, and improve performance. What does this foundational culture consist of? These questions can guide the discovery of the aspects of

how learning takes place, how performance is improved, and the culture that inherently must exist to provide an environment conducive to maximize performance and learning. Through the influence and lens of effective athletic coaches, the progression toward mastery and emergent expertise can be rationalized and replicated for use across athletic domains (Ward, et al, 2007). This qualitative research study will look to build a framework of this formula and generate a model to present a theory of learning through the perceptions of effective athletics coaches.

Context

Athletic coaches are the leaders of athletic teams, from skill development to character building and culture development. Legendary, well known effective coaches, such as Vince Lombardi, Bobby Knight, Lou Holtz, Bill Belichick, Urban Meyer, Jim Tressel, Phil Jackson, Billy Donovan, Bill Walsh, Greg Popovich, Nick Saban, Joe Paterno, Bear Bryant, Jim Harbaugh, and John Wooden produced exponential numbers of wins and championships through skill development, character development, and team building through methods of generating learning and performance superior to none (Wooden & Jamison, 1997, Holtz, 1998, Phillips, 2001, Knight & Hammel, 2002, Bernstein & Greenburg, 2008, Martin, 2008, Tressel & Fabry, 2008, Walsh, Jamison, & Walsh, 2009, Wooden & Jamison, 2010, Posnanski, 2012, Jackson & Delehanty, 2014, Zucco, 2015, Coyle, 2018, Anderson, 2019, & Heheir, 2020). Delving into the nuances of effective athletic coaches' processes in these aspects of development could provide an avenue to a theoretical model of learning; a model that has produced results and outcomes that exceed that of an average athletic coach.

The study consists of interviews, observations, and documents from up to twenty-five (25) coaches across various athletics domains, experience levels, divisions, and age ranges for the generation of a theory of effective learning in athletics, as well as what cultural aspects must be present to maximize learning. Athletic coaches can be considered effective through a broad range of avenues, whether it be expertise or vast knowledge of the domain content, outcomes, or psychological and motivational factors (Rutt-Leas & Chi, 1993, Bergemann, 2000, Schempp, McCullick, & Mason, 2006, Mallet & Cote, 2006, Horn, 2008, Reade, Rodgers & Spriggs, 2008, & Cote & Gilbert, 2009). However, Erikson, Cote, and Fraser-Thomas (2007) allude to the fact that experience alone does not make high performing, or in this context, an effective athletic coach. Athletic coaches also play pivotal roles in not only the success of teams, but can potentially have a major impact on the character development of the individuals for success, not only in athletic competition but also in future life endeavors (Shields, Bredemeier, & Power, 2002, Cote & Gilbert, 2007, & Willink & Babin, 2017, Raidbrand, 2019). Effective athletic coaches can have profound impacts on the lives of their players.

In the context of this qualitative study to be considered *effective*, the athletic coaches will either have to have a high percentage of wins or have shown trending improvements from year to year based on their teams' win/loss record. Horn's (2008) review of effective coaching defines effectiveness based on results: "Effective coaching ...results in either successful performance outcome (measured either in terms of win-loss percentages, individual player development, or success at the national or international level) . . ." (p. 240). Coaching effectiveness can also be considered through the eyes of legendary UCLA basketball coach, John Wooden, through Tharp & Gallimore's (1976)

studies regarding effectiveness. Cote and Gilbert (2009) also discuss several contextual definitions for what effective coaching is and what it consists of, as well as discerning between coaching effectiveness and expertise; while Kobe Bryant, a legendary member of the Los Angeles Lakers (2018) suggests, "A good coach is of the utmost importance" (p. 62).

Athletic coaches that meet the contextual definition for this study were chosen via theoretical sampling to further develop or verify the emergent theory (Glaser & Strauss, 1967). The effective athletic coaches participated in interviews, provided any artifacts, and were observed to gather data. Effective athletic coaching interviews will be the foundation of the theoretical model. The process of constant comparison was used throughout the process to, again, further develop or verify the emergent theory. The generation of a theory requires an ample amount of data collected to reach a point of saturation to claim, in this case, the creation of a theoretical model of learning (Glaser & Strauss, 1967, Creswell, 2013 & Patton, 2015). The process of this generation will consist of collecting data from interviews, observations, and artifacts from effective athletic coaches. Analytic memos serve as the foundational reflective process throughout the analysis of data. The process of analysis of these forms of data will follow suit with grounded theory qualitative research: open, axial, and selective coding (Creswell, 2013 & Saldana, 2016). Member checks are also periodically performed to confirm the interpretation of the data that was collected.

Problem Statement

Throughout athletics, as well as countless other domains, expert performance is generated by many individuals. Expert performances are not reliant on genetic

predisposition or natural talent (Galton, 1892 & Watson, 1924). The performances are an

evolution of countless hours and iterations of practice, evaluation, and feedback (Ericsson

& Pool, 2016). What aspects of learning are the most highly utilized in athletics?

Learning in athletics has been known to produce superior levels of learning. Individuals

learn and produce expert performances. Why are these superior levels of learning and

performance not utilized across all athletic domains and by all coaches? In athletics,

effective coaches build a culture that athletes are constantly improving their craft despite

the time and effort involved in such tasks. A culture is set by effective athletic coaches to

push their players to constantly improve. What does this culture consist of that continues

to help athletes thrive and constantly improve without quitting the task? Particular aspects

of culture have to exist that make some teams effective, while others are not. What do

effective athletic coaches consider as the elements of the culture that make their team

effective? The theoretical model could ultimately be used to impact learning for all

athletic coaches across all athletic domains.

Statement of Purpose

Particular aspects from effective athletic coaches can be replicated in a theory of

learning for use by all athletic coaches across all athletic domains. This study aims to

explore the nuances behind learning in athletics to create a theoretical model of learning.

The theoretical model will be informed through the lens of effective athletic coaches to

describe the production of learning. The purpose of this study is to explore and

understand how the nuances of learning and the cultural aspects of effective athletic

teams that allow for the intense cycles of practice, evaluation, and feedback leading to

expert performance. Culture plays a major role in how effective the theoretical model of learning can be. The research questions considered for this study are as follows:

1. What theoretical model describes learning as understood by effective athletic coaches?

2. What aspects of culture are essential to maximize learning?

Definitions of Terms

According to Merriam-Webster's Dictionary, the word coach can be used as a noun or a verb. As a noun, a coach is defined as, "a private tutor . . . one who instructs or trains . . . one who instructs players in the fundamentals of a sport and directs team strategy." The verb uses of coach: "to instruct, direct, or prompt as a coach . . . to train intensively (as by instruction and demonstration) … to act as coach of" ("Coach," n.d.). Athletics coaches are deemed as individuals who instruct and lead athletes in their respective sports domains. An athletic coach is responsible for the performance of an athlete or athletics team.

Significance of Study

A formula for learning in athletics as described by effective athletics coaches has produced hundreds of wins and numerous championships among the sampling of athletic coaches and can be leveraged to improve learning, enhance performance, and provide the opportunity to build to mastery and expertise. Mastery and expertise do not just happen, yet are part of a building process; Michelangelo stated after finishing the Sistine Chapel: "If people knew how hard I worked to get my mastery, it wouldn't seem so wonderful after all" (Brown, Roediger, & McDaniel, 2014, p. 184). This process of attaining

expertise level performance is not instant, as some might think that expertise comes from innate ability or experience. Expertise requires tremendous time and effort, as Michelangelo's masterpiece "had required four torturous years of work and dedication" (Brown, et al, 2014, p. 184). The theoretical model that will be generated from this study will provide a pathway to expert levels of learning and performance in athletics. This pathway could also be relied on to improve learning for all athletic coaches in all athletic domains.

Research Plan

Theoretical sampling (Creswell, 2013) was used to select athletic coaches to interview, observe instructional practices, and collect artifacts for the process of generating a theory of effective learning in athletics (Creswell, 2013 & Patton, 2015). The process of member checking and constant comparison was used to ensure validity throughout the interviews and data collection. Up to twenty-five (25) effective athletic coaches that are employed in many different states, different sports, different age groups, and across multiple lengths of experience participated in the study. The athletic coaches, respectively, have a high percentage of wins or have shown trending improvements from year to year based on their teams' win/loss record, and have, collectively, won district/region championships, state champions, conference championships, and national championships; while individually, a large percentage of the athletic coaches have been awarded *Coach of the Year* honors.

The research conducted encompasses learning, practice, feedback, and culture. Each major section is subdivided into categories. The learning section is focused on behaviorism, the humanistic theory of learning that includes self-actualization, self-

determination theory, and motivational factors, cognitive learning theory, the zone of proximal development, and the expertise theory. The practice section consists of the principles of deliberate practice along with the process of retrieval through spaced and interleaved practice are used to build mental representations and automaticity. An evaluation section consists of analysis and feedback utilized through notational and biomechanical analysis, and reflection to evaluate and assess performance to aid in improvement. The section revolving around culture includes relationships, environment, motivation, and goals, and a commitment to improvement. The aspects of research are then intertwined with research findings generated through the theoretical model of learning through the lens of effective athletic coaches. The overarching goal is to provide a pathway of continuous improvement.

Overview

The theoretical model of learning as seen by effective athletics coaches could be nuanced with methods of performance improvement strategies but also be inherently influenced by overarching cultural aspects to create an environment conducive to maximize learning. The utmost importance is placed on culture, along with other aspects of performance enhancement. The components of culture are at the center of the theoretical model and could have profound impacts on potential learning and performance. The *Culture for Learning* includes necessary aspects of performance improvement and learning allowing for improvement to continuously progress by small tweaks and changes along the pathway toward becoming an expert, like Ericsson, Krampe, and Tesch-Romer (1993) proclaim, "At increased levels of performance, the practice activities obviously change and so do the criteria for evaluation" (p. 369).

CHAPTER II: REVIEW OF LITERATURE

The review of literature covers a gamut of topics from theories of learning to a defined culture. The research conducted encompasses learning, practice, feedback, motivation, and culture. Each major section is subdivided into categories. The learning section is focused on behaviorism, the humanistic theory of learning, and cognitive learning theory. Included among those sections is also the zone of proximal development, and the self-determination theory as well as the expertise theory.

The practice section focuses on how learning takes place cognitively, along with motivational factors that can influence learning. Cognitive processes are described through different avenues along with a progression of the acquisition and refinement of skills through repetition and practice. The principles of deliberate practice, the process of retrieval through spaced and interleaved practice, along with the process of automaticity, and the creation of mental models make up the practice section.

The analysis and feedback section categorize how constant feedback coincides with evaluation and assessment. These processes are used through notational and biomechanical analysis and reflection. Learning and performance are impacted through the evaluation of present levels of performance along with specific means of improvement are effectively communicated.

Culture is the key driver and the foundation for the other components to function properly and improve performance. Culture includes goals, improvement, motivation, environment, and relationships. Cultural aspects loop back into theories of motivation, self-actualization, and self-determination, linking learning and culture. These aspects of research are then intertwined with research findings generated through the theoretical

model of learning through the lens of effective coaches. The overarching goal is to provide a pathway of continuous improvement.

Learning Theories

The conceptual framework of learning for the theoretical model of learning generated from this study will capture aspects from different theories of learning. The learning theories encompass aspects of learning and motivation as seen in athletics. Behaviorism contends that learning is a derivative of a behavioral response to a stimulus. The humanistic theory of learning is predicated on the concept that all learning is not based on response to a stimulus but an innate human desire to succeed and improve. Cognitive learning theory is based around the acquisition of knowledge and skills as well as knowing how and when to apply that which had been acquired. Humans and animals thrive on the ability to cognitively process information building into the cognitive learning theory. Subtle nuances of each comprise the theories of learning that research alludes to as responsible for the methods of learning and development in athletics.

Behaviorism

The theory of learning known as behaviorism is founded upon the notion that all learning is based on responses to external stimuli. Reaction to the external environment is the foundation for human behavior. Human behavior is based on the connections between the response and the stimulus, thus creating learned behavior (Bransford, Brown, & Cocking, 2000). Behaviorism does not consider mental processes when it comes to learning, but considers learning as acquired behaviors in response to the environment around them, "Behaviorism is a theory of animal and human learning that only focuses on objectively observable behaviors and disregards mental activities" (Nagowah &

Nagowah, 2009, p. 279). Behaviorist researchers sought to examine behaviors as a means to create a framework for human behavior (Watson, 1924 & Schunk, 2012). Behaviorism takes on the structure of "examined observable and measurable phenomena" (Schunk, 2012, p. 72). Behavior is molded in response to positive or negative reinforcement to observed actions. Behaviorists' belief was that behavior could be conditioned to stimuli with a consistent response to that stimuli.

Similar, yet separate types of conditioning are considered in behavioristic views: classical, contiguous, and operant (Schunk, 2016). Conditioning is believed to produce learned behavior, "… learning is a direct result of experience or practice that leads to a change in behavior. They also believe that behaviors can be modified by consequences such as positive or negative feedback and rewards and punishments" (Nagowah & Nagowah, 2000, p. 280). Classical conditioning is a process to train a response to a stimulus and is regarded as a natural response; while contiguous conditioning operates on the foundation of the association of stimuli and responses (Schunk, 2016). The most well-known method of conditioning, operant, is based around reinforcement (Pavlov, 1927, Skinner, 1938, Guthrie, 1952, & Schunk, 2016). Schunk (2016) explains conditioning as going from an unconditioned stimulus that produces an unconditioned response progressing to a conditioned stimulus producing a conditioned response. Pavlov (1927) contends that even higher-order conditioning can occur by proposing changes to the conditioned stimulus amid conditioning, yet these higher-order conditioned responses have limitations.

Schunk (2012) regards contiguous conditioning as the association with movements declaring behaviors are results of behaviors involving muscles and acts, or

groups of movements generating an effect. These acts can be considered something as simple as turning on a television or complex as playing guitar. Through all these acts and movements, associations are made between stimulus and response through repetitive practice under the same conditions where the desired result is intended (Schunk, 2016). Schunk (2012) claims that constant rewarding or punishing does not lead to learning, but "contiguity or close pairing in time between stimulus and response" (p. 85) is the key lever in learning. Contiguous conditioning has an impact when changing behavior and forming habits, but, as Schunk (2012) contests, "Guthrie's theory does not include cognitive processes and thus is not considered to be a viable learning theory today" (p. 88).

Operant conditioning encompasses aspects of classical and contiguous conditioning. Operant conditioning looks at how Skinner's (1938) laboratory experiences with animal behavior can be applied to humans. While similar to other methods of conditioning, operant conditioning addresses how reinforcing and punishing behaviors can lead to human learning (Schunk, 2012). It relies on strengthening behavior through reinforcement, as Skinner (1938) contends the strength of the behavior is increased or decreased based on the reinforcements that follow a behavior. While operant conditioning does have a place in learning, it merely leans on response to a stimulus and does not involve cognitive mental processes. Learning requires more than reinforcement based on a response to a stimulus. Goals, needs, and motivation are factors that have major influences on learning.

Humanistic Theory

A prompt disagreement with the behaviorism theory of learning is shown in the humanistic theory. While behaviorism is foundationally built upon conditioned response to a stimulus, "Humanistic theories as applied to learning are largely constructivist and emphasize cognitive and affective processes" (Schunk, 2016, p. 346). Humanistic theory regards individualistic needs and goals as a foundation of learning rather than conditioning response to a stimulus (Weiner, 1992). The creativity of humans, along with the ability to make a decision based on these individualized goals, motivations, and feelings drive humans to a level of self-actualization.

Self-actualization is the pinnacle of Abraham Maslow's *Hierarchy of Needs* (Maslow, 1968). Maslow's landmark research on the needs of humans determined that conditioning did not reveal the nuances and overall process of human behavior. Those nuances and processes are highly stressed and must be addressed, "Needs are hierarchical. Lower order needs have to be satisfied adequately before higher-order needs can influence behavior" (Schunk, 2016, p. 346). A determining factor with self-actualization is that it brings forth a desire for individuals to achieve, which motivates behavior toward individualized goals (Maslow, 1968, Maslow 1970, & Schunk, 2016). Phil Jackson, legendary head basketball coach of the Chicago Bulls dynasty of the 1990s and the Los Angeles Lakers dynasty of the 2000s, discusses his philosophy of building championship athletes and teams. Jackson & Delehanty (2014) contend in *Eleven Rings: The Soul of Success*, the journey toward self-actualization follows Maslow's hierarchy and is vital in team building. Humanistic needs look far beyond how behavior is formed by conditioning and takes into account individualistic motivations for growth.

Along with Maslow, Carl Rogers was very instrumental in humanistic theory research. Rogers (1963) believed self-actualization is built upon the motivation for human life and should be viewed as a constant progression toward growth. He also contended that this motivation was a fundamental principle of human life; while all other basic human needs are derived from a motivation to constantly grow (Rogers, 1963 & Schunk, 2016). Rogers's (1969) *Freedom to Learn* discusses learning that is not meaningful does not require a vested interest, thus having virtually no impact on growth nor leading toward the goals of progression. Goals are the foundation of learning and education in Rogers's research (Nelson, Cusion, Potrac, & Groom, 2014). Goals are directly related to individuals' motivations.

An extension of self-actualization based on the motivation of individuals is what Deci and Ryan (2000) call the *Self-Determination Theory* (SDT). SDT is based on the fact that motivation comes from a high amount of autonomy in making decisions and setting goals -- making it a basic human need that can have a profound influence on human behavior (Deci & Ryan, 2000 & Pink, 2011). SDT also exhibits foundational aspects of Maslow's research that behavior and learning were based on more than animal-like responses to stimuli, and possess more intrinsic motivation to achieve than can be produced through external conditioning. While behaviorists do not consider motivation in conditioned responses and learning, humanistic theorists regard motivation as a key component in learning:

> "Motivation is intimately linked with learning. Motivation
> and learning can affect each other. Students' motivation can

influence what and how they learn. In turn, as students learn

and perceive that they are becoming more skillful, they are

motivated to continue to learn (Schunk, 2016, p. 351).

The learning and perception of skill development that increases performance and

motivation are directly connected to how skill development and learning takes place

through the cognitive learning theory.

Cognitive Learning Theory

The cognitive theory of learning describes learning that involves thinking and

mental processing. The brain receives information in the form of inputs, processes

information, and possibly stores those inputs, then brings forth a response or an output

(Schonbrun, 2018). The brain does not just produce a forced response from a stimulus,

producing an action or behavior based on a separate external action. Knowledge can also

be constructed through the context of an individual's social interactions. Cognitive

processes are still maturing, and can only do so along in conjunction with others. This

conjunction aids in the construction of knowledge through the culture and language that

an individual is immersed in as knowledge is thought to be constructed alongside others

in the social environment (Vygotsky, 1968). These aspects of cognitive activity are

connected through factors both internally and externally to produce learning. The

characteristics of behaviorism's conditioning of attention, memory, and motivation

combined with the cognitive processes along with the environment and social interactions

are used to construct new knowledge and skills (Schunk, 2012). These characteristics are

necessary for learning (Willingham, 2009). Schunk (2012) contends that the

characteristics necessary for learning are present under the right conditions. These conditions are responsible for the creation of the *Zone of Proximal Development* (ZPD).

ZPD can be defined as, "the distance between the actual development as determined by independent problem solving under guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Meece (2002) explains this concept as what children can do with assistance and without considering the difference as the ZPD. By recognizing where the differences are and closing the gap, learning takes place within the zone. The gap can only be closed by stretching the learning beyond what is already known, ". . . the notion of zone of proximal development enables us to propound a new formula, namely that the only 'good learning' is that which is in advance of development (Vygotsky, 1978, p. 89). Scaffolding provides assistance in certain aspects of a task where cognitive demands are too high and is a common application of the ZPD (Schunk, 2012). The key implication of Vygotsky's theory "is that the cultural-historical context is relevant to all forms of learning because learning does not occur in isolation" (Schunk, 2012, p. 248). Other avenues within cognitive learning theory encompass the acquisition of knowledge and skills leading to the expertise theory.

The acquisition of knowledge along with memory storage explains these cognitive processes and explains how learning takes place. Schunk (2012) describes also that in addition to knowledge, skills acquisition occurs as well. Acquisition and storage are brought about through observations and the formation of information along with generalizing concepts. Learning is also developed through observing, modeling, and imitating others. People tend to learn from observing others through the process of modeling. Piaget (1968) and Perry (1999) were more concerned with acquiring

knowledge and skills through cognitive processes rather than observed behavior. The cognitive processes include relating new information to what is already known along with adjusting knowledge for the newly learned content. Mental processes make up mental representations, and the representations are essential to building new knowledge (Simon & Chase, 1973, Chase & Simon, 1973, & Ericsson & Williams, 2007). These mental representations are formed around previous knowledge and experiences. They are essential to skill development, and skill development can be viewed as a fundamental aspect of learning and expertise.

Skills are categorized into general skills and specific skills (Schunk, 2012). Specific skills can also be known as domain-specific. Specific skills are developed and honed to create domain-specific experts (Ericsson, et, 1993). The expertise theory of learning, introduced by Ericsson, describes the process when individuals move from novice to expert in a given domain (Schunk, 2016). Expertise theory explains how ability and performance are progressed and developed through instruction, practice, and clearly defined goals across specific domains. The theory of expertise suggests that the world's elite are developed and made, not born as opposed to some behaviorism proponents and genetic scientists, "Consistently and overwhelmingly, experts are always made, not born (Ericsson, et al, 2007b, p. 116). This theory explains the pathway to gaining superior performance across domains through various forms of practice. The expertise theory utilizes deliberate practice as not just a means but the pathway to becoming an expert (Ericsson, 2008). Brown, et al (2014) contends that this pathway begins with the acquisition and progression of knowledge and skills through practice, as is stated, "Mastery, especially of complex ideas, skills, and processes, is a quest" (p. 159). The

quest begins with the repeated performance of acquired skills and knowledge to aid in the progression.

Practice

A key to performance, as Willingham (2009) suggests, "any complex cognitive skill, must be practiced to be improved" (p. 189). Practice consists of repetitive activity of a given skill. Willingham (2009) also states, ". . . practice usually means investing time in activities that are not the target task itself but done for the sake of improving the task" (p. 194). Individuals must have the performance or skill modeled as well as having the opportunity to practice. Brown, et al (2014) claims the acquisition and improvement of skills lies not in just the performance of skills, but ". . . expert performance is a product of the quantity and quality of practice, not of genetic predisposition, and that becoming an expert is not beyond the reach of normally gifted people who have the motivation, time and discipline to pursue it" (p. 185). Time and time again, the ideology of practice has "demonstrated to be a plausible a ground rule for achievement as any we have" (Schonbrun, 2018, p. 62). The pursuit of expert performance starts with acquiring the skills needed to become an expert.

Skills are acquired through more than just normal practice, but through strategies that have been found to build toward expertise and mastery in learning and performance. These strategies include countless repetitions and coaching, "Seek constant, critical feedback. If you don't know how you're doing, you won't know what to improve" (Pink, 2011, p. 158). Repetitions on fundamental skills are an integral component of performance. Greg Popovich, head coach of the San Antonio Spurs, consistently makes fundamentals in practice the most important aspect of basketball (Allen, 2014, Hancox,

2015, Davis, 2016, & Coyle, 2018). Wooden and Jamison (2010) discussed Coach Glenn Curtus, Wooden's high school basketball coach whom he credited this strategy of coaching basketball, "breaking it down into separate components, little parts, and perfecting those parts" (p.248). Wooden planned out every minute of every practice on note cards turning the UCLA dynasty through a highly detailed machine (Wooden & Jamison, 1997 & Collins & Hansen, 2011). It could be considered that Wooden's players obtained expertise in basketball, as Bernstein and Greenburg's (2008) UCLA Dynasty film documentary states, "By the time the games came along, they just became memorized exhibitions of brilliance." Wooden acknowledged the amount of time required to reach expertise.

The attainment of expertise "requires thousands of hours of dedicated practice…" in order "to surpass one's current level of ability, a process in which failure becomes an essential experience on the path to mastery" (Brown, et al, 2014, p. 93). Bill Belichick, head coach of the New England Patriots, reiterates the need for practice as essential for development as some sports play multiple times a week, while football limited to one time per week, has to rely on practice to improve (Zucco, 2015). Through the process of acquiring knowledge and skills with frequent opportunities for repetitive practice, failure, coaching, and more practice, a level of expert performance can be reached.

Acquisition & Retrieval

Acquisition of skills and knowledge is a slow process, but that process has been proven to make learning last. The cognitive process requires intentionality, explained by Willingham (2009b): "Thinking is slow . . . Thinking is effortful . . . Thinking takes concentration" (p. 5), but this "greater cognitive effort will more than repay you in the

depth and durability of your learning" (Brown, et al, 2014, p. 160). The slow process of cognition can make learning last for longer periods of time as well as making it adaptable for diverse situations (Brown, et al 2014). The temptation of the traditional style of skill or knowledge acquisition of repeating the same thing over and over and moving on must be resisted. Brown, et al (2014) also suggest "difficulties that elicit more effort and that slow down learning . . . will more than compensate for their inconvenience by making learning stronger, more precise, and more enduring" (p. 68). The traditional style of practice that Willingham (2014) perceives can be effective in the short-term especially if an individual embarks in cramming learning into a period directly before being assessed. However, the information and knowledge would dissipate as quickly as it was absorbed, giving way to the much more productive style of learning through retrieval.

The slow process of acquiring knowledge and skills is heavily entrenched with retrieval practice, the constant mining for information that is stored within the brain. Lang (2016) suggests that retrieval practice is the process of retrieving stored knowledge from memory. Retrieval is difficult but highly effective. Brown et al (2014) claim "retrieval is harder and feels less productive, but the effort produces longer lasting learning and enables more versatile application of it in later settings" (p. 4). Retrieval practice is best served when information is acquired and left alone, allowing time to incubate, allowing for a purposed time to force memory to forget the information (Sawyer, 2013). Quizzing is utilized to retrieve the forgotten information from long term memory stores. Constant quizzing and retrieval will create and strengthen pathways to where the information is stored within the brain. According to Brown, et al (2014), "Frequent low-stakes quizzes in class help the instructor verify that students are, in fact,

learning as well as they appear to be and reveal the areas where extra attention is needed"

(p. 125). While this use focuses on how retrieval is applied in the classroom, the same

could be carried over through a performance coaching model to acquire skills.

Acquisition through retrieval is highly effective and can be strengthened by creating

mental models or representations.

Mental Representations

Mental representations are built through repetition and repeated practice, as Coyle

(2009) states, "Repetition is invaluable and irreplaceable" (p. 88). Repetitions and

repeated practice cannot just begin but has to link new knowledge to prior knowledge; the

key being, as Willingham (2009) states, "… they understand new ideas {things they don't

know} by relating them to old ideas {things they do know}" (p. 88). Prior knowledge can

allow individuals to link new learning to something previously learned. Links can make

new learning more durable and sustain motivation. Creating mental representations

requires the use of another strategy known as chunking.

Chunking requires interaction with the whole process, then subdividing into

smaller chunks, followed by changing the speed at which they interact -- starting slow,

advancing to fast and back again (Chase & Simon, 1973, Coyle, 2009). The mental

representations of information chunks were key in the analysis of expert performances

from chess grandmasters. Chase and Simon (1973) explain:

> The data suggest that the superior performance of stronger
> players (which does not appear in random positions)
> derives from the ability of those players to encode the

position into larger perceptual chunks, each consisting of a
familiar sub configuration of pieces (p. 80).

A key driver for the world's greatest chess players was the creation of mental

representations of particular board setups in chunks. Mental representations or models

can be defined as "a set of interrelated ideas or a sequence of motor skills are fused into a

meaningful whole that can be adapted and applied in later settings" (Brown, et al, 2014,

p. 101). The chess grandmasters developed these models from thousands of hours of play.

A claim of Simon and Chase (1973), as well as Ericsson and Williams (2007), were not

that these chess grandmasters had an innate amount of skill in the domain of chess, but

rather their creation of mental representations lead to expert performance in chess.

Ericsson and Pool (2016) not only highlight the mental representations of chess

grandmasters but also of American football quarterbacks. Quarterbacks create mental

representations of the defensive alignments and movements of the opposing team to

understand which player to pass the football to on particular offensive plays. Ericsson and

Pool (2016) claim,

This explains why the most successful quarterbacks are
generally the ones who spend the most time in the film
room, watching and analyzing the plays of their own team
and their opponents. The best quarterbacks keep track of
what's happening everywhere on the field, and after the
game they can generally recall most of the game's players,
providing detailed descriptions of the movements of many
players on each team (p. 64).

Brown, et al (2014) offers a unique summary of this process in learning on the pathway to mastery, "People who learn to extract the key ideas from new material and organize them into a mental model and connect that model to prior knowledge show an advantage in learning complex mastery" (p. 6). The creation and growth of detailed mental representations of performance are paramount to improving and achieving superior performance at any level, through any domain (Ericsson & Williams, 2007, Ericsson, 2008 & Ericsson, 2020). Mental representations are vital in creating automaticity of skills.

Automaticity

Automaticity is the process of making basic movement or skill automatic. Ackerman (1987) discusses automaticity as a processing theory, "...characterized as fast, effortless {from a standpoint of allocation of cognitive resources}, and unitized {or proceduralized} ..." (p. 4). Automaticity processes allow for "parallel operation with other information processing components within and between tasks" (Ackerman, 1987, p. 4). This can be understood as when knowledge and skills become automatic, the required cognitive functions to perform these skills is significantly lessened. Willingham (2009) claims, ". . . basic processes that initially are demanding of working memory . . ." (p. 115) can become more automatic with practice "leaving room for more high-level concerns…" (p. 108). Explained, the more a movement is performed, the neural activity and mental representations become stronger and more well defined. Automaticity is a key aspect of expert performance (Coyle, 2009); however, it takes an extensive amount of practice and repetition to reach, "Automaticity takes lots of practice" (Willingham, 2009, p. 125). However, Ericsson (2020) claims, ". . . expert performers do not make their

performance completely automatic" (p. 162). The reasoning for this could be attributed to that automaticity can slow the progress of improving performance or because so much time has to be invested in the acquisition of skills to reach a level of automaticity.

Brown, et al (2014) discusses the phenomenon of creating mental models as "combinations of cognition and motor skills . . ." (p. 83) to reach automaticity of skills. Without mastery of movement, the thinking required to perform those skills would decrease the ability to perform other tasks that are required. The activities involve driving a vehicle, scribing a signature, or specific performances as playing fundamental notes in music or applying sequences of chess moves during a game (Brown, et al, 2014). Schonbrun (2018) describes automaticity as "representations of an action or sequence of actions that get formed, reorganized and consolidated in our long-term memory" (p. 89). The key is knowing which processes need to become automatic in order to save room in working memory (Willingham, 2009 & Schonbrun, 2018). Because of the amount of time and energy involved in automaticity, it is imperative to decipher which skills need to become automatic. Automaticity can be achieved and maintained through the use of spaced and interleaved practice.

Spaced & Interleaved Practice

Spaced and interleaved practice is a style of retrieval that utilizes forgetting purposefully and retrieving the stored information for the benefit of learning: "When retrieval practice is spaced, allowing some forgetting to occur between tests, it leads to stronger long-term retention than when it is massed" (Brown, et al, 2014, p. 32). As previously noted, the acquisition of skills should be a slow process that does not happen

instantly. Mastery or expert performance cannot be attained unless performance can be applied at different locations and settings.

Brown, et al (2014) describes the difference between massed practice and interleaved practice. An example of massed practice is hitting thirty curveballs as opposed to an example of interleaved practice of hitting five curveballs, five fastballs, and five changeups while mixing them. The player working massed practice "will perform better in practice than the player who mixes it up. But the player who asks for random pitches during practice builds his ability to decipher and respond to each pitch as it comes his way, and he becomes the better hitter" (Brown, et al, 2014, p. 206). By constantly spacing and interleaving practice, the brain will create pathways to where the brain stores information. The practice of spacing and interleaving requires the brain to retrieve information constantly, thus strengthening those pathways and making learning deeper and stronger.

Defining spaced practice and interleaved practice is just as it states, "Spaced practice means studying information more than once but leaving considerable time between practice sessions" (Brown, et al, 2014, p. 203), while interleaving is known as: "Mixing up problem types and specimens improve your ability to discriminate between types, identify the unifying characteristics within a type . . ." (Brown, et al, 2014, p. 206). Willingham (2014) describes a student cramming for a test can perform effectively on the test, but the information will likely be quickly forgotten. Willingham (2014) stands in opposition to massed practice, "For longer retention, spacing practice out is much more effective" (p. 3). These types of practices are woven in with each other to produce stronger learning pathways through retrieval, as constantly "alternating between them

requires that you continually refresh your mind on each topic as you return to it" (Brown, et al, 2014, p. 204). The methods of retrieval along with spaced and interleaved practice appear considerably different than traditional massed practice.

The traditional method of massed practice is considered the least productive in learning and building to mastery (Brown, et al, 2014). While Willingham (2009) confirms, "Memory is the residue of thought" (p. 54), very little thinking may occur, "If all of the practice of a skill is bunched together, students will know that every problem they encounter must be a variant of the skills they are practicing" (p. 124). However, the use of spaced and interleaved practice places requirements on students to "think more carefully about how to tackle the problem, and about what knowledge and skills that might apply" (Willingham, 2009, p. 94). Using this type of practice can give the illusion "like it doesn't work. But rooting around in memory, trying {perhaps struggling} to remember something, is actually a great way to ensure that memory sticks" (Willingham, 2014, p. 4). It demands individuals to retrieve information from long-term memory, creating pathways, and strengthening learning, which "produces better mastery, longer retention, and more versatility" (Brown, et al, 2014, p. 47). Utilizing the methods of spaced and interleaved retrieval during practice can lead to the attainment of expert performance. However, the method of practice that has been known to build toward expert performance is known as deliberate practice.

Deliberate Practice

According to Ericsson and Pool (2016), deliberate practice is referred to as "the gold standard" (p. 10) in creating elite performers in various domains around the world. The practice is highly utilized in performance improvement and the process used to

achieve expertise in specific domains. Deliberate practice can be defined as the attainment of expert performance through acquiring high levels of domain-specific knowledge and skill through planned and monitored practice, mental representations, and frequent analysis of performance (Ericsson, et al, 1993; Ericsson & Pool, 2016 & Schunk, 2016).

Deliberate practice could be used in skill acquisition adhering to four specific conditions, as Ericsson (2008) contends, "significant improvements in performance were realized when individuals were 1) given a task with a well-defined goal, 2) motivated to improve, 3) provided with feedback, and 4) provided with ample opportunities for repetition and gradual refinement of their performance" (p. 991). He also concludes that improving performance at this level "demands full concentration and often requires problem-solving and better methods of performing the tasks" (Ericsson, 2008, p. 991). There are marked differences between experts and novices especially, as Schunk (2016) states, "in quantity and organization of knowledge (p. 243). Even though differences exist, Dreyfus and Dreyfus (1986) conclude that beginners can eventually reach a level of expertise, while Ericsson and Ward (2007) claim, "Deliberate practice has also been implicated as a key factor in maintaining expertise" (p. 349). Through deliberate practice, beginners in any specific domain can attain the level of expert.

However, Macnamara, Hambrick, and Oswald's (2014) meta-analysis concluded regarding the impact of deliberate practice and the performance of individuals in various domains that while a higher correlation was found in music and athletics than in education, deliberate practice "is not as important as Ericsson and his colleagues have argued" (p. 1615). A plethora of research and evidence contradict the results of the meta-

analysis, as deliberate practice has been shown to propel individuals toward expertise.

Deliberate practice research is explained as "a fundamental understanding of how expert

skills are forged in domains as incongruous as radiology, violin, and the spelling bee"

(Schonbrun, 2018, p. 79). The initial report from Ericsson, et al (1993) regarding

deliberate practice was conducted with violin players, with his suggestion being that

expert violin players were exposed to some 8,000-10,000 hours of purposeful, intentional

practice toward specified goals. The ten-year or 10,000-hour rule was highly popularized

in Malcolm Gladwell's (2008) best seller, *Outliers*, where he outlined the path to

expertise. Ericsson (2006) states, "A closer examination of the evidence for the ten-year

rule shows that the number ten is not magical … the number of years of intense training

required to become an internationally acclaimed performer differs across domains" (p.

691). The pathway to expertise is built on the premise of the acquisition of skills being a

process.

Ericsson and Ward (2007) claim, "Expert performance develops gradually and

reaches its peak typically more than a decade after physical maturation" (p. 348). The

idea of 10,000 hours of practice can create an expert is, however, "fundamentally wrong"

(Wiliam, 2018, p. 161). Ericsson, et al's (1993) study claims "that the maximal level of

performance for individuals in a given domain is not attained automatically as a function

of extended experience . . ." (p. 366). He also concludes, ". . . the belief that a sufficient

amount of experience or practice leads to maximal performance appears incorrect"

(Ericsson, et al, 1993, p. 366). Stigler & Miller (2018) state in *The Cambridge Handbook

of Expertise and Expert Performance, 2ⁿᵈ Edition*, "A large body of literature supports

the idea that expertise requires practice over long periods of time, but experience alone

does not guarantee the development of expertise" (p. 436). Deliberate practice is, indeed, as the name explicitly implies, deliberate with the intention to progress an individual's performance by specific principles.

The principles of deliberate practice are applied to propel ordinary performers to expert. The principles can be viewed as the "fundamental keys to achieving an elite level of performance" (Schonbrun, 2018, p. 79). Research and evidence claim that through creating detailed mental representations of performance, followed by planned, monitored, and analyzed practices of the performance combined with deliberate effort and concentration, performance improvements to superior status at any level, through any domain can be attained (Ericsson & Pool, 2016). Through the principles of effective practice, learning is much more effective. Ericsson et al (1993) also claim that as performance improves, the practice and assessment of performance evolves and adapts to the increased level of performance.

Deliberate practice is highly intensive, as it requires superior concentration and intrinsic motivation to improve. The intensity level, claimed by Ericsson, et al (1993) is so high, it is advised that it can only last approximately three hours at the maximum duration. To ensure and maintain the intensity level, it is not feasible to go past this duration because of mental and physical fatigue. Coyle (2009) also advises that sessions of deliberate practice are to take place in the morning when the mental and physical capacities are at their peak state. Deliberate practice, however, does not and will not produce instant results, like Ericsson, et al (2007) state,

> The development of genuine expertise requires struggle,
> sacrifice, and honest, often painful self-assessment. There
> are no shortcuts. It will take you at least a decade to
> achieve expertise, and you will need to invest your time
> wisely, by engaging in 'deliberate practice' -- practice that
> focuses on tasks beyond your current level of competence
> and comfort. You will need a well-informed coach not only
> to guide you through deliberate practice but also to help
> you learn how to coach yourself (p. E3).

Even though deliberate practice does not produce instant results, the objective remains constant.

Pink (2011) claims, "deliberate practice has one objective: to improve performance" (p. 158). Does deliberate practice always involve this methodical struggle that is often unpleasant and painful? Some research contests that in some instances deliberate practice has been proposed to be seen as enjoyable, similar to Mihaly Csikszentmihalyi's research regarding *flow* (Duckworth, 2016). Csikszentmihalyi's (2008) initial research outlines the principles of *flow* show stark similarities to the principles of deliberate practice. Duckworth (2016) discusses the two concepts while defining a fine line between flow and deliberate practice in regards to where goals are set, also contending that deliberate practice is a process and flow is a feeling. Goals and the level they are set are essential components to the culture in maximizing learning. While practice is an integral part of improving performance, various methods of analysis help provide performers with the knowledge required in the specific domain where expertise is sought (Ericsson, 2006). The claim reiterates how vital analysis of performance is during

performance improvement. Combining analysis with feedback extends the quest of expert performance and maximizing learning. Feedback aids in the progression of the quest.

Analysis & Feedback

Constant evaluation and assessment techniques accompanied with feedback can be used to make the appropriate informed adjustments to enhance performance and maximize learning. An analysis of the current state of performance must occur along with feedback on the performance is necessary to propel the current state of performance forward. Analysis and feedback on performance are essential to development. Ericsson, et al (2007) focuses on the constant assessment of performance to identify where deficient areas exist, thus working to strengthen those areas. Feedback must be provided from a knowledgeable coach (Ericsson, et al, 2007b). While Coach Popovich of the Spurs considers fundamentals the most important aspect of basketball, he is very quick to provide his players with feedback and criticism (Allen, 2014, Hancox, 2015, Davis, 2016, & Coyle, 2018). Urban Meyer, current head football coach of the Ohio State Buckeyes and former head football coach of the Florida Gators, consistently focuses on one of the important aspects of his program, player feedback on their performance of exactly the needs to improve (Martin, 2008).

Feedback

Willingham (2009) describes that to improve performance through practice, it is imperative that it is accompanied with "feedback from knowledgeable people . . . Without feedback, you don't know what changes will make you a better cognitive scientist, golfer, or teacher" (p. 193). Feedback can identify where the level of understanding or performance is as well as inform the direction it needs to go. The

absence of feedback can have major implications on performance; without it, there can be little to no change in performance or learning (Hughes & Bartlett, 2015). High-quality feedback is employed by coaches and teachers to reinforce desired behaviors and actions as well as to correct errors. Ericsson & Pool (2016) outline a description of the appropriate employment of high-quality feedback: "simple, direct feedback after every attempt - correct or incorrect, success or failure" (Ericsson & Pool, 2016, p. 17). High-quality feedback should be specifically defined in order to understand and utilize it to its maximum potential.

Feedback is defined as the process of information and details on performance being exchanged or looped from one source to another and back to reach a specific goal, create understanding, or to track progress (Hattie & Clarke, 2019). Feedback should be specifically focused on performance and how to improve it. Ericsson, et al (1993) claim individuals "should receive immediate informative feedback and knowledge of results of their performance" (p. 367). Feedback must be direct and explicit in ensuring how to improve performance because, without these specific characteristics, it can be very devastating to learning (Ericsson & Pool, 2016 & Hattie & Clarke, 2019). Feedback is at the core of improving performance to expert status and to "maximize learning capacity" (Hattie & Clarke, 2019, p. 17). However, feedback is sometimes ineffective and inadequately used.

Feedback should not only propel performance but should promote learning. Feedback can be viewed as the foundation to improve performance. Instances, where feedback is not appropriately utilized, is when the feedback involves, "Telling people what we think of their performance doesn't help them thrive and excel, and telling people

how we think should improve actually hinders learning" (Buckingham & Goodall, 2019, p. 95). Truly effective feedback causes the individual to cognitively process what is being said to internalize the improvements or changes in performance. Brown, et al (2014) makes the argument that a brief delay in feedback is actually more effective because of the retrieval process. Immediate feedback does not allow for retrieval practice prompting greater cognition, and it can also lead to dependency for the feedback to the performer. The use of retrieval practice causes the individual to sift through their memory, going back to the actual performance to fully understand the feedback. The sifting process can create more cognitive activity, therefore deeply embedding the feedback into memory for the next occurrence, thus, leading to lasting improvement. The reliance on memory from a coach or individual can hinder performance improvements, also allowing subjectability to influence the next steps in the improvement process. Feedback is an essential component, but only after the evaluation to determine the current state of performance.

Evaluation

According to Ericsson (2008), "Superior performance requires the acquisition of complex integrated systems of representations for the execution, monitoring, planning, and analyzes of performance" (p. 993). Constant evaluation and assessment are used to move onto more difficult skills in a quest for expertise. The process of constant evaluation and assessment are used to reset goals in order to consistently progress forward toward mastery. Deliberate practice is only effective at increasing performance if skill goals are constantly adjusted to stay in the perfect zone where the task individuals are asked to do is not too easy as there will be no challenge, but not too challenging that will cause an overload or shut down (Ericsson, 2008 & Ericsson & Pool, 2016). The most

effective and efficient way to remain in the optimal zone for improvement is to constantly evaluate and monitor performance.

A key aspect of improving performance is "to overcome weaknesses, and performance is carefully monitored to provide cues for ways to improve it further" (Ericsson, et al, 1993, p. 368). Without resetting goals and continuing on the quest for mastery, performance can actually regress as individuals become stagnant after reaching an acceptable level of performance or fail to maintain practices (Willingham, 2009 & Ericsson & Pool, 2016). This constant reset "is not simply about struggling; it's about seeking out a particular struggle, which involves a cycle of distinct actions: 1) Pick a target, 2) Reach for it, 3) Evaluate the gap between the target and the reach, and 4) Return to step one" (Coyle, 2009, p. 92). Evaluation and analysis are much more effective when used in conjunction with video recording. The use of video can improve performance by providing an opportunity for objective analysis and feedback.

Performance Analysis

Performance analysis is the process of using objective observations to improve performance through the use of visual analysis and feedback. This process is highly utilized in athletics to produce learning and performance improvements. Performance analysis began in European football, or soccer, as video recordings were used to analyze the performance of specific practices or games providing the coaches with feedback on their players' performance, as well as a systematic way to observe and evaluate performance to "produce gradually refined and improved performances" (Ericsson, 2020, p. 171). The process has become increasingly more effective by professional athletes, as they can be provided with immediate feedback through computer-aided analysis of video

(Lingbergh & Sawchik, 2019). Performance analysis consists of two distinct avenues focused on the improvement of teams and individuals. Notational analysis focuses on videos of systems and strategy within team settings; while biomechanical analysis is designed for specific, detailed movements by individuals. The combined use of notational analysis or biomechanical analysis and feedback is used in athletics to produce learning and performance improvements far superior to other domains (Bartlett, 2001, Hughes & Franks, 2008 & Hughes & Bartlett, 2015).

Notational analysis provides a means to critique and improve conceptual ideas, sometimes referred to as "plays" in the athletic context of team sports. This highly utilized process originated for the improvements to how each player within the team moves, creating designed "plays" in European football or soccer. Notational analysis could also describe tactical movements to better understand the movements of the unit as a whole. Bartlett (2001) explains, "Notational analysis . . . focuses on gross movements or movement patterns in team sports. It is concerned mainly with strategy and tactics" (p. 123). This method of analysis is used as a means of error detection, feedback, as well as predictive use (Church & Hughes, 1986). A very adaptable form of analysis, notational analysis allows for a zoomed-out analysis of team performance along with a zoomed-in analysis of more specific actions (Hughes & Franks, 1997). While notational analysis focuses on team or unit functions and movement, performance analysts turn to biomechanical analysis when more specific analyzes of individuals are needed.

Biomechanical analysis is utilized in improving performance by focusing on the fine motor movements that make up individual skills. Reilly and Holmes (1983) contend that during close contests, teams with occurrences of higher performances in the fine

details could have a distinct advantage. The advantage is most likely due to the use of the highly effective practice of biomechanical analysis prioritizing where and how improvements are made (Hughes and Bartlett, 2015). Bartlett (2001) explains, "Biomechanics studies the fine details of movement technique of, mainly, performers individual sports" (p. 123). This focus on the details of skills can have a drastic impact on the improvement of performance, ". . . biomechanics identifies the performance indicators that relate to good and bad techniques" (Bartlett, 2001, p. 123). The improvements come in the fine details of movement; not necessarily meaning full movements, but the smaller, intricate details of techniques that are improved to make the performance as a whole better. Biomechanical analysis focuses on improving techniques, as Lees and Robinson (2015) focus on two stages: "...the first is based on observation and its purpose is to identify and diagnose faults in performance … The second is remediation" (p. 181). These two stages are the fundamental factors of biomechanical performance analysis as they determine the deficiencies that exist between the current state of performance and the desired state while determining how to close the gap between the performances.

Performance analysis uses "the measurement of the movements of sports performers, making extensive use of video analysis and technology" (Bartlett, 2001, p. 123). Liebermann and Franks (2015) regard that the use of video and technology has transformed notational and biomechanical analysis allowing for on-demand feedback. The transformation of on-demand feedback begins with not having to rely on memory alone improving limitations involved in trying to recall information from a performance session (Hughes & Franks, 1997 & Hughes & Franks, 2008). The concept of video

recording and analysis is an integral part of improving performances by reviewing the performance, discussing it, and gathering feedback on the performance to make adjustments for improvement. However, Willingham (2009) states, "It's not productive just to sit down and watch them like a movie, waiting to see what will happen. You should have a concrete goal" (p. 198). Performance analysis is also highly beneficial in promoting reflection to make the necessary adjustments for improvement.

Reflection is an integral part of learning and has been linked to successful progression (Middlemas & Harwood, 2018). Video analysis provides a layer of reflective practice that simple reliance on memory cannot match, as storage in the working memory is just not large enough (Willingham, 2009). Video promotes feedback generated through the process of reflection that can be viewed as vastly superior to individual memory of having to recall what was seen during a performance.

Reflection

Reflection during evaluation and assessment allows individuals to understand "what went right, what went wrong, and how might I do it differently next time" (Brown, et al, 2014, p. 155). The process of reflection is a powerful learning tool but requires deep concentration. It provides "a combination of retrieval practice and elaboration that adds layers of learning and strengthens skills" (Brown, et al, 2014, p.209). Couros (2015) reiterates how important reflection is to learning, as he states, "I reflect, therefore I learn" (p. 188). Reflection provides an opportunity to spend time thinking about past performance, and where the next steps should go. Coyle (2018) describes the NAVY SEAL's *After-Action Review* as an effective method of reflection, "You put down your

gun, circle up, and start talking" (p. 141). The process of reflection forces the brain to retrace mental pathways and connections to frame information in individualized contexts.

The use of reflection can be a powerful tool to advance learning and performance, but "the technique remains little understood or utilized by teachers or students as a learning tool in traditional educational settings" (Brown, et al, 2014, p. 29). Its use is to inform learning and performance providing all parties involved with the ability to self-regulate performance concluding with the question -- where to next? For these aspects of learning and performance improvements to be effective, a culture that is conducive to learning from errors based on trust must exist. A culture conducive to learning is essential to progress on the quest for mastery.

Culture

Culture is the presence that exists in and around environments. However, the presence of culture does not merely exist but must be cultivated and developed. Matt Deggs, head baseball coach at the University of Louisiana at Lafayette, states in *The Pack* regarding his team, "The most important thing that you will do is build your team and create your culture" (Deggs, 2018, p. 5). Culture does not just exist; it is grown and nurtured. It must be attended to on a daily basis within organizations, oftentimes going unnoticed. Unlike many other things that exist in organizations, "Culture is often not something you can measure. Rather, it's something you can feel" (Couros, 2015, p. 178). Coyle (2018) describes, "While successful culture can look and feel like magic, the truth is that it's not. Culture is a set of living relationships working together toward a shared goal. It's not something you are. It's something you do" (p. xx). However, it does not just come to fruition or magically appear.

Culture could potentially have significant impacts on performance and learning, progressing from average or adequate to expertise and mastery, "The creation and maintenance of high performing cultures represents a stimulating new era in applied sport psychology" (Cruickshank & Collins, 2012, p. 351). High performing cultures can, indeed, have a profound impact on performance, as a conclusion of studies involving United States Olympic athletes confirm that culture has a significant influence on performance in the Olympic Games (Greenleaf, Gould, & Deffenback, 2001 & Gould, Greenleaf, Guinan, & Chung, 2002). Collins (2009) describes the development of culture through Wooden's UCLA Bruins basketball teams of the 1960s and 1970s. Wooden went from being an unknown coach to national prominence, "Like the Wooden dynasty, lasting transformations from good to great follow a general pattern of buildup followed by breakthrough (Collins, 2009, p. 172). Essential components of this creation of culture are trust and vulnerability, goals, commitment to improvement, environment, relationships, and motivation. The unique opportunities for these components to exist within documented effective athletics teams and utilized by effective and highly successful athletic coaches to create cultures conducive to maximize learning leading to expert performances.

Trust and Vulnerability

Effective cultures are built on trust between the individuals. However, trust is not simply gained from getting things accomplished; nor does a magical checklist exist. Sinek (2009) describes trust as "a feeling . . . You have to earn trust by communicating and demonstrating that you share the same values and beliefs (p. 84). Trust is highly predicated on vulnerability from individuals within the organization, as Coyle (2018)

states, "Vulnerability doesn't come after trust -- it precedes it" (p. 107). A culture built on trust and vulnerability can provide a highly effective learning environment (Coyle, 2018). Jowett and Poczwardowski (2007) suggest that athletes that trust their coach are likely to respond to the coaching that is provided. This would suggest a similar trust with individuals on the same team relying on each other, in addition to the coach/athlete aspect. Trust and vulnerability are synonymous with one another, and are necessary components for an environment for learning and improvement to thrive. Foundations of trust are dependent on connection and safety.

Trust is built on a foundation of connection and safety, as those elements "perfectly capture a basic human need -- the need to belong . . . When we feel like we belong, we feel connected, and we feel safe. As humans, we crave the feeling and we seek it out (Sinek, 2009, p. 53). Deci and Ryan (2000) suggest in their findings that individuals want to be connected to one another and have an internal desire to do so. When any new member of the Oklahoma City Thunder professional basketball team is hired, they are taken on a tour of the Oklahoma City National Memorial, as "It sends a powerful belonging cue . . ." (Coyle, 2018, p. 87). Coyle (2018) goes on to discuss that the victims of the 1995 Oklahoma City bombings are honored at the National Memorial, providing new members of the organization insight into what so many individuals that attend games have gone through in their lifetime. Examples of this type of culture are one that "communicates one powerful overarching idea: We are safe and connected" (Coyle, 2018, p. 15).

Coyle (2018) also describes the missileers, well-trained soldiers charged with overseeing the nuclear silos, and the culture they work within. The missileers were

notoriously known as a low performing unit, but "The difference wasn't in the content of their character. It was in the lack of safety and belonging in their culture" (p. 46). These cultural aspects are imperative to an environment that encourages learning and high-level performance. Individuals must know they belong to a high performing group with expectations and support to meet them (Coyle, 2018). The foundational elements of trust are also promoted through vulnerability. Vulnerability can aid in connections among individuals, reiterate safety, and build trust.

Showing vulnerability provides visibility that individuals, especially leaders, are humans and are real persons. Vulnerability and trust establish a culture conducive to learning and high performance. Phil Jackson was known for trying to promote his teams to show vulnerability in order to find out about his players (Jackson & Delehanty, 2014). Jackson also wanted practices with the Chicago Bulls and the Los Angeles Lakers to be a safe place for players to do and say things not worrying that what was done or said would be published or accessed by the media (Jackson & Delehanty, 2014). Obviously, Jackson's teams performed at exceptional levels, due to trust among teammates and of the coaching staff. Urban Meyer commented during a keynote address during an Ohio High School Coaches Convention, that the details of being successful were not a question of football knowledge and scheme, but of belief and trust. A sense of belonging and safety are unheralded aspects of highly effective cultures where trust becomes a byproduct allowing individuals to build trust among one another, even in the face of disagreement.

In order for improvements to be made, trust is imperative. Collins (2009) explains his research of the Phillip Morris company when making decisions, constant arguments

and disagreements emerged, however, "All debates were for the common good of the company, not your own interests" (p. 60). Cohesion is defined by Carron, Brawley, and Widmeyer (1998) as a "dynamic process that is reflected in the tendency for a group to stick together and remain in the pursuit of its instrumental objectives and/or for the satisfaction of member affective needs" (p. 213). Cohesion is a byproduct of trust among teams, and the level of trust between team members had to be extremely high for these decisions to make.

Bloom, Stevens, and Wickwire (2003) state, "If cohesion is the desired final outcome, then team building is the process to facilitate its development" (p. 129). Much like Phillip Morris, Pixar is highlighted by Burkus (2014) as he discusses a myth that cohesive teams are the best way for the most innovative ideas to emerge, "The more debate around each frame, the higher the end quality of the film" (p. 146). He goes on to state, "Pixar employees work together; they have fun together. Walking around campus, it's hard to imagine employees fighting. Yet fight they do. For many of the animators at Pixar, conflict, and debate is just part of the morning routine" (Burkus, 2014, p. 145). There is no room for egos, but a tremendous amount of trust must exist between team members. Trust among team members, trust among athletes and coaches, and trust among coaches all must be present in order for all stakeholders involved to progress toward the same goal. Loughead, Hardy, and Eys (2006) suggest leadership with defined roles among a team can lead to the progression toward a goal. Trust among individuals is as vital of a need as "…humans need oxygen" (Bartholomew, 2017, p. 7). As essential as trust is to an organization, a clear direction is equally important. The direction of performance improvements relies on goals.

Goals

Improving learning should be the overarching goal of any organization. However, to maximize improvements, goals must be clearly defined. The clarity of a goal provides the focus for improvement methods, "Without clarity, nobody knows the direction. Nobody knows where you're headed" (Deggs, 2017, p.6). Bill Belichick uses goals on a daily basis to improve the New England Patriots in their quest for championships (Zucco, 2015). Marcus Luttrell, United States Navy SEAL, whose story is recounted in his book turned box office cinema, *Lone Survivor*, states, "The clarity of purpose is inspirational" (p. 15). Providing clarity through goals is an essential component for performance improvements.

The process of acquiring domain-specific concepts and skills utilizes clearly defined performance goals just outside an individual's comfort zone with a highly intentional, deliberate focus and motivation toward obtaining those goals that are just out of reach providing sufficient challenge not excessive enough to decrease motivation (Ericsson, et al, 1993, Ericsson, 2008, Pink, 2011, Sawyer, 2013, Schunk, 2016, Schonbrun, 2018, Hattie & Clarke, 2019, & Ericsson, 2020). Clearly defined goals are essential in a culture conducive to learning and improvement, as Doshi and McGregor (2015) content, "Strange things happen to us when we're all gunning for the same goal" (p. 192). Oftentimes, however, goals need to be readjusted to maintain a clear pathway to mastery. Collins (2009) suggests, "There is nothing wrong with pursuing a vision for greatness . . . But, unlike the comparison companies, the good-to-great companies continually refined the path to greatness . . ." (p. 71). Just as tweaking the pathway toward a goal is necessary, stretching for them is equally as important.

Hattie & Clarke (2019) refer to the process of stretching and goal setting as "pushing the boundaries so that the 'just right' zone increases in its demands . . ." (p. 17). The level of intensity that has to exist within this zone can maximize performance improvements. This 'just right' zone could be considered the maximum learning zone. Not only can this zone maximize learning, an overwhelming feeling of satisfaction. The sense of overwhelming satisfaction is explained in reference to *Goldilocks*, as Pink (2011) states, "challenges are not too hot and not too cold, neither overly difficult nor overly simple" (p. 116). Pink (2011) describes this as a situation in a misalignment in the desired goal and an individual's current state of performance level. Csikszentmihalyi (2013) discusses *flow*, stated as, "the feeling when things were going well as an almost automatic, effortless, yet highly focused state of consciousness" (p. 110). This feeling of *flow* can be applied across all domains.

When *flow* is applied to performance improvement, it is heavily reliant on what Csikszentmihalyi (2013) refers to as a ". . . balance between challenges and skills. In *flow*, we feel that our abilities are well matched to the opportunities for action" (p. 111). The concept of "well-matched" is not defined clearly but applies to tasks that require effort or those that are considered difficult but obtainable. Brown, et al (2014) also contends regarding learning: "To be desirable, a difficulty must be something learners can overcome through increased effort" (p. 99). Extremely difficult tasks will disable this zone because an individual will become overly frustrated and fold their efforts toward accomplishing the task. This sense of *flow* matches the 'just right' zone that Hattie and Clarke (2019) refer to as the primary zone to maximize performance improvements. Deliberate practice, however, aims for goals to be set just outside this zone, causing

uncomfortability (Ericsson & Pool, 2016). A very high degree of commitment to meet

these goals is imperative to improvement.

Commitment to Improvement

Commitment is essential in performance improvement (Studer & Pilcher, 2015).

When expectations are clearly set, a commitment to improvement must exist. Providing

an environment that allows for individuals to continuously improve displays the

commitment of expectations and culture. This type of environment, used by coaching

legends, Phil Jackson and Nick Saban, is one that does not focus on the end result or

outcome, but on the pathway to get there (Jackson & Delehanty, 2014 & Anderson,

2019). The commitment to improve must be addressed in order for individuals and teams

to reach maximum potential. Commitment can be shown through setting expectations for

each team member and holding teammates to those expectations. The expectation that

Greg Popovich uses with the San Antonio Spurs is one of expectations, as he states to

team members, ". . . I have very high expectations and I know that you can reach them"

(Coyle, 2018, p. 56). In a culture committed to improvement through expectations,

embracing and encouraging learning through failure is essential. This is not a culture of

the acceptance of failure, but one that, as Bill Walsh, legendary head football of the San

Francisco 49ers in the 1980s, suggests, "Almost always, your road to victory goes

through a place called 'failure'" (Walsh, Jamison, & Walsh, 2009, p. 1). Failure can be

used as a necessary avenue for improvement.

Embracing and encouraging learning through failure displays a commitment to

improve. The environment must also include the attitude that errors and failures are an

essential part of learning. Duckworth, Peterson, Matthews, and Kelly (2007) claim that

expecting and knowing "failures and misfortunes" will occur, and domain expertise

"requires years and years of time on task" (p. 1100). Learning opportunities are created

through error and failure while constantly working toward improving. The opportunities

suggest where errors and failure occur, the correction can have lasting impacts on

learning, "Making mistakes and correcting them builds bridges to advanced learning

(Brown, et al, 2014, p. 7). Willingham (2009b) also suggests regarding failure:

> Fear of failure can, therefore, be a significant obstacle to
> tackling this sort of challenging work. But failure should
> not be a big deal. Michael Jordan put it this way: 'I've
> missed more than 9,000 shots in my career. I've lost almost
> 300 games. Twenty-six times, I've been trusted to take the
> game-winning shots and missed. I've failed over and over
> and over again in my life. And that is why I succeed (p.
> 11).

An imperative aspect of culture is displayed through Jordan's ideology, as failure cannot

have a negative connotation. Jordan's track record of domain expertise and commitment

to improvement is evident from his unprecedented and unmatched success throughout his

basketball career (Heheir, 2020).

Collins (2009) describes this environment during the period of restructuring for

Fannie Mae in the 1980s, as the company experienced major issues fearing failure was

inevitable. Leadership saw this as an opportunity for growth and the creation of a much

more effective company. By using failure as an opportunity, Fannie Mae reinvented itself

and saw incredible growth over the upcoming years. The commitment to improve can be

summarized in *The Champion's Mind*, "Our greatest glory is not in never failing, but in

rising every time we fail" (Afremow, 2013, p. 67). Corrections and remediation are the keys to improving learning, constantly requiring to grow new pathways as well as continuously revisiting them. Failure can also result in higher levels of learning. Learning is hard, and those "who are taught that learning is a struggle that often involves making errors will go on to exhibit a greater propensity to tackle tough challenges and will tend to see mistakes not as failures but as lessons and turning points along the path to mastery" (Brown, et al, 2014, p.91). Brown, et al (2014) also states, "… when learning is harder, it's stronger and lasts longer" (p. 9). Hattie and Clarke (2019) affirm the belief regarding opportunities for learning through errors, as "Errors in learning can create opportunities . . ." (p. 27). Difficulty in learning can only have potentially positive effects within a culture committed to improving through failure.

Coyle's (2018) discussion of the missileers looks at the lack of this aspect of culture where the interactions do not embrace or encourage learning through failure: "You're either perfect or you're a bum," as the soldiers ". . . must score 100 percent on certain portions of the tests, or else they fail" (Coyle, 2018, p.45). This type of negative culture can cause great damage to an organization, causing a lack of motivation, high rates of turnover, and low morale among members. Cultures, similar to the ones depicted here, are not conducive to learning and high levels of performance. Cultures that are conducive to learning and high levels of performance have particular environmental aspects. An environment committed to improvement through failure is imperative, but the environment must be prioritized on expectations, common purpose, and discipline.

Environment

The environment for a culture conducive to maximize learning to truly be effective must be founded upon expectations, purpose, and discipline. Expectations and purpose provide direction while discipline confirms accountability in that direction. Cruickshank and Collins (2012) discuss high-performing cultures are essentially "a product of the interaction between management ideals and their targets' beliefs and expectations" (p. 341), as they explore methods in order "to keep all players and staff satisfied, motivated, and united" (p. 342). Jackson and Delehanty (2014) discussed Michael Jordan on his demanding attitude as a teammate, as his long-time teammate in the early 1990s Chicago Bulls dynasty, John Paxson, states, "If you were on the floor, you had to do your job and do it the right way. He couldn't accept anyone not caring as much as he did" (p. 81). John Wooden, during the 1960s, early in the UCLA dynasty was noticed to be picking up trash in the locker room after games, which is a common occurrence from other highly successful athletic coaches, such as Billy Donovan, head basketball coach of the Florida Gators and Oklahoma City Thunder, Mike Krzyzewski, head basketball coach of the Duke Blue Devils and the 1996 United States Olympic basketball team known as the Dream Team, Tom Coughlin, head football coach of the Jacksonville Jaguars and New York Giants, as well as the New Zealand All-Blacks rugby team (Coyle, 2018). In these cases, coaches set the expectations and purpose and demanded discipline in doing so.

Collins (2009) provides insight on purpose, as he states, "It's about how you take a good organization and turn it into one that produces sustained great results, using whatever definition of results best applies to your organization" (p. 15). Purpose is key to

the environment where the culture exists. Pink (2011) discusses purpose as one of the major components in the motivation formula; while Studer and Pilcher (2015) comment on purpose, as to why "we work . . . to have a purpose, do worthwhile work, and make a difference" (p. 109). An overarching purpose can downplay selfish behaviors that are sometimes present in sport. Popovich and the Spurs are one of the most successful teams in sports in the past decades, due largely in part of the unselfish behaviors putting the team's purpose above individual interest (Coyle, 2018). Explicit details are part of building purpose.

John Wooden started every single year at the first practice by teaching every athlete, even returning All-American players and national champions, to tie their shoes properly (Wooden & Jamison, 1997 & Bernstein & Greenburg, 2008). Expectations, goals, and improvements would be meaningless without purpose. Leaders should also celebrate aspects of culture that will remind those individuals of their purpose and that they can make a difference, as it "fuels the passion that brought people into this field" (Studer & Pilcher, p. 105). Popovich and the Spurs go to dinner to enjoy food and wine after games, even in the face of defeat to maintain a sense of purpose and importance of the team rather than simply wins and losses (Coyle, 2018). The environment also must prioritize discipline as part of the culture.

Discipline also establishes an environment of, what Collins (2009) refers to as "workmanlike diligence" (p. 39). Discipline, in this instance, is about working toward the purpose, not regarding consequence. Collins (2009) claims that when you have a "culture of discipline" (p. 13), there is no need for micromanagement control or other forms of unmotivating behavior, collectively referring to it as "tyrannical disciplinarian" (p. 124).

The key is establishing discipline and structures that micromanagement is not necessary.

This environment of discipline was not about getting rid of those that did not comply

with the culture, "but to create an environment where hardworking people would thrive

and lazy workers would either jump or get thrown right off the bus" (Collins, 2009, p. 51)

and allowing those "who are willing to go to extreme lengths to fulfill their

responsibilities" (Collins, 2009, p. 124) to thrive. Personal discipline, accountability, and

ownership aid in the creation of this environment. Coyle (2018) explains that Popovich is

notorious for not attending huddles during timeouts in efforts to force his players to work

out issues; while Jackson and Delehanty (2014) comments, "I would slip into the

background and let the players orchestrate the attack" (p. 121). Leading from the inside

out is a byproduct of discipline within an organization.

     Discipline within the organization can assist in improvements through consistent

improvement and growth over time. Collins and Hansen (2011) consider a concept that

utilizes consistency over long periods of time rather than quick gains and declines, known

as "the 20 Mile March concept" (p. 45). The 20 Mile March takes "fanatic discipline"

(Collins & Hansen, 2011, p. 20) to maintain trending improvements while resisting the

urge to make stretched gains in profit margins when available. This type of growth is

claimed to be much more sustainable over time than fast-growing companies. Sustained

growth is evident in highly successful coaches as they tend to have tenures longer than

most with their teams. Throughout this tenure, these individuals included in this

environment will begin to form relationships with one another. It is imperative that

relationships are valued within the culture.

Relationships

A high priority must be placed on establishing relationships with the person or persons providing coaching, mentoring, or teaching. Without a relationship, any potential benefits to performance enhancements could be lost. Relationships simply are the most important thing (Couros, 2015). Ericsson, et al (2007b) claim that even though the feedback necessary to improve is harsh, it is necessary to improve, but can only be provided by someone that actually cares more about the person than the actual performance. The relationship between coaches and athletes is a vital component to the development of athletes and athletic teams (Jowett & Poczwardowski, 2007, Rocha & Chelladurai, 2011, Vann, Coleman, & Simpson, 2014 & Gencer & Ozturk, 2018). Brett Bartholomew, a highly regarded strength and conditioning specialist comments regarding his years of training athletes, "The interpersonal dynamic between coach and athlete is central to the coaching process" (Bartholomew, 2017, p. 3). As is evident from the sports world regarding relationships and learning, cognitive science and learning research contest the same concept and agree, relationships far outweigh the performance itself, "The emotional bond between students and teachers - for better or worse - accounts for whether students learn" (Willingham, 2009, p. 65). Jowett and Poczwardowski (2007) also confirm,

> A coach-relationship that contains elements of success and
> effectiveness is the ideal athletic relationship because it
> includes both performance success, as reflected in improving
> skill or achieving success, and personal growth, as reflected
> in experiencing a sense of maturity and satisfaction, and an

example of this type of relationship is Michael Phelps and

Bob Bowman (p. 4).

A degree of personal feelings and trust must be present for these relationships to develop

between not only the coach/athlete but numerous other individuals to develop.

Relationships should be based, as Collins (2009) states, "beyond just mutual

respect to lasting comradeship" (p. 62). Popovich comes to practice every day and walks

around to personally interact with each and every player, as he jokes, touches them on the

arm or shoulder, hugs, communicates in their home language, as San Antonio Spurs

General Manager, R.C. Buford, comments, "That's the way Pop approaches every

relationship. He fills their cups" (Coyle, 2018, p. 50). Connections among leaders and

members with other team members can lead to, as Pink (2011) refers to, a higher degree

of productivity and fulfillment, as well as success in the sport by providing support

during intense, high levels of competition (Pierce, Sarason, & Sarason, 1996 & Jowett &

Nezlek, 2011). Relationships can also lead to productivity and fulfillment in other

domains even in the face of conflict.

Collins and Hansen (2011) comment one of the keys to building great companies

is to "build deep and enduring relationships with people for whom you'd risk your life

and who'd risk their lives for you" (p. 179). Pixar utilizes these relationships and teams to

encourage conflict of team members, "Teams that utilized conflict in their process

consistently outperformed teams that focused on cohesion" (Burkus, 2014, p. 150).

Teams of this nature have to build relationships among members. The relationships have

to be based on trust with the end goal in mind in order to maximize potential and

effectiveness. Improvements in performance have to be more than simply improving

performance but have to be "all about establishing relationships, conveying the fact that I'm interested in you, and that all the work we do together is in the context of that relationship" (Coyle, 2018, p. 24). Jackson & Delehanty (2014) allude to Jackson commenting that even know his players, both of the Bulls and the Lakers, were not close off the court, they were not strangers to each other, "Most important, they had a deep respect for one another" (p. 165). Relationships are the key component in improving performance, and these relationships are constructed through an investment of time spent among individuals, especially in a coach to athlete relationship (Foulds, Hoffmann, Hinck, & Carson, 2019). The individuals included in the relationship should feel a sense of togetherness and safety. They must share a bond based on fundamental principles. These principles, according to Coyle (2018), "We are close, we are safe, we share a future" (p. 26).

Bartholomew (2017) comments, "Recent technology may be advancing what we are able to measure and manage, but the best training programs are not driven by technological connection. They are driven by human connection" (p. 2). Oftentimes, however, individuals, especially within coach-to-player relationships, feel as if the coach is more interested in the actual performance than the individual. In misalignment with this occurrence, Buckingham and Goodall (2019) conclude, "We excel only when people who know us and care about us tell us what they experience and what they feel, and in particular, when they see something within us that really works" (p. 101). Relationships thrive when individuals invest time with one another, building championship organizations (Jackson & Delehanty, 2014, Coyle, 2018, Anderson, 2019, & Heheir,

2020). A relationship built within a culture of trust can lead to expert performance and success, which is key to keeping the individual motivated to continue to improve.

Motivation

Doshi and McGregor (2015) allude to the imperative function of motivation and its role in high levels of performance. Motivation is a concept the drives individuals towards expertise and mastery of performance and essential to continuous improvement. External motivation from encouragement or praise is the main source of motivation early on in the process of performance improvement with novice learners or performers trying to keep them motivated to improve (Wooden & Jamison, 1997, Coyle, 2009, & Wooden & Jamison, 2010). However, as novice performers improve their skill set, a likely increase of intrinsic motivation should further their quest. In the process of development and progress, individuals must develop a much more intrinsic motivation to continue to improve. Motivation can come from small improvements, as Wooden and Jamison (2010) discuss making small steps toward improvement on a daily basis in performance.

Motivation, as described by Pink (2011) calls for individuals to have autonomy in the efforts of solving a task The task should be of appropriate difficulty that pushes individuals to a point just beyond comfortability and establishing a purpose for the task being presented that is part of something larger. Tincknell-Smith, Duda, and Ntoumanis (2011) study on autonomous goal motives was found to have a significant effect on motivation in training sessions for improvement areas. Autonomy plays an essential role in increasing and sustaining motivation. Jackson and Delehanty (2014) describe autonomy through the Lakota Indian culture as they are said to have far more autonomy than other cultures, but carry considerably more responsibility. This type of culture is one

that Jackson confirms to have used with the Chicago Bulls teams of the 1990s and the Los Angeles Lakers teams of the 2000s that produced 11 NBA championships.

Motivation can also be described as an intentional focus on a task or material that is to be learned. This intentional focus can keep individuals "focused, awake, and working hard (Brown, et al, 2014, p. 235). Purpose provides sustainability of high levels of motivation throughout training: "Help your students understand the ways you have incorporated desirable difficulties into your lessons, and why" (Brown, et al, 2014, p.228). Students that are motivated to improve can exert more effort into tasks that are more difficult, as Schunk (2016) declares, "most learning is motivated (p.341). Motivation in this sense is drastically increased, especially early in development.

According to Willingham (2009b), by praising the effort of young or novice individuals rather than ability, motivation can be increased to complete difficult tasks. Willingham (2009) also states regarding praise, "In addition to praising effort, you might praise a student for persistence in the face of challenges . . ." (p. 142). This can also increase motivation through purpose and the satisfaction of completing a challenging task (Aerily, 2016). Praising effort and not ability can maintain high levels of motivation during difficult situations. The difficulties involved in continuous performance improvements require tremendous motivation. By building motivation through external praise, the transition to high levels of internal motivation is essential for further improvements.

A key characteristic of deliberate practice involves high levels of internal motivation to continue to the hours and hours of practice (Ericsson, 2008, Coyle, 2009, Ericsson & Pool, 2016, Schunk, 2016 & Schonbrun, 2018). Schonbrun (2018) reiterates

that individuals might be resistant to spend 10,000 hours in "deliberate, excruciating, mind-numbing practice" (p. 97) as most would not inherently possess the intrinsic motivation nor the internal discipline to become an expert in a specific domain. Sustained motivation drives all performance improvements in any field or domain. The requirement for motivation to drive performance must be a constant, as Ericsson and Ward (2007) contend, "The highest levels of expert performance and the drive for improvement will always involve searching for innovation and experimentation at the threshold of understanding, even for masters dedicated to redefining the meaning of excellence in their fields" (p. 349). Constant improvement is imperative to maximize learning on the pathway to expertise and mastery.

Summary

Using the principles of performance enhancement in conjunction with a culture conducive to maximize learning provides individuals a great opportunity to progress on the pathway to mastery and expertise (Ward, et al, 2007 & Sawyer, 2013). Expertise requires a foundation of knowledge and understanding superior in terms of performance: "Mastery requires both the possession of ready knowledge and the conceptual understanding of how to use it" (Brown, et al, 2014, p. 18). The pathway for the quest to mastery has been paved; however, its utilization in other domains continues to be in question.

Regarding the quest to mastery, Willingham (2009) contends it would not be effective practice "to do everything at once. It's not realistic to expect to go from wherever you are now to 'great' in a year or two. Because you're not trying to fix everything at once, you have to set priorities" (p. 202). Performance or learning, at any

level, can progress on the quest to mastery, and could, indeed, have lasting impacts on

learning for years to come. Expertise is not, according to Brown, et al (2014), "a grade on

a test, something bestowed by a coach, or a quality that simply seeps into your being with

old age and gray hair" (p. 159), but the process of multiple iterations of "...simulation,

generation, testing, feedback, and practice" (p. 252). Progression toward mastery should

be a continuous effort to improve, starting with foundational skills and leading to

conceptual ideas. Ericsson and Pool (2016) contest that this quest to expert performance

is not about reaching maximum potential but constantly building toward it. In the words

of the legendary 1980s, San Francisco 49ers head football coach, Bill Walsh, "Recognize

that mastery is a process, not a destination" (Walsh, Jamison, & Walsh, 2009, p. 146).

CHAPTER III: METHODOLOGY

Introduction

Schunk (2012) defines learning as the acquisition of skill or knowledge through study or instruction or deemed as a behavioral modification through experience. The question driving this research methodology is not what learning is, but how it takes place, how it is improved, and how it is maximized. Learning in athletics can seem different across domains as athletic coaches often provide the opportunity for maximal learning potential. The frequency of opportunities is extremely high and has been evident through countless extraordinary athletic performances. The performances display what is learned along with how much an individual actually learns regarding the skill at which is being performed. Expert performances can demonstrate superior rates of learning under certain conditions. What conditions must be in place for this model of learning? What are the components of a model of learning in these contexts? What culture must be in place to maximize this model of learning?

Research Questions

1. What theoretical model describes learning as understood by effective athletic coaches?

2. What aspects of culture are essential to maximize learning?

Statement of Purpose

The purpose of this study is to explore and understand the nuances of learning as it is understood by effective athletic coaches, along with the cultural aspects of effective athletic teams that allow for the intense cycles of practice, evaluation, and feedback leading to expert performance. Culture plays a major role in determining how effective

the aspects of the theoretical model of learning can be. The culture can affect learning to such an extent to produce learning that appears much differently and happens at a much higher rate than other domains. The theoretical model could potentially be used to impact learning for all teams and individuals across all athletic domains and used by all athletic coaches.

Research Setting / Context

The research will be conducted through interviews, with observations and documents of effective athletic coaches of various athletic domains, years of experience, and age levels gathering a 360-degree view of learning -- how it is achieved, how it can be improved, and how it can be maximized. The most effective and efficient way to uncover and understand how learning is accomplished in this context is to ask effective athletic coaches a battery of questions and observe their practices. Effective athletic coaches are assumed to produce higher rates of learning with their players. Effective athletic coaches have a proven track record for maximizing learning (Cote & Gilbert, 2007, Horn, 2008, Willink & Babin, 2017, & Raidband, 2019).

Creswell (2013) defines this process as multiple iterations of fieldwork to gather data and analysis of participants that are "theoretically chosen" (p. 86). Theoretical sampling is a method of recruiting participants based on verified data that has already been collected and analyzed for the purpose to further develop an emergent theory (Glaser & Strauss, 1967). This theoretical sampling will be used to identify and recruit participants for the study. The interviews and observations along with other artifacts and documents will serve as the foundation for a grounded theory qualitative research study to generate a theoretical model of learning through the lens of effective athletics coaches.

Due to the different ideologies of the formation of grounded theory, as Glaser and Strauss (1967) minimize the use of documents, and Charmaz (2006) along with Birks and Mills (2011) see the definite benefit, strict adherence to grounded theory guidelines are not as important rather than bringing to light the phenomenon behind the generated theory of learning. Charmaz (2000) even contends that while grounded theory offers a standardized set of guidelines, those guidelines should not limit the collection and analysis to generate theory. A fundamental aspect of grounded theory is to build theory, through more of a constructivist view toward its generation (Glaser & Strauss, 1967, Charmaz, 2000, & Ralph, Birks, and Chapman, 2014). This study will be guided through the constructivist view of building or generating theory rather than strict adherence to it.

Methodology

Grounded theory, informed by Glaser and Strauss (1967), Creswell, (2013), and Patton (2015), can lead to the creation of an emergent model to inform learning as seen through the lens of effective athletic coaches. Subsequently, the generation of this model can show how learning can be replicated and to better understand learning. Grounded theory qualitative research is used to examine how effective athletic coaches understand learning in their context, and generate a theory of effective learning in athletics through the discovery of techniques and strategies used by those effective athletics coaches. A grounded theory method approach is used for the generation of the theory. Patton (2015) refers to grounded theory as having fieldwork as the foundation of the theory developed through "systematic comparative analysis" (p.98). Fieldwork, in this context, consists of interviews, observations, and collection of documents and artifacts from effective athletics coaches.

The theoretical model will be developed through grounded theory qualitative research to inform, as it is focused on induction and deduction through constant comparison of data (Patton, 2015). Creswell (2013) refers to this process as "data collection in a grounded theory study is a 'zigzag' (p. 86). Throughout the initial process of interviews, observations, and collection of documents and artifacts, a broad lens is needed in order to keep an open mind from what is being collected. Patton (2015) refers to this as a "discovery or inductive approach" (p.76); analysis that takes place of the initial data will begin to organize categories and emergent themes. As this data is collected and the emergent theory is formed, the generation of "conceptual categories or their properties from evidence" (Glaser & Strauss, 1967, p. 23). After the initial analysis phase and more data collection begins, ". . . the investigator will begin to focus on verifying and elucidating what appears to be emerging – a more deductive approach to data collection and analysis" (Patton, 2015, p. 76). The collection of data combined with analysis through induction, deduction, and constant comparison can verify or continue to develop the emergent theory.

Glaser and Strauss (1967) discuss that the collection of data and evidence toward an emergent theory should be constantly compared to verifying its accuracy and progression to validation. This process of discovering and verifying, induction, and deduction is the key driver to an emergent theory. The core phenomenon will be uncovered through open coding of transcriptions of recorded interview sessions and observations along with documents and artifacts from effective athletics coaches. This phenomenon will be further developed through axial coding and concluding with selective coding (Saldana, 2016). The progression of the phenomenon also is the product,

not only of interviews, observations, and coding but of the reflection of the researcher

known as analytic memoing. Constant comparison will be used throughout the coding

process of interviews. Through the constant comparison and analysis of data, categories

will form. The categories will serve as the foundation of themes, which will lead to the

generated theory of learning.

Rationale

The use of grounded theory qualitative research will lead to the development of a

theory as a phenomenon rather than strict adherence to guidelines in order to ensure the

validity of a generated model of learning as seen by effective athletic coaches (Glaser &

Strauss, 1967). The grounded theory qualitative study, as described by Creswell (2013)

and Patton (2015), looks to discover a theory explaining an action or process that is

grounded in field data through interviews and observations. Glaser and Strauss (1967)

claim one of the roles of grounded theory, which is heavily relied on in this study, ". . . to

enable prediction and explanation of behavior" (p. 3). Explanation from effective

athletics coaches provides the most vivid and realistic details to generate a model of

learning in this study.

Participants & Data Sources

Athletic coaches are referred to as those individuals that lead athletes or athletic

teams. Athletic coaches tend to play essential roles in the development of athletic

performance as well as psychological health (Raidbrand, 2019). The athletic coaches that

are participating in this study come from vast backgrounds and experiences. Head

coaches, assistant coaches, coaches that are part of large and small coaching staffs,

coaches of individual and team sports are included in the theoretical sample for this study.

Participating athletic coaches were identified through public domains as their teams have shown evidence of high performance over the past five years either by substantial win/loss record or trending improvement in win/loss records during that time. These coaches are referred to as *effective* using the parameters above to serve as a definition of *effective*. The first two coaches were purposefully sampled due to geographical proximity to the researcher, "Beyond the decisions concerning the initial collection of data further collection, cannot be planned in advance of the emerging theory {as is done so carefully in research designed for verification and description}" (Glaser & Strauss, 1967, p. 47). Subsequent theoretical sampling of coaches followed (Creswell, 2013). The study consists of interviews with, observations of, and artifacts from up to 25 effective athletic coaches. Creswell (2013) deems that to reach saturation of data and effectively generate a grounded theory, 20-60 interviews should take place.

The coaches were contacted through email via the respective school website to see if they are willing to participate in the study. Participation included interviews, observations, and collection of documents/artifacts. Based on the convenience of the coaches, interview times and locations were set along with a request for practice session observations. An interview protocol (Appendix B) was used. The coaches are employed in coaching various athletic sports, vast differences in years of experience levels, coaching divisions ranging from youth league to professional, as well as have received a multitude of awards and championships. A brief description of the coaches interviewed are in Table 1 (Appendix A). The coaches that elected to participate in this study are

described in order of participation. Pseudonyms are used for the coaches' names. A full description of each effective athletic coach that participated is as follows.

Coach Clout is a 21-year veteran of athletic coaching, being involved in numerous sports and grade levels; most notably for coaching high school baseball where he has won Coach of the Year honors, district championships, and being involved in the state championships tournaments. He has coached at a public middle school and public high school, both in the same school district, throughout his tenure. Other coaching responsibilities included high school football, middle school football, and middle school basketball; all of which have been involved in championships at their respective levels.

Coach White is a 12-year volleyball coach at the high school and middle school levels, as well as non-school affiliated "club" volleyball. She has been awarded Coach of the Year honors as her teams have played in district championships games during her tenure. She has coached at two different small rural public high schools, while the "club" team is through a privately funded organization, stationed in a larger city. She spent one year as an assistant, spending the other 11 years as a head coach. During the midst of coaching both teams, she produced trending improvements, as the teams were not known for substantial winning records. She has not participated in coaching any other sports.

Coach Ellington is a 39-year college football assistant coach at a mid-major public university in a large urban city. He has won Coach of the Year honors while his teams have won conference championships on numerous occasions. During his coaching tenure, numerous players were either drafted or signed in the National Football League (NFL), largely due to his coaching effectiveness. He spent short stints at two other mid-major universities during his career. He has not participated in coaching any other sport.

Coach Brandon is currently the women's softball coach at a public major university in a large urban city. His 33-year coaching career has been spent coaching softball and football in high school and college athletics. Before his current position, he was the head softball coach and an assistant football coach at a large public high school in an urban city. He has won district and state championships in both sports at the high school levels, and conference championships at the college level; as well as earning Coach of the Year honors at the high school and collegiate levels.

Coach Slate is in his eighth year of athletic coaching spending this time as a high school head softball coach and head football coach, as well as a middle school assistant football coach all in the same public school district. He has won Coach of the Year, district championships, and been involved in state championship games. His softball teams have shown vast improvements during his tenure, while his football teams have maintained a traditionally high level of success. He is a third-generation head football coach of a small rural high school where his father and grandfather have received Hall of Fame honors for their coaching effectiveness.

Coach Street is a 13-year assistant football coach having spent his career at two different public high schools, an intermediate rural high school, and a large urban high school. During his stints at both schools, the football teams showed trending improvements over those years, largely due to his coaching effectiveness. He has won Coach of the Year honors and his teams have competed for district championships. He has not coached any other sports.

Coach Patrick has spent the majority of his coaching career in college athletics at small private universities in larger cities. The last two years of his 15-year career has

been spent as an assistant football coach at a small rural public high school. Coach Patrick has been part of district championships at both the college and high school levels. He has not coached any other sports.

Coach Howard is a 44-year Hall of Fame head baseball coach at a small private university in an urban city. His entire coaching tenure has been spent at one school. Coach Howard has won Coach of Year numerous times, as well as countless conference championships, and a handful of national championships, while sending numerous players to Major League Baseball (MLB) and other professional baseball outlets. Coach Howard could be considered as the standard for coaching excellence in his division. Early in his coaching career, he was also charged with being the head basketball coach at the same small private university, where he is still employed.

Coach Jones is in his 15th year of coaching as an assistant football coach along with serving as the team's strength and conditioning coach. During his career, he has worked at three schools, two small rural public high schools, and a large urban public high school. He has also served as the head middle school football coach at one of the small rural districts. Coach Jones took over as one of the small rural team's strength and conditioning coach and currently serves in the same role at the large high school. His teams have won numerous district championships and state championships, largely due to not only his coaching effectiveness on the field but also in the strength and conditioning training center.

Coach Stack is a 13-year strength and conditioning coach at the collegiate and professional sports levels. He is charged with working with numerous sports teams while at the college level, while having spent time with a single Major League Baseball (MLB)

team. His college-level experience ranges from a small private college in an urban city to his current role at a major private university in a large urban city. His teams have consistently competed for conference championships. He has never coached a specific sport but focused his efforts on performance within certain sports from a strength and conditioning point of view.

Coach Hank has spent his 11-year coaching tenure mostly in high school baseball, as an assistant baseball coach at a large public school, the head baseball coach at a small rural public school, and, currently, the head baseball coach at a small private school in a large urban city. He has also spent time during his coaching career working as a middle school assistant football coach and middle school wrestling coach, both in a large public school. His teams have consistently competed for district championships.

Coach Klampe is a 15-year high school football assistant coach that has been part of a district championship and/or a state championship winning team for each of his years of coaching. His teams' successes have been in large part due to his coaching effectiveness. He has also been in the role of the strength and conditioning coach at his former school. He has worked in a small rural public high school and is currently in a large urban public high school. He has not coached any other sports.

Coach McClain is a 13-year coaching veteran having spent time at different levels and different sports. He has been an assistant football coach at a small private college and a large urban public high school. He also serves as a high school basketball coach, where he has one district championships and Coach of the Year honors. His basketball teams and football teams have seen trending improvements during his tenure as head coach.

Coach Waters is a 17-year assistant and head football coach that has won district championships, conference championships, and Coach of the Year honors. His head football coaching tenure was spent at a large urban city school where he had unprecedented success turning the program around during his time there. He was also an assistant football coach at the same school, as well as a small private university. Mainly spending his career in football, he has spent time coaching track and field, wrestling, and basketball, in large urban city public middle schools and high schools.

Coach Sands has spent his 10-year career as an assistant and head basketball coach of a small rural public school. His team has shown trending improvement from the beginning of his time with the team, most recently competing for district championships. Coach Sands has also spent time coaching youth sports as well as high school volleyball.

Coach Kregg is a 15-year assistant and head football coach at two large public high schools in large urban cities. His teams have competed for district championships, while his current team where he serves as the head football coach has shown trending improvements since being in that role. Coach Kregg's brother is also a head football coach, and his father is a Hall of Fame head football coach. Coach Kregg has also coached youth sports, but no other organized school sports at any level.

Coach Day is an 11-year assistant football coach having worked with two schools: an intermediate rural public high school and a small rural public high school. His father is a Hall of Fame head football coach. Coach Day also serves as the strength and conditioning coach for his current school, as well as his former school. His current team has competed for district and state championships. In addition to being an assistant

football coach, he has also served as a head middle school coach within the small rural public school district. Coach Day has not coached any other sport.

Coach Walker is a 24-year football coaching veteran, having served as a head football coach for numerous public rural high schools in different states, as well as spending time as a major university assistant football coach. His teams have won district championships, have competed for state championships, and even national championships. Coach Walker has had numerous players move on to the next level of play, as his high school players have received scholarships and college athletes have been able to be drafted or signed by the National Football League (NFL). He has also won Coach of the Year honors during his career. He has not coached any other sports.

Coach Pratt is a 27-year high school football coaching veteran over two different states. His teams have won district championships and competed for state championships. He has coached in small rural public schools, as well as intermediate urban high schools. He currently serves as the head football coach of a small rural public high school and has shown trending improvements with the team during his tenure at the school. He has not coached any other sports.

Coach Dunbar is a 20-year coaching veteran, mainly serving as an assistant football coach. His football teams have won district championships and state championships. He has worked in a large rural public high school and a large urban public high school. He has also served as the head softball coach of a large rural public high school. His teams have been successful largely due to his coaching effectiveness.

Coach Brunt is a 14-year assistant and head football coach. He has served as an assistant football coach at a small rural public high school, a small private high school,

and a large private high school. Both private high schools are located in large urban cities. Coach Brunt was also the head football coach at an intermediate urban public high school. His teams have won district championships and competed for state championships. He has also been the head track and field coach at a small public rural high school and an assistant baseball coach at a small private high school.

Coach Taylor is a three-year assistant basketball coach. Over those three years, her team has won three district championships and has been in the finals of the state basketball tournament for two of those years, while the other was cut short due to the COVID-19 pandemic global shutdown. At the time of the shutdown, her team had just notched their first victory of the state basketball tournament en route to potentially another state tournament final. The school she serves is an intermediate rural public high school. She has not coached any other sports.

Coach Shields is a 15-year football coaching veteran, having spent time as an assistant football coach at an intermediate rural public high school and a large urban public high school. He has also served as head football coach at a small rural public high school, and his current role as the head football coach at an intermediate rural public high school. While only being part of one team that has won district championships and competed for state championships, his other teams have shown trending improvements from the beginning of his tenures, leading one of the teams from a long-standing, triple-digit losing streak to a birth in the state tournament playoff system. He has not coached any other sports.

Coach Cadena is a 20-year assistant athletics coach in baseball and football. His teams have won numerous district championships and state championships, some of

which coming in the same year. The majority of his coaching tenure has been spent at a small rural private school, where players have gone on to college scholarships and successful professional sports careers. This is largely due to his effectiveness as a coach. He began his career at an intermediate rural public high school where he coached football and baseball.

Coach Carter is a 14-year athletics coach ranging over multiple levels and sports. His teams consistently show trending improvements during his tenure. He has been a middle school head football coach at a small rural public school and middle school head basketball coach at a large urban public school. Coach Carter has also served as a high school assistant track and field coach at a small rural public high school and is currently the head softball coach at a small urban private high school. His teams have competed for district championships.

Coach Bard is a 22-year basketball coach serving as a head coach and an assistant. His teams have consistently competed and won district championships and appeared in the state basketball tournaments. Coach Bard's tenure has been at a single intermediate rural public high school. His teams also have consistently seen trending improvements while in his charge. Coach Bard has also coached youth sports, but no other school organized sport.

As previously noted, all coaches have been identified as effective athletics coaches based on a substantial win/loss record or have shown trending improvements over their tenures at the school. The effective athletics coaches' sample consists of head and assistant coaches, multiple sports domains, multiple experience ranges, and multiple age level coaching experiences. A more condensed description of the effective athletics

coaches' sample is included in Appendix A. The interviews, observations, and documents

or artifacts collected from these coaches serve as the data for the development of a

theoretical model of learning as seen by effective athletics coaches.

Data Collection Procedures

Creswell (2013) suggests that interviews are the main source of data collection in

a grounded theory study, along with observations and other documents to be used to gain

". . . enough information to fully develop (or saturate) the model" (p. 89). This saturation

from data collection in grounded theory comes from typically twenty (20) to sixty (60)

interviews (Creswell, 2013). Additional coaches were identified for participation in this

study based on theoretical sampling as emergent aspects of the theoretical model become

apparent. Identified athletics coaches were asked to participate in interviews,

observations, and to provide any additional information or artifacts that coincide with the

interview questions. An interview protocol was used (Appendix B). The interviews took

place face-to-face, via an online platform (Zoom, Google Meet), or text/email exchange.

The online platform and text/email exchange were due to the Center for Disease Control

(CDC) Guidelines set forth due to the COVID-19 pandemic to reduce face-to-face

contact and maintain social distancing.

Data Analysis Procedures

Data analysis in a grounded theory qualitative study uses coding methods

informed by Creswell (2013) and Saldana (2016). Strauss and Corbin (1998) placed so

much emphasis on constant comparison of data, a set of coding methods were offered to

help streamline analysis for grounded theory; as those coding methods are known as

open, axial, and selective. Saldana (2016) explains open coding can be a combination of

first-round coding methods, axial coding -- the second round of coding -- is meant to focus on categorizing the data, while selective coding is where the "intersection of the categories becomes the theory" (Creswell, 2013, p. 85). The open coding phase consists of initial analysis and formation of collected data, axial coding shows the links between these formations, and selective coding builds a narrative of an emergent phenomenon or theory from the categories (Strauss & Corbin, 1998, Creswell, 2013, Creswell, 2016, & Saldana, 2016).

The relationships between the coding process and the phenomenon can be linked through analytic memos (Weston, Gandell, Beauchamp, McAlpine, Wiseman, & Beauchamp, 2001). During the data collection and analysis, an important aspect of the generation of the emergent theory is the use of analytic memos. Analytic memoing is a means of reflection in regards to data collection, data analysis, emergent theme, or any other aspect during the process of qualitative research. Memos can be thought of as a place or means of journaling reflective thoughts from the researcher regarding research data or the analysis of (Clarke, 2005, & Vogt, Vogt, Gardner, & Haeffeke, 2014). Analytic memos are personal, reflective journal entries by the researcher to aid in the generation of the emergent theory. The key rationale for analytic memoing is for researchers not to rely on memory during the nonlinear process of grounded theory qualitative research, as it "should blur and intertwine continually, from the beginning of an investigation to its end" (Glaser & Strauss, 1967, p. 43). Reflection is essential in qualitative research and the genesis of an emergent theory.

Throughout its process and generation, another aspect of reflection is member checking. Member checking is a consultation with study participants, in this case,

effective athletics coaches, during the data analysis phase to ensure what the researcher is interpreting is, indeed, what the participant was inferring. Saldana (2016) discusses member checking "as a way to validate the findings . . ." and "articulate your internal thinking processes, but also to clarify your emergent ideas and possibly make new insights about the data" (p. 38). Through the theoretical sampling, data collection, and analysis of interviews, observations, documents and artifacts, the use of reflective analytic memos, and member checking, an emergent theoretical model of learning provides a basis for how learning takes place through the lens of effective athletic coaches. The results of the constant comparative analysis of the grounded theory coding process of interviews, observations, and documents are presented in the findings.

Summary

Theoretical sampling will be used to select coaches to interview, observe instructional practices, and collect artifacts used in the process of learning to generate a theory of effective learning in athletics (Glaser & Strauss, 1967, Creswell, 2013, & Patton, 2015). The athletics coaches participating in the study are from different states, sports domains, years of experience, and level coached ranging from youth league to major university. The coaches, respectively, are defined as *effective*, as they have a high percentage of wins or have shown trending improvements from year to year based on their teams' win/loss record. The participating coaches will most likely have won district/region championships, state champions, conference championships, and national championships. The process of member checking and constant comparison will be used to ensure validity throughout the interviews and the coding process. Analytic memos and

the analysis of the observations and artifacts will lead to the creation of a theoretical

model of learning in athletics as seen by effective athletic coaches.

CHAPTER IV: FINDINGS

The process of collecting and analyzing interviews, observations, and documents/artifacts allowed for the generation of the themes that make up the theoretical model of learning. During the collection procedures, the participating athletic coaches were asked a battery of questions regarding their creation of learning with their players. These questions focused on practice sessions, skill and material introductions, improvement methods, and cultural components. The interviews allowed for very open responses based on interpretations of the questions and concluded with an open-ended question to provide any pertinent information that could have been absent. Observations of their coaching sessions were conducted as well as the collection of any other documents or artifacts the participating coaches felt the need to share.

A key to this generation is to accurately capture information from the participating effective athletic coaches. Throughout the process, constant comparison and member checking were done as simultaneous tasks. Each coach was consulted after the interview for assurance that an accurate interpretation was conveyed. These interactions came with a phone call or email/text exchange. The findings were confirmed through the process after each interview and analysis, the member checks and comparisons presented very similar aspects, in turn giving way to the themes of the findings and the theoretical model, the *Culture for Learning*.

During the member checks, comparisons were made to deduce inferences regarding learning as seen from that particular coach involved. Most of the member checks were responded to with favorable acknowledgments. One specific example, during member check with Coach Bard, he commented about the need for observing

more than just a singular aspect of performance sessions to determine current levels of performance or evaluate and assess. This conversation prompted one of the titles of the constant cycles from practice to performance. This is just one example of how specific member checks allowed the theoretical model to evolve over time.

The evolution of the theoretical model also was informed from multiple iterations of constant comparison. As the interview and observation process began, immediately following each data analysis session, the data was compared to the previous analysis. Iterations of constant comparison continued through a vast majority of the data collection events. The constant comparison process allowed for the elimination of any pre-conceived biases from the researcher and promoted the confirmation of the emergent concepts and themes from the data. After the initial data collection from the first two interviews, constant comparison led to the discovery of the emergent concepts. While those initial interviews pointed toward performance and improvement aspects of learning and minimal cultural involvement, later iterations brought to light more reliance on culture and less on performance and improvement strategies. Constant comparison and member checks finally led to the discovery and verification of the emergent theory leading to the development of the theoretical model, *Culture for Learning*. The theoretical model not only focuses on performance and improvement strategies and how they are utilized, but the foundational culture that is used to drive those strategies and how they are necessary to maximize learning.

Early in the process of data analysis, many performances and improvement strategies were deduced. A specific example is determining the multi-faceted use of video recording referred to as performance analysis in the literature review. While all the

participating coaches in the study mentioned their use of video, constant comparison

enabled a more explicit description of how video is used to introduce, demonstrate,

evaluate, reflect, and refine performance. Over the time of the study, as constant

comparison and member checking were allowed to generate and mold the emergent

theoretical model, the themes of the model were very detail specific, similar to the

example previously stated above. Upon further verification of the emergent theoretical

model, it was deemed that specific instances and uses were not the actual concepts or

themes, but more so the methods in which those concepts were utilized. Quotations that

were used to designate components of the theoretical model gave way to more macro-

conceptual phrases and ideology.

Member checks were vital during this process as it allowed the model to no longer

take on actual quotations from the participating coaches, but more into generalized

concept titles to cover a wider range of ideology. The member checks, in this context,

allowed the findings to frame the theoretical model into a wider, macro view of learning

through the lens of the effective athletic coaches who participated in the study. This

macro view is defined in the findings, beginning with the foundational aspects of culture.

The themes that are generated from this study are derived from interviews and

observations of effective athletic coaches. The nuanced aspects of what makes up this

culture are displayed to show the components that make up the *Culture for Learning*

theoretical model. The aspects of culture within the theoretical model include the

importance of building relationships, establishing and maintaining expectations, and

having a high degree of accountability for all those stakeholders with a vested interest in

the program. The cultural components are displayed in Figure 1.
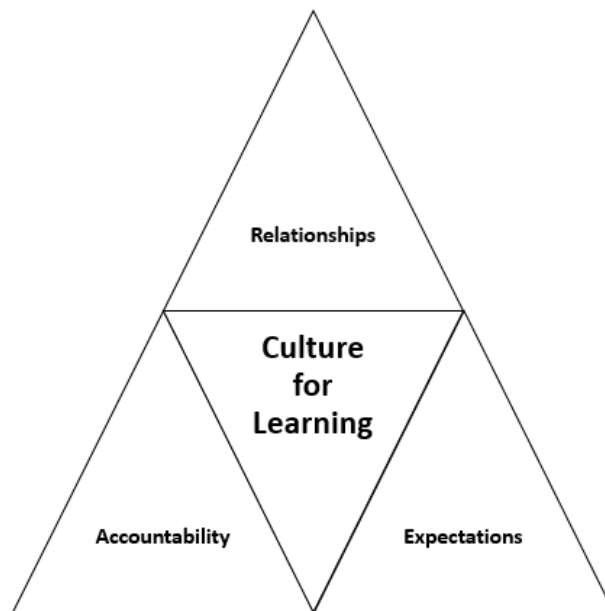
Figure 1. *Culture for Learning* cultural components

The main component of learning as categorized through the coaches' interviews is the resounding effect culture has on learning, as Coach Street proclaimed, "culture is everything." How do the coaches define culture? What aspects of the culture make the coaches and teams effective? To maximize learning, an emergent culture based upon relationships, accountability, and expectations play a pivotal role.

The utmost importance is placed on culture while performing and improving are constantly cycled leading to higher rates of learning. Performance includes introducing and developing skills through repetitions and practice, and improvement relies on analysis and feedback through observation. Constant cycles of performance and improvement, Figure 2, can lead to learning.
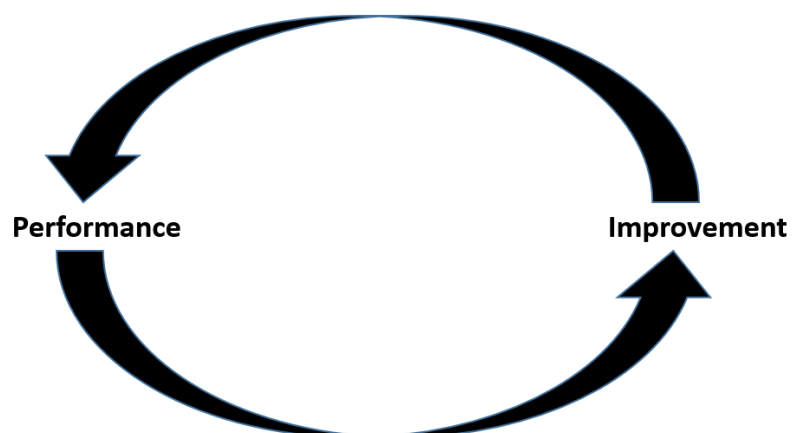
Figure 2. *Culture for Learning* constant cycles of learning

The association of constant cycles of performance and improvement along with foundational culture leads to maximizing learning. The cycles coupled with developing and maintaining expectations, relationships, and accountability is the overarching goal of effective athletics coaches within the theoretical model of learning, summarized by Coach Klampe, as "mastery of skills, mastery of performance, mastery of material," leading to the *Culture for Learning* theoretical model:

> When repetition is the key and you model, as a coach, what it means to be a good person, a good man, and a good father, and you combine that with a team goal of winning a championship, that's what really puts it over the top. It takes it all, that's what makes a really great team not successful because they have one and not the other. It really takes it all.

Combining the components of culture along with the aspects of performance and improvement that effective athletic coaches use to maximize learning leads the generation of the theoretical model of learning, *Culture for Learning*, shown in Figure 3.
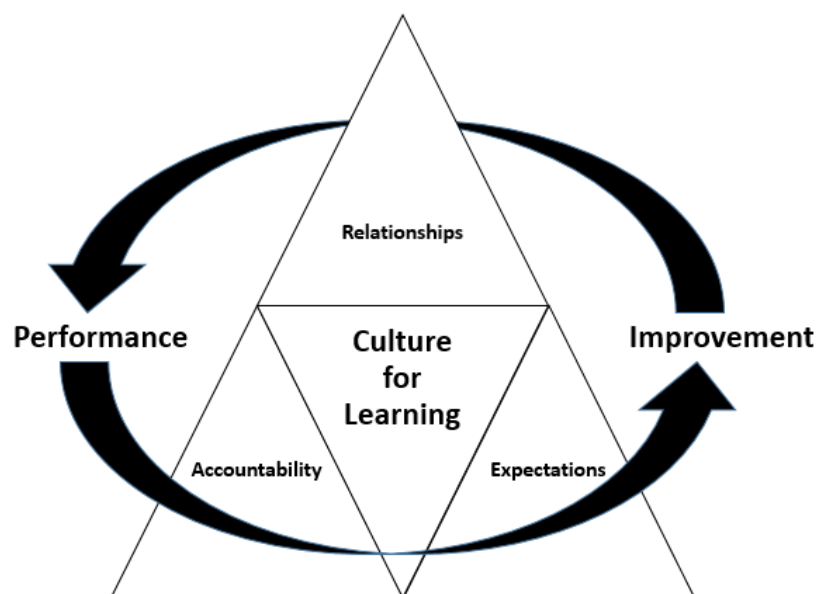
Figure 3. *Culture for Learning* theoretical model of learning

The cyclical nature of performance and improvement that is used to enhance performance and maximize learning is driven by the components of culture necessary for learning and performance. What are the components of culture necessary to maximize performance and improvement methods utilized by effective athletic coaches to maximize learning?

Culture for Learning

Culture must be foundationally set on what or how the coach defines success. Coach Brandon commented, "We spend almost as much time with team culture as we do with fundamentals skills." Aspects of the culture, he states, that are important: "we don't get hung up on wins and losses. We get hung up in doing the little things right, taking care of small details." Coach Brandon also discusses this definition of success as he consistently tells his players, "Your self-worth is not tied to being a player, it's tied to your school, to your character, tied to what you are doing in the world." He asks his team

at the end of every practice, "Were you a champion today?" The answer to that question,

he explained, was rhetorical but led to a culture of championship-caliber performance.

Coach Hank commented in a similar fashion, "At the end of the day, my success in my

wins and losses is not and does not define me. Not going to define me as a man, a father,

an employee. They are not going to define me." Coach Carter added that not every player

will get to play on a team competing for a state championship, "does that mean that they

aren't successful? No. We have to remember what we are here for." Coach Bard also

commented on the importance of defining success and how it is different for each team

he has coached.

Coach Dunbar added regarding culture, "The hardest thing to form in your

program is culture." The difficulties are embedded because of the amount of time and

energy spend toward it. When asked about the time investment into the culture, he stated

that "you got to be repetitive of culture every day." Coach Street also discussed the

development of culture:

> Throughout this year I have found that it isn't always going
> to work exactly how you picture it. The ways that you
> attempt to build this culture aren't always going to work, but
> how committed you are to the culture. How patient can you
> be? Can you sacrifice success for the success of it? I also
> have learned that if you are the one in charge, you have to
> make the tough decisions to do what is best for the whole
> group, not just what is best for some individuals, players and
> staff included. Culture is a living breathing thing that needs
> to be nurtured, and sometimes the roots don't get enough

water, but when you water them and tend to them and cut off

the dead leaves, the tree will continue to grow.

Coach Clout also agreed that culture has to be molded and built, as he concluded regarding a middle school team he is currently charged with, "The culture has been a project because this group of young kids had not been exposed to it before. They were more of an activity without a vision of the expectations." Expectations are viewed by the coaches in this study as a vital part of the culture and imperative for those in the program to know and understand those expectations.

The impact culture has on the team has shown drastic results over time, "Our culture has done a complete 180-degree turn from when we got here. It is enjoyable to be around the guys and see the change take place," Coach Kregg remarked about the change of culture and the effect it has had on his team. As the conversation continued, however, he again commented on how difficult changing the culture was, and that it was not always a formulaic system to change, "just because it worked last year doesn't mean it's going to be effective this year. I think you got to know your kids and figure them out. We have to get more effective figure out each individual kid. Coach Sands summarized the synthesized *Culture for Learning* theoretical model, "Lay out what you expect of them, and stick to it, don't go away from it, hold them to it, and everyone else falls in line to those expectations and it goes a lot more smoothly. Holding kids to a standard and instilling a little discipline." Coach Sands's quotation sets the stage for the cultural aspects of the *Culture for Learning*: expectations, accountability, and relationships.

Expectations

Many coaches declared that expectations are key in the culture, as Coach Howard commented on the importance of "expectations on and off the field." Likely more important, as Coach Street claimed, "what people outside the program can expect" or Coach Klampe states, "what do others see you doing when you are not on the field or in the locker room." Culture, as deemed by the coaches in this study, is essential for success. A high priority is placed on ensuring everyone involved know the expectations within the culture, through being modeled and communicated with all stakeholders. Coach Clout referred to aspects of culture that are keys to success, "expectations and preparation," being among the most important. Coach Clout also adds that "high expectations" is also vital for the culture of the team, as he described the culture of the teams he coaches or has coached. Coach Kregg went into length about the culture of his team when he took over as head coach:

> When I first got here, the culture was really not where it
> needed to be at all. Guys missing class, character issues in
> class, issues in the weight room, so we changed it all. We
> went to dressing alike, white shirts and black shorts and went
> really old school with them. Talked to them in meetings with
> each player. I had to take it seriously and tell them what my
> expectations of the team were and how I expected them to
> act. We started the [winter program] that counted points for
> all aspects of school, class, practice, and character.

The winter program provides expectations from the head coach through the assistant coaches and further into the players. He went on to state, "It is player-led and those guys

address issues within the team." Coach Day also reiterated, "A great team cannot be coach-led when it comes to character and culture. The coach can set an expectation, but it has to be player-led, and when that happens, you can go from a good team to a great team."

Establishing and Modeling Expectations

Coach Waters sets a high standard for his players, "I attempt to provide a structure and environment that challenges each young man to be his best, to lead by example and set the standard for what we are looking for, and finally establish tradition and pride in the program." Coach Cadena stated, "Everyone has to take the attitude of the leader, and that attitude must trickle down from the head coach." Simply setting high standards will not be effective, as Coach Dunbar commented, "You have to introduce it, list the expectations out, and model it. If you aren't modeling the expectations you have to the kids, they are not going to follow it." Coach Pratt stated about expectations, "We have a set of core values we try to instill in our players. Lead by example, support, and counsel kids to help them be successful." Coach Klampe stated, "It's simple, modeling. It is hard to talk about character and making good choices when you yourself don't emulate them." He went on at great length explaining that a person's actions will have a resounding effect on those players directly in the coach's charge. He discussed how much of an impact it has made with his players and is starting to catch on with the rest of the team:

> The link to this is having the coach, myself, having the right mentality of demonstrating proper character, of being respectful to your players. They see you being respectful and

polite and well-mannered to others is the biggest way to improve the players' character. Here recently, at the school, I started a Wednesday night offensive line devotional, where I take them out to eat, luckily their parents started to help support, and we do a devotional. We come together, we talked about God, but we talked about what it means to be a good person, a good man, making the right choices all around. You know you're getting other families involved, so it becomes like a big unit. You got moms and dads feeding us, and they are hanging out with them. It's been huge as far as the mentality of the players that I directly interact with.

He also discussed how much of an impact that the players' direct coach has, but obviously there are differences among other position coaches. Coach Hank concluded that it is imperative for young people to "see that people do things right, that people care, and that people do love." Coach Dunbar and Coach Waters both alluded to having high expectations and modeling those expectations for their players, along with constantly reinforcing to them that through maximum effort and hard work, they will meet those expectations. While effort is an essential aspect, character and perseverance are aspects of culture that coaches contend is a necessity to instill in players.

Challenging through Expectations

Coach Hank, Coach McClain, and Coach Klampe all referred to their athletes as having good "character." Coach Ellington explains building character in his players: "Character comes from the example that, as the coach, you establish. They will do what you require of them." Coach Street comments character can be built around "motivating them to go through every day the best they can be and putting their best effort forth" as

well as "taking pride in what you do." Coach Slate adds, "Anyone can have a good attitude and give great effort." Coach Taylor constantly "preaches being your best, on and off the court, in the classroom, in everything." Coach Street also added "you win in the locker room first," and how teams are now going to more of a "best fit" for the team rather than a "best player." Coach Waters uses this same aspect with his program, "I attempt to provide a structure and environment that challenges each young man to be his best." Through these challenges, perseverance is also developed.

Character and perseverance, according to the coaches, are usually built by challenging and introducing players to high-pressure situations, as Coach Clout comments "Character is developed through times of struggle, out of hard pressure. We challenge them to the max." Through these times of pressure and challenge, players develop perseverance and a certain amount of resiliency, and the ability to overcome failure and hardship. Coach Bard commented, "I encourage the team during our free throw drill, but I encourage them with pressure," as he described his team shooting free throws at the end of practice and for every missed attempt, an amount of conditioning was required. Coach Hank discusses how he challenges his players to persevere through difficult situations that he himself designs in practice, also, very similar to how Coach Brandon places a high priority on developing character through pressure as he explains how he ends practice every day:

> At the end of each practice, I'll say we are at wherever our
> conference championship tournament is or whoever we are
> playing that weekend and tell them it's the bottom of the 7th,
> we are playing whoever our next opponent or our rival is and

we're up by one, bases loaded, nobody out and we will go live and try to win. I will end it by saying, 'Seniors, if you win this game you are going to the [national tournament] and you'll get a ring. If you lose, you hang it up and never play again. I try to put pressure on them. That's the way we end practice all the time, sometimes you win, sometimes you lose. When we won our championship, we got to the 7th inning and we were up by one, we had played that inning 100 times and it worked out in our favor.

While having and modeling the expectations is a necessity, coaches overwhelmingly stated the need to teach players those expectations. By teaching expectations, leadership and team unity can be byproducts.

Teaching Expectations

Coach Street declared that we "can't expect children or adults or anyone to lead if they don't know what leadership looks like." Coach Jones claimed that a culture of expectation is "all about habits" and making sure players know exactly what is expected of them. Coach Walker, Coach Bard, and Coach Taylor discussed the need for teaching these expectations through team-building exercises, team trips, and other means of, as Coach Bard commented, "…letting the kids see me outside the gym and that I was a real person and the way I carried myself around others." Expectations can help players know how to become good individuals on and off the field.

Other methods of teaching the expectations are by reading and studying what good character and leadership look like. Coach White talked about reading articles with the team on ". . . how to be a good leader or how to be a good teammate. That is an opportunity for me to talk about good character qualities and showing good leadership."

Coach Brandon and Coach Street, likewise, use resources to teach players the expectation

or standard, using what Coach Street referred to as "leadership training and book studies"

in order to accomplish this task. He also professes that for young people to be held to a

standard, they have to be taught the standard.

Coach Hank discussed teaching expectations for how to dress and how to begin

practice can alleviate the issues he has with only having one to two assistant coaches.

Coach White and Coach Clout both explained to their players when and if a skill was

going to be difficult and challenging, and that they would struggle to be able to do this.

Communicating this to players is important; they must know that they would not master

the skill that day, as Coach Brandon commented that when players were told they would

struggle, they were going to get "coached up." Coach Patrick added regarding

communication is that he reflected back to his coaching instruction based on how well his

players performed asking himself, "Am I not communicating it well enough?" The

process of communication and expectations are essential to the culture.

Communication of Expectations

Communication is one of the most important skills an individual can possess.

Coach Slate shared this sentiment, "If I had to think about one thing in coaching or in

life, it is communication. Communicate what you want the outcome to be." Coach

Klampe discusses "being on the same page," because having a clear goal is essential to

being effective and successful. Coach Shields shared similar thoughts, "We have a

coaches' meeting before practice every day to discuss new install, what we are covering,

or what the expectations are for the day. That way everyone knows the big picture for

that day of practice." Numerous coaches had similar meetings with their players before

practice. Coach Brandon gave his players the opportunity to view and discuss the plan for the day, as he explained to his players "Let's talk through it for a second, you can ask questions to make sure everyone is on the same page with what they think," and then followed this session up during practice to constantly "remind them as we transition in practice." Coach Brunt held meetings prior to going to practice; while Coach Bard would communicate with his team during a team stretch or warmup period. Coach Howard discussed the importance of having a plan and communicating it to players along with communicating expectations during a "pre-practice skull session." Coach Jones stated, "They have to know what the expectation is," and reiterating how imperative communicating expectations is to a program and culture.

Communication is also valuable to a coaches' performance. Coach Patrick commented that communication actually helps him be a better coach, as he stated, "They know what to do and now I'm having to coach how to do it." Coach Brunt reiterated this sentiment as he claimed that using notes during a meeting with his players allow him to coach technique on the practice field, not introduce content. Coach Hank stated that he would "communicate with [players] and find out things that they have worked on and what worked for them." For players to know what the expectation is, and involving them in the reflection process, leads to the players being more apt to hold up the expectation and standard set forth by the coach. By doing so, the players have a sense of accountability to the program and the expectation.

Accountability

Accountability is a theme across most all coaches involved in the study as an essential component to an effective team. Accountability in athletics focuses on being

accountable for details and shown through honesty, love, and care. It is considered from coaches to players, players to players, and even players and coaches to the program referred to as tradition. Numerous coaches also attributed the success of their program to accountability throughout their program.

Accountable for Details

Coach Patrick commented, "First and foremost, you have to have accountability. They have to know what the standard is. You have to teach the mindset, teach the expectation, teach them the standard, and you have to hold them to that standard." He refers to holding the players to a standard or an expectation of "even small things as small as starting and finishing drills and doing certain things." Small details can have major effects on team culture in terms of accountability. Coach Waters recalled that when he first took over as head coach, he attempted to structure an atmosphere that was based on accountability for everyone in the program. Coach Brunt discussed "holding them [players] accountable at practice, for online meetings, for the notes we give them. They know they are going to be held accountable for what they are supposed to do, and there is no excuse." He also referenced accountability in the rationale of how quickly his team's culture has changed, "They know they are getting constantly evaluated which helps hold them accountable." Constant evaluation of expectations from major things in practice to small details of drills and meetings help streamline the culture that is being developed.

Coach Slate discussed that after the expectations have been set, the need to "hold kids to expectations" is of the highest priority, as he claimed, "Accountability in everything from showing up on time to the effort you give." Oftentimes holding players to a standard, or accountability is not always a pleasant conversation or interaction.

Coach Day referred to those interactions as "not always candy and rainbows;" while Coach McClain stated, "Our kids know that we will not allow them to halfway do something." Coach Street stated, "The standard is the standard and it doesn't change for anybody," as players on his team are held to the same standard: "This is something you have to commit to and you have to sacrifice some things. We had to dismiss a three-year starter this past year because he was not holding up the standard." The standard that Coach Street referred to is considered to be the expectation that the players within their program are held accountable. The coaches who participated in this study, the coaches refer to honesty, love, and care as having a major role in accountability.

Honesty, Love, and Care

Honesty and accountability are synonymous with one another within the context of the study. Accountability is what Coach Brandon claims as one thing that is lacking in modern-day athletes:

> In college athletics, kids are growing up and not being held accountable. Their parents just tell them whatever they want to hear and they don't really, they aren't parenting them. They aren't telling them 'no,' just telling them 'yes' and they're being more their friends than they are their parents. So they are getting to us and they're not disciplined, and I tell them, I am not your friend. When you graduate, I'll be your friend, but I'm your coach right now, which means that I will tell you what you don't want to hear, but it is for your benefit.

Coach Dunbar states regarding accountability to "be open and honest with them, and tell them why we are doing it." Coach Brunt shares similar thoughts regarding accountability through honesty and adds the concept of care, "We are going to hold you accountable. We are going to be honest with you. We have your best interest in mind, we love you, we care, and we want you to succeed." Coach Street and Coach Hank also contend that accountability must be demonstrated through love and care.

Accountability Breeds Success

Accountability is considered by numerous coaches involved in the study as one of the key drivers in their teams' success. "The one thing we do that has helped is that the kids know they are going to be held accountable for what they do. From the top-down, doesn't matter which coach you are with, they are held accountable," Coach Brunt professed as the most influential attribute that the team went from the previous year before the staff took over of not making the playoffs to the following year falling just short from advancing to the state championship game in the coaching staff's first season at the new school. Coach Klampe explained that having the same goal with the expectation, "we are going to hold each other accountable," and that these things "really put us over the top as far as success." Coach Hank describes that he has a theme for each season, and this theme for the current season is for players to take personal responsibility for their own actions. He stated, "you got to own it. It's no one else's responsibility but your own." Coach Shields mentioned his players taking ownership for their effort and actions, and being accountable to their teammates for those things. Coach Pratt also commented about his players, "They are accountable to themselves, their team, their

school, family, can community." A sense of accountability to a school and community is considered by some of the coaches in the study as tradition.

Tradition

Coaches discussed tradition as important in the culture, as Coach Howard commented "Tradition is a big part of the culture that we try to develop" along with having an "appreciation of the program, there has to be an appreciation of the history to make history." Coach Howard is the leader of a storied major college program. He adds regarding the culture of effective teams, "The history is very important, the expectations, respect each other, the coaches, be a good teammate." Coach Pratt commented it is more than just being part of a team, but "being part of something bigger than ourselves." Coach Carter also often referred to this same idea, "it's not about us, but all those that came before us." Providing this sense of togetherness and tradition can also lead to overall team effectiveness.

Coach Pratt commented on the team culture he tries to set, "We are all in this together and we have each other's back, and we are all working toward the same goal." The togetherness that is promoted through tradition and culture allows for more deeply intertwined accountability. Coach Kregg comments about his team's winter program, "It holds them accountable. It really helped our culture and holds kids accountable, but the players hold each other accountable. They hold each other to a higher standard." He also discussed that the real turning point in this program was when the less talented athletes were chosen last in the draft because of the liability they caused other teammates during the program. "Once the kids start taking over and start correcting issues and fixing problems. They are calling each other out for being late, and on grades. They want each

other to do well in the classroom." He went on to note what a tremendous turnaround in his program he has witnessed. Coach Day also mentioned how the culture of his team changed when players starting holding each other accountable.

Accountability among individuals can be the difference between a mediocre culture and a high performing one. Coach Shields claimed regarding the foundation of the culture is not only based on accountability but relationships: "We created a culture that we are in this together. We are able to hold them accountable because of those relationships." Throughout the series of interviews, an overwhelming majority of coaches involved in the study placed the foundation of expectations and accountability on the relationships they had with other coaches and players alike.

Relationships

Coach Patrick talked about developing a culture of effort; however, he remarked that this culture was a direct representation of the relationship he had established with the players, "Relationships are everything." Coach Taylor shared that she considered their culture to be "built on the value of relationships. Strong relationships with teammates and coaches create a level of intensity that is unmatched." The findings are focused on developing relationships through love and care along with creating equality and a family atmosphere and getting buy-in from players.

Developing Relationships

Relationships are key in Coach Hank's program, as he discussed checking on them in classes and calling them on the weekends to "develop a real relationship with that player." Coach Pratt also commented about developing a relationship far more deeply than surface level, "Get to know the player individually, how they communicate,

mannerisms, and body language." Coach Dunbar also states developing a relationship

allows him to understand how the player learns most effectively.

Expectations, accountability along with relationships become forged into the

making of a learning culture. These relationships are based on personal connections with

players, as Coach Day stated:

> My big thing is connecting with my guys. We keep in contact
> years later because we developed a connection and
> relationship. My number one culture builder is
> understanding what makes them tick. I mean sure you are
> going to know his name, but do you know his mom or dad's
> name? Do you know what type of situation he goes home to?
> Does he live with his grandma? Does he live with a single
> mom? Are his parents divorced? Are his parents married?
> Does the kid sleep in a car? Does he sleep in a bed? The
> longer I have been coaching, the more I understand that.
> Understanding how kids are going to react to you or to a
> situation. You literally have to be a psychologist to be a
> teacher and a coach. That is what hurts a lot of coaches, they
> refuse to understand kids, students, and players. You have to
> let them know that you are there for them and that you care
> for them.

Coach Shields discussed the transition to head coach at his current school. His staff

placed a high priority on developing relationships among coaches and among players,

which he commented "that's the most important." Consequently, he confessed, that he

neglected this early in his coaching career, but has sense place a high priority on,

"Developing a positive relationship with our players and because of that, we can coach

them harder, we can set higher standards and greater expectations than ever before because of that relationship." The relationships that are developed are often based on genuine care for the players.

Love and Care

Love and care provide a firm foundation for relationships. Some coaches try to develop and display this through time spent with the players, as Coach Cadena and Coach Thompson commented; while Coach Waters structured an environment to "allow them to be who they are, challenge them, and love them." Coach Bard and Coach Carter confirmed that a daily conversation with their players played a pivotal role in building a relationship. Coach Hank commented in regard to relationships with his players, "players that have character flaws typically have a love deficiency." He discussed, at length, the journey and focusing on the journey rather than the outcomes for his team, "The journey is not about wins & losses, the best or worst players, the journey is about the relationships and the development, growth, and future of the players. The journey is everything to me." He discussed his idea about the journey was "the main thing":

> My wife told me this a couple of years ago. I was worried about my successes and failures. About winning, winning, winning. If you aren't winning, then we are not having success, if we're not winning, we aren't having success. This is just what kept getting drilled into my head, and she looked at me and she said 'you got to keep the main thing the main thing.' And I said well what's that? She said 'look back at the relationships that you have built, the growth that players have had, and the love you poured into each of those players.

So, I say it a lot. I tell my players to keep the main thing the

main thing.

He shared that coaching should be out of love for the players and wanting what's best for

them, not out of fear of punishment. Coach Klampe commented numerous times about

how the time he spent directly with his players had the most impact. According to Coach

Hank, the ultimate goal is to show players how to have "relationships with one another,

their kids, their wives, with Christ. Building relationships is success and is winning." The

attitude of impacting players through relationships can have a domino effect from the

coach-to-player relationship to the player-to-player relationship. Coach Clout discussed

developing relationships among more experienced players and less experienced players,

"Something passed down to the next group." This ideology combined with the concept of

role equality within a program can create a much sturdier foundation.

Equality and Family Atmosphere

Coach Pratt and Coach Bard commented regarding the importance of equality

among the team, as Coach Pratt stated, "Everyone's role is equally important." Coach

Street stated, "We all have different backgrounds, pasts, family problems, etc… But in

the locker room, we all strive for the same goal." The focus should never be on

individuals, but the team should commit "focusing on being a unit," as Coach Clout

stated; while Coach Klampe added, "Focus on a goal that everyone is working toward."

The focus on the team being a family unity was resounding. Coach Walker discussed

within his program an acceptance of everyone, "no matter what," and that it was a

family-type atmosphere. The concept of family was also referenced by Coach Shields,

as he stated, "One of our greatest hurdles to overcome at first was to create somewhat of a family atmosphere, a brotherhood in sense." The family-oriented atmosphere develops through a network of relationships among a team including all team members, no matter their ethnic background or origin, race, gender, or socioeconomic status.

Coach McClain stated, "Diversity is what makes athletics so special, it brings kids from various backgrounds together for one common goal." Being part of a diverse team prepares many young athletes for the outside world where a diverse population is a foundation of society. Young people must be able to coexist with all individuals without seeing any barriers that may have previously existed or still may currently exist. Coach Street alluded to acknowledging these barriers, and working past them, "The locker room should mirror what we want our world to be, unified." Many of the participating coaches mentioned unity in their interviews and how they developed it. Coach Stack noted, "I've had a background of coaching athletes, literally from all over the world. I like to get to know the athlete and find ways to bridge the gap." Coach Clout added, "Race and family background do not come into play in the athletic team scope, and no coach should ever allow those to impact the team unity." Coach Klampe also noted:

> The biggest thing is that it is a player. Not a white player, not a black player, or a Latino player. I don't care what color skin you have or what language you speak. Are you coachable? Will you listen? And can you play? That is the most important aspect of that. So as far as recognizing diversity, there is none when it comes to that. I mean, you're here, you're a person, and you matter. We want you to be a

contributing member of this team if you are willing and able.

Developing a team under these principles can unify individuals within and part of the program no matter their background.

Most all coaches commented that the only diversity that existed on their teams was experience level. Coach McClain noted, "Every kid gets coached just as hard as the next," and Coach Street added, "Every child wants to be coached/taught. It doesn't matter if you are a certain color or socioeconomic status." Coach Shields also stated regarding the role of equality among a team, "Make them all feel like a family, create a culture that we are in this together." Coach Waters professed that the family atmosphere throughout his program was the reason for his team's effectiveness and success. The role of relationships to bridge any gap based on equality among all team members provides an environment where learning can be maximized.

Buy-In

As important as a culture built on expectations, accountability, and relationships can be to learning, it is also imperative that all stakeholders involved to buy into the particular aspects of culture. Coach Slate discussed for this culture to take effect and thrive, it is absolutely necessary to "get kids to buy into what you are doing." The most effective method in getting those involved to buy in, is, as Coach Street professed, "You have to believe in what you're doing and you've got to buy into it as well." The methods of performance improvements and aspects of culture would be ineffective if there is no buy-in or belief in the methodology. Coach Brunt referenced a coaching position he was in at a particular school where buy-in never took place, and it did not produce the amount

of success for the school in terms of wins and losses as his current school is experiencing. Coach Cadena, Coach Day, and Coach Dunbar all mentioned getting buy-in from their players to ensure maximum learning is taking place.

Keys to promoting buy-in from stakeholders are attributed to promoting why they are there and what their purpose is for various reasons, as every coach participating in the study commented about these aspects. A shared, unified purpose allows the culture to be sustained, also allowing the motivational aspects of improving performance to remain constant. The coaches involved in the study also mentioned a primary aspect of getting buy-in was also letting the players have fun. Coach Sands stated, "Kids play sports to play. Let them have fun playing a game they love." Numerous comments were also made that buy-in is founded on "love and accountability," as Coach Street summarized buy-in; while Coach Hank added his mantra, "Founded by love, strengthened by perseverance, kept by joy."

The key ingredients of culture are showing players love and respect through developing a relationship, challenging them through expectations, and garnering ownership through accountability. Being able to promote and achieve buy-in from all stakeholders of a program to this culture sets the stage and foundation to maximize learning. These aspects of culture are the key drivers in *The Culture for Learning*. However, proven methods of instruction and practice for performance along with assessment, evaluation, and feedback for improvement must complete this formula. When these principles of performance and improvement are constantly cycled around the foundational aspects of culture, profound effects on learning can occur in the *Culture for Learning* theoretical model.

Links to Performance

Learning in athletics is built around the acquisition of skills needed to perform certain tasks. These skills are perfected throughout multiple avenues of practice whether it be individual, small group, or whole group practice sessions. Coach Thompson sums up the performance aspect of the *Culture for Learning* theoretical model:

> We break the skills down into smaller parts, work towards mastery of the smaller skills before putting them together to perform the new skill, then we will gradually progress into full speed, providing time for fundamentals.

Fundamentals

Coach Klampe states that "there's different aspects in [drills] but it can all go back to the fundamental aspects." Coach Patrick also explained fundamental skills are a large part of a practice, as he stated he is "real big into fundamentals and the small work in the detail." Fundamentals as defined by Coach Pratt, ". . . individual skills that are needed to play the game." Coach Taylor's rationale for the success of her team during her tenure is a "focus on fundamentals," she claimed; while Coach Sands commented that in practice every day, his teams work on fundamentals. Coach Brandon professed in regards to fundamental skill acquisition: "Number one is repetition, isolating that skill and really bearing down. Then you got to simulate game speed with whatever that skill is." Coach Stack promotes beginning "with the most basic form of that exercise" in order to properly instruct skills. Coach Sands and Coach Taylor also commented about focusing on a skill, and "isolate what we want to work on." Fundamental skills can be honed through repeated completions of those skills. These fundamentals are constantly practiced as all

coaches discussed repetitions to teach and build those fundamental skills. Repetitions are an essential component of skill acquisition and development.

Repetitions

Coach Patrick defined practice as the foundational driver of skill acquisition and development, "Repetition is the father of perfection." Coach Sands quoted a similar statement, "Repetition is key. The key to becoming great." Coach White states, "Repetition, like a lot. Do it over and over and over again using multiple drills for the same skill set," while Coach Cadena said it the same way, "repetition, repetition, repetition." Coach Jones calls for "Getting a lot of reps, but not necessarily the same drills." Coach Klampe explained, "Repetition is the key, the more you do it, the better you get." However, he does describe that in addition to repetition, skills have to be specially addressed through drills, and not just once or twice, but "done over time." Coach Clout stated, "Skills need to be repped. High, high in repetition. Real frequent, over and over and over" and Coach Howard commented that the "repetitive nature of the game" requires that players "do it a lot, repetition." Coach Shields stated that his team goes through a "step by step basis of repetition," commenting that his players might perform some skills thirty (30) to fifty (50) times within an individual period on any given day. Coach Hank discusses skill development, as "it takes thousands and thousands of reps." The repetitions performed are mainly broken down into smaller chunks or parts of the skill and taught in that manner leading to developing the entire skill. This example aligns with the learning progressions that the coaches made mention during interviews.

Chunking

Coach Clout commented for players to "rep it, rep it, rep it," and that skills are broken down and mastered in smaller parts: "I split skills into four parts: A, B, C, and D. We master part A, part B, then parts AB together, then C, then ABC, then D, putting ABCD together and then speeding it up." Coach Cadena stated that breaking down skills was essential for them to be mastered. The broken-down chunks of fundamental skills lead to much more complex skill sets and concepts that athletics are made up of, but as Coach Cadena reiterated, "There is no reason to go on in sports if you can't master it and get good at it." Coach Stack discusses using a similar method as he called it, "whole-part-whole." Explained, he would demonstrate "what the final product should be, break it down into steps, and get the athlete to piece it all together." This is a basic form of progression on teaching skills by starting at the fundamental level and building to the whole. Coach Hank referred to this as "build on the building blocks that have already been established." Coach White commented that she would "really break everything down very fundamentally," while Coach Slate added he would "start off very basic, start from zero and assume it's a blank slate." The generation mentality of smaller chunks to a larger whole, or as Coach Shields referred to as "small intricate details" and how they fit in the "big picture," plays a vital role in learning progressions for skills.

Progressions

Progressions are commonly used by the participating coaches. Coach Jones stated, "We will always work a progression whether it's a [Olympic power] clean or [football] tackling." Coach White discussed using a progression for the instruction of hitting a volleyball: "Be able to master the footwork, the arms, the jump, and the swing before we

ever get a ball out." A progression similar to what was proposed by Coach White can be used across all sports domains. Coach Pratt emphasized that his team always works from small parts toward a whole, "We introduce small chunks, and then to complex skills, progressing to putting together the smaller skills to reach the desired result." Coach Kregg also highly utilizes progressions similarly to Coach Pratt and Coach White, "Break down each process, break it down into different drills, and specifically work on each small skill. Then put it all together." The use of drills to teach skills is imperative, but as Coach Day states:

> We want our drills to do some type of specific function or drill during practice whether it's as an individual group or as a team. We are going to do a lot of scaffolding type of drill work. Drill specific stuff that I want to do that will translate to what we will be doing on Friday night. The further along in the season we get, the more advanced our drills will get.

Drills are also a vital part of each coach involved in the study and their instruction. Coach Kregg and Coach Waters both commented they use lots of "hands-on" drills, executing it many times to "display mastery." The learning progression involved during practice sessions and meetings with instruction from the coaches was in individual, small group, and full team settings. These periods within practice sessions involve talking through, walking through, half speed, full speed, full speed versus live competition as well as live-action versus video representations using in-person demonstrations and video.

Demonstrations and Video

The use of demonstrations and videos are considered essential elements among the coaches in the study as they go through progressions of learning as well. Coaches also use video to introduce skills or concepts to their team as a model of what a movement or play is supposed to look like. Coach Bard placed very high importance on knowing what you were teaching before instruction began. Video is used by Coach Jones to reinforce the learning progressions he uses to improve performance, as their team will "...walk through it, run through it, practice it, and then watch it on film. Video is the best thing to teach the progression." Coach Walker reaffirms this progression, "Talk through it, provide an example on film, walk through it, then execute it full speed." Coach Kregg is also a major proponent of using film along with the walk and talk method of instruction. Coach Sands discussed the use of demonstrating what he wanted but is starting to incorporate more video. Coach Cadena uses demonstration, film, walkthrough, and talk-through along with "using the board to explain what we want." Coach Dunbar discussed the way he and most other coaches involved in the study in his generation were taught, through demonstration. However, he went on to claim in regards to the current generation, "With technology now, we can actually show our players not only us doing it, but show them others doing it, and even show themselves doing it." Coach McClain comments regarding the use of walkthroughs and watching film to help players, "This is a generation of needing to see things." Coach Dunbar also agreed, "Kids nowadays are visual people." Video can have a major impact on learning through modeling for athletes as well.

Many coaches commented that they show their players short video clips of performance, allowing the players to get a mental image to replicate. Coach Howard, Coach Hank, and Coach Jones used videos of "professionals" to show players exactly what they were expected to do, or as Coach Hank states, "...watch the video to mirror what they do." Coach Clout commented that he does not limit the video clips to just professionals in the use of "video clips, usually pretty short to show them a clip of someone performing that skill." Coach Clout explained on the use of video with his team, "Our video is more pitchers' pitching and hitters' hitting. We have to use video for specific stuff like hitting mechanics because there is such a fine skill or movement. It is hard to see with the naked eye." Coach Brandon discussed a similar function of video using it in practice, as they "pull video of every pitcher we face for that weekend and simulate taking at-bats versus that pitcher pretty much every day. Video plays a big part." Video provides a plethora of instructional tools to use to teach and demonstrate performance. Instruction becomes part of daily practice outlined by most coaches who participated in the study through very specific, detailed plans.

Clearly Defined Goals

This aspect of the *Culture for Learning* is clearly outlined by the majority of coaches. The foundation is having "clarity," as Coach Clout stated. He defined clarity as explicitly knowing the expectation, "Kids got to know what we're here for, what are our team goals. This is our mission and why we are going to do it." Coach Dunbar also agreed, stating, "We must tell them why we are doing it;" while Coach Waters reiterates to his players often why they are being asked to do things and how it will make them more successful. Coach Street claimed they have to "definitely know why you're doing

what you're doing," as he commented that a major part of practice for him was to "try to make the player understand why we are doing this. What is the purpose?" Coach White explained the importance of knowing why to help with the understanding of what she was trying to improve that day, "If they understand why they are doing what I am asking them to do, they will understand the full capacity of what the purpose is." Coach Ellington claimed that by his players knowing the ". . . specific things you stress each day in practice," what he referred to as "musts," allows them to work on ". . . the core techniques and fundamentals . . ." every day. Clear expectations and purpose are claimed by the coaches participating in the study to be essential for learning.

Along with this clearly defined purpose, coaches must keep in mind why they do what they do. According to Coach Hank, "...the same desires and passions that you got into the profession for in the first place. Don't lose your love for young people. Don't lose your love for the game, and the passion for the game, and don't forget about the things that got you to where you are." Clear expectations or goals are necessary for planning. Coach Klampe reiterated, "Everyone must be on the same page, the same goals to be the best, not for the individual, but for the team." Clear expectations and knowing why can drive motivation and maintain focus toward a goal.

A generalized practice also is viewed as a de-motivator to some coaches, as Coach Patrick stated that practice has to have a goal and a focus, commenting it is imperative to "focus on the main thing," while Coach Brandon detailed that expectations and focus "keeps them zeroed in on that day." Focus starts with having a plan, as Coach White stated she had a "plan for practice, minute by minute" and met with the players prior to practice to go over it. Confirmation of a daily schedule keeps the plan transparent

as well as efficient during a practice session unless issues arise that cause a need to deviate from the plan. Coach Pratt frames his schedule around details to organize practice, maximize time, and involve all parties within the program, hoping to increase motivation. Having a schedule also diminishes the likelihood of going off script, as Coach Street commented, they "try not to do a lot of random drills." Coach Sands alluded to having a plan for each day of practice and shared this plan with his players encouraging questions from them. Coach Dunbar has a short pre-practice that sets the tone for practice, a "focus for the day." In-person or online meetings play a huge part in the planning for Coach Brunt's team. While instructing and teaching fundamentals through breaking down skills and progression toward mastery, this quest to mastery would be null without coaching, as the coaches involved in the study collectively referred to as, "coach up." Clear goals, clarity of purpose, detailed practice plans, and specific drills are all means of gauging present levels of performance. It is from that point; the improvement phase begins.

Links to Improvement

Repetitions and learning progressions of fundamentals are a vital part of the learning process. However, improvement strategies that include analysis and evaluation of performance levels accompanied by reteaching and feedback to improve, pressing the current level of performance forward. As those current levels progress forward, evaluation and assessment with feedback continue on the updated level of performance. Coach Walker summed this process up, "It is a never-ending cycle. To get where we want to get, we have to improve every day." The process of improvement can have profound effects on learning and performance, whether it be considerable growth and

improvement in performance or minimal change over time. The *Culture for Learning* theoretical model utilizes improvement to maximize learning or performance constantly considering the current state of performance through assessment and evaluation, and progression from the current state of performance to a more desired state through reteaching and feedback.

Assessment and Evaluation

The assessment and evaluation process includes observations, video reviews, and statistical analysis. Coach Slate discussed using a baseline of performance to know where to set the expectations of performance; while Coach Clout's comments were similar, as he used "a pre-read on what can the kid perform at that moment, sit back and evaluate. Then, I will focus on the areas that need work the most." The constant evaluation also lets coaches know where to "set priority if we need to work on a certain thing that I've seen that in other practices or maybe even a game that we aren't doing well with," as noted by Coach Howard. Coach Klampe evaluates his players every day to identify areas for improvement. Coach Patrick also turns to reflective practice and poses the question, "What is it that we can do to improve it?" Coaches are quick to set a priority list of what, indeed, needs to be addressed regarding performance and learning.

Statistics. Coach Taylor reflected on statistics from games to frame specific improvements for practice. According to Coach Howard, he too, used evaluations of statistics from games and practice determine where adjustments need to be made, as he stated, "Evaluate performance. If they go 6 for 10, that's a lot different than going for 0 for 10." Coach White commented on the use of stats to evaluate and set goals as well: "We use stats to assess what we are doing good or not and to see what we have mastered.

If our passing percentage was only 50%, I feel like the majority of practice will be centered around passing and passing drills." Coach Brandon focused his evaluation around statistical analysis as he stated, "This is a numbers game, chart the number of times [pitchers] hit a specific spot or how many times out of 50 [batters] hit it." Coach Sands also discussed the use of stats and tracking small details to improve the performance of players. While some coaches in the study mainly used statistical analysis as evidence for improvement, others rely on observations.

Observations. Coach Stack assessed deficiencies in his athletes while training, and then designed "workouts that will help address those deficiencies." Coach Pratt expressed the need to observe and assess to determine where improvements needed to be made, and Coach Bard commented on the importance of observing and evaluating over multiple games and practices to find trends of performance. Coach Day referred to observing "little cues, hitting a sled, bending over to get a ball, translating things from the weight room to the field" to determine improvements as he noted that he acknowledged the level of performance his players needed to exhibit. Coach Brandon and Coach White discussed working on deficiencies or very specific sets of skills that had not been mastered. Coach Howard commented that priorities are set during the evaluation: "You quickly notice that as a coach and pick it up, especially if you have the experience, you can pick up those things." Observations are a key component in evaluation, but overwhelming, most coaches who participated in the study evaluated using video recordings.

Video Recordings. Coach Patrick explained evaluation through the use of video and immediately addressing the deficiencies, as he added, "If you're seeing that some

people are consistently messing up on a certain rule that they don't know what they're doing on that so you don't have to wait until you get into practice number eight to find out they don't know." Video allows coaches to continue to coach constantly and be engaged in other aspects of practice, yet still, be able to analyze the full team's performance on an individual basis. Coach Day commented on film being a "luxury" that not everyone has at their disposal or the ability to use effectively. However, he discussed the difficulties of being able to evaluate and observe different players at one time with the human eye. This coincided with Coach Howard's thoughts that video use in his program was not used as much, but recognized the need for it. He relies solely on experience and memory to recognize performance deficits, but did comment that "takes experience and that's something I have a lot of." For coaches not as experienced as Coach Howard, video provides a necessary outlet for improvement.

Coach Street and Coach Patrick use the video to gather evidence on players, their performance, and where to make improvements. "We film everything we do. Go back and watch it so they can see visually what they've done wrong, and what they've done well," explained Coach Street, while Coach Patrick added, "show them the next day to see where you're messing up and see where to fix that kid." Coach Sands commented, "Video is a great thing to use with kids to get them to see what you want them to change." Coach Pratt utilized video to assess his players' performance, but also as a means to show his players good examples of the performance during a critique review of the film. Coach Walker uses film with his team to correct mistakes, and "work on strengths and weaknesses;" while Coach Shields and Coach Brunt videoed sections of practices to highlight and evaluate areas to improve.

Monitor and Track. The coaches in the study also professed to the use of video as not only a means of evaluation but as a means to track performance over time. Coach Taylor and Coach White used tracking sheets to "monitor and track improvements to see where to get better," while Coach Street and Coach Ellington use the process of grading players in practice and in games to make adjustments based on those. Coach Pratt stated that he "provides written explanations" on each player's performance based on film assessment, coinciding with Coach Shields comments that the individual grade and explanation to his players is "probably the most beneficial thing that we do for our guys." Coach Cadena also referred to giving players individual grades on their performance claiming that the method most utilized in classrooms of grade on a test is easily interpreted by his players. Coach Dunbar commented that he has used a variety of scoring systems for players, but most importantly it was to "explain why they get the score they got." Grades are a common improvement strategy, but as Coach Dunbar alluded to, the explanation is an absolute necessity. These forms of feedback drive performance improvements.

Feedback

Feedback on the performance can be considered a highly effective improvement strategy. Coach White discussed the use of video in a couple of different ways, commenting "video gives us instant feedback and we talk about it." She also uses it to give on-demand feedback: "I literally video their footwork and their arm swing and play it back to them in the middle of practice. Coach Jones remarked, "Feedback is the most important," while he discussed giving feedback on every single rep: "I think every play in football, every rep in the weight room, there should be some kind of feedback." Many

referred to it as "coach up," or "fix it." According to Coach Clout, his process of

feedback consists of:

> We stop, breakdown, discuss why it's wrong and tell them
> how to fix it. I always give feedback that way. If a kid
> doesn't seem to get it or screws it up, we look for reasons
> why. Then we try to find high rates of understanding, and for
> those that don't, it's back to those same skills the next day
> as the goal.

The understanding of why learning or performance does not reach a certain level can and

should affect instruction and feedback. While the goal of feedback is to improve

performance, the coaches involved in the study discussed providing feedback with

positivity.

Coach Street referred to his means of feedback as he would "constantly watch and

critique what they're doing and trying to provide positive reinforcement to try and fix this

technique or fine-tune it." Coach Jones also remarked, he, likewise, gave "positive

feedback, but also telling them what they are doing wrong." Positive feedback should

give the players a clear message on how to improve, not just positive comments.

"Whenever you give feedback, you need to have positive feedback critiquing someone,

but always leave something they can improve on," as Coach Slate referred to, along with

positive feedback. The coaches involved in the study employ the use of questioning to

more deeply imbed understanding.

Coach White stated that feedback came in the form of questions because of the

desire for her players to think and understand why they needed to do what it was they

were being asked to do: "I ask my players a lot of questions so they can get the full understanding because I can't just tell them what to do. I simply asked 'are you doing what you are supposed to be doing?' Most of the time they knew how to correct it." Coach Sands, Coach Brunt, and Coach Carter also remarked about their use of questioning players as part of feedback or "coaching," as it was commonly referred to. Feedback was also consistently discussed as a way to change the behavior of players to lead to the desired behavior for the execution of the skill or concept.

Learning from Failure

Coach Howard made a statement during the interview regarding feedback about being careful in some instances: "If a player is producing and using an unorthodox swing or delivery, I don't try to change that person." Coaches can sometimes "coach or feedback" players out of being productive or great performance. Coach Howard brought to light a cultural aspect in regards to feedback that relates to inviting failure and improving from it, as he added, "You have to let them fail before you can make them change." In a culture that encourages failure, it is imperative to teach individuals how to overcome those failures, because failure can be disheartening. Coach Carter noted that a high priority was to prepare his players for life, and "life isn't always easy." Coach Street termed this, "learning from failure." He discussed in detail that players must not be afraid to fail, as failure is a vital part of improving, and "if they fail it is ok. Take coaching and get better." During the interview, he discussed that through those failures, learning and improvement can be the product. Coach Clout and Coach Slate, both, contend the need for an environment of improvement and encouraging failure as a means of improvement. "You will stumble and fall down, but you cannot go backward," Coach Clout states,

while Coach Slate states that an effective culture is based on "admitting something needs improving and understanding you can improve." Coach Day commented that if players do not get it at first, it may not be the fault of the player, but rather the coach tries to press too fast causing coaches to get upset. This is in direct opposition of the improvement landscape presented by coaches.

Growth and Perseverance

Many coaches involved in the study discussed growth and a mindset to improve and grow each and every day. Perseverance is vital to growth and improvement. Coach Jones discusses the methods used to build perseverance during training sessions: "We finish with a 'finisher' that is geared toward trying to test how tough they are and trying to make them tougher," and Coach Klampe mentioned trying to make his players "tough" during practice and drills. Building perseverance through these methods is framed upon an environment identical to learning through failure. Coach Clout proudly confessed, "It's not about where you start, it's about where you finish." Coach Hank discussed the need for consistency. In his sport he commented that it was difficult to see improvements when stats might not show it, however, it was imperative for players to know, "performance is continual, consistent performance is about knowing your players and building them up from a mental, emotional, and physical standpoint." The *Culture for Learning* theoretical model utilizes this environment to not only improve performance, but to also build relationships, set high expectations, and hold those involved accountable to those expectations.

Conclusion

The *Culture for Learning,* Fig. 4, is presented through the lens of effective athletic coaches as it allows for cycles of performances and improvements on a foundation built on expectations, accountability, and relationships. The *Culture for Learning* provides an outlet to maximize learning in athletics from effective athletic coaches who participated in this study.
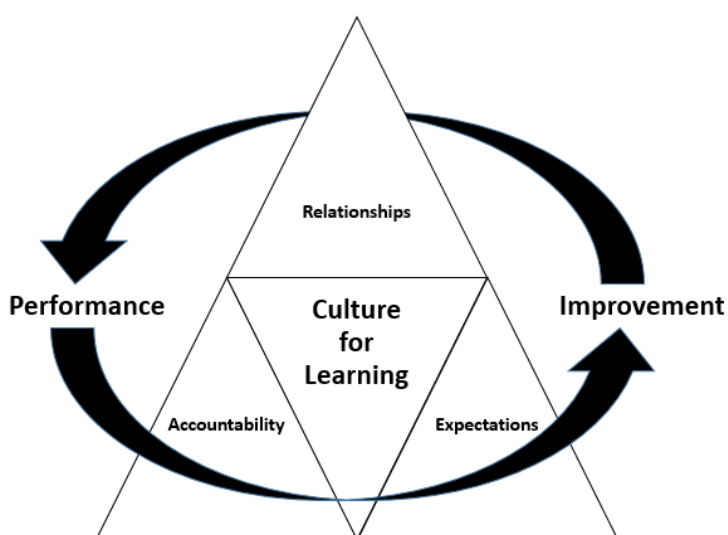
Figure 4. *Culture for Learning* theoretical model of learning

Coach Stack summarized his thoughts on learning, in general, through this process. He referred to when the players help define the expectations, hold each other accountable, and share a high degree of comradery. Coach Stack has recently moved schools and stated, "I can't identify what the culture and expectations are here." He then goes on to say, "We haven't been successful during my time here at this point." This could be seen as how the elements of the *Culture for Learning* are linked to effectiveness within this context. Other links of culture, performance, and improvement from the findings are acknowledged and compared with the review of literature section of this study.

CHAPTER V: DISCUSSION

The theoretical model, *Culture for Learning* consists of aspects of learning that are all intertwined together so tightly, no hierarchy exists, yet all aspects have to be present to maximize learning. The developmental process of this theoretical model captures aspects of performance improvement and the culture that maximizes them. The aspects of culture presented in the theoretical model display the influence culture has on performance and improvement, and its potential impact on learning. At the center of the *Culture for Learning* are the emergent themes of what is included by other aspects that are imperative to maximize learning. The purpose of this study was to generate a model of learning as seen through the lens of effective athletics coaches. While the model for learning was the goal, an emerging concept came to light regarding the culture that can not only be used to generate learning but maximize it.

Based on the findings, culture becomes the key driving force of the theoretical model. The *Culture for Learning* is foundationally built upon a culture that has the potential to maximize learning through expectations, accountability, and relationships. The emergent culture to maximize learning exists in the crossover of those components. As expectations, accountability, and relationships shine through from the coaches involved in the study, questions also arise: What expectations of performance and improvement need to be present with athletics and coaches? How are those individuals held accountable for the performances and improvements in performance? What role do relationships play in the Culture for Learning and why do relationships play such a tremendous role?

Culture

The looming and foundational theme of culture was discussed in depth by all participants of the study. Culture is considered the most important aspect of highly successful organizations, especially in athletics. The coaches involved in this study had a relatively difficult time defining their culture, however, through the process of this grounded theory qualitative research study, the essential components in generating effective learning in athletics emerge, beginning with what Coach Street stated during his interview, "Culture is everything." The components of the culture have subtle nuances that unite each of them. Numerous times it was mentioned that the expectations of the culture had to be taught, developed, and maintained. Coaches used various outlets to expedite this process. The methods of teaching and development, while not specifically stated during interviews, were implied and, indeed imperative. Behavioral and social expectations have to be learned the same as fundamental skills. Just as expectations are developed and maintained, individuals must be held accountable to those expectations, and, likewise, to the culture. The coaches in the study referred to the culture being developed and maintained under pressure - events that demanded maximum effort in the face of maximum challenge.

Athletics is known for highly pressurized situations, and the interviews provide evidence of the exposure to these situations, either at practices or during other team activities. While wins and losses were a determining factor for participating in the study, it was stated specifically by Coach Hank and Coach Brandon, that wins and losses do not determine worth and value as a person, as Coach Hank reiterating about focusing on more controllable aspects. Many coaches in the study implied that while wins and losses

can determine success, the process and pathway are much more important than the result. This comparison equivocally parallels with what Ward, et al (2007), Sawyer (2013), and Brown, et al (2014) commonly referred to as mastery not being an outcome, but a process. While these aspects could all be considered part of effective athletic programs and cultures, the cultural elements of highly effective organizations in business and military emerged through research as well. As previously noted, the coaches involved in the study identifiably struggled to pinpoint the elements of culture that they viewed as essential to maximize effectiveness and learning. This could be partly due to the fact that this was their everyday life and normal to their daily procedures and ideology. The aspects of this model would be expected to appear in any superior learning environment.

Expectations

Expectations entailed having very transparent standards for behavior, performance, and improvement. These expectations also included the process of developing and maintaining the standards, how leaders within the program are responsible for modeling the expectations, and how those expectations are communicated with all stakeholders within each program. The comparison of expectations that emerged in the literature review was aligned with previous research. In some of the business examples from Collins and Hansen (2011), expectations are framed around hard work and diligence. Athletics and military examples from Coyle (2018) focused on San Antonio Spurs head coach Greg Popovich and the United States Armed Forces missileers, and how they create and set high expectations that can lead to increased motivation. Many times, with a highly effective professional business, professional athletics, and the military, expectations already exist. The expectations for those

organizations from the research are already set at a high level, requiring the individuals'

maximum effort, intensity, and focus (Collins 2009, Jackson & Delehanty, 2014, Willink

& Babin, 2017, Anderson, 2019, & Van Camp & Symonds, 2020). Comparisons to the

review of literature can be seen within a commitment to improving and environmental

aspects of culture. Oftentimes expectations are created by organizational leaders. No

matter what organization develops the expectations, it is essential that those are

communicated and modeled. They must be within the scope or context of maximum

effort, high character and morality, perseverance, integrity, and respect. Expectations and

standards, however, have no value unless a high sense of accountability for upholding

them exists.

Accountability

Accountability should be viewed as essential to all those involved, including how

individuals are accountable to each other and to the organization or program.

Accountability can also be viewed as being held to standards or expectations, another

previously discussed essential element of the culture in the *Culture for Learning*. The

section on accountability in the findings was minimally aligned to the research, however,

not misaligned to a culture built for learning. There is a tremendous amount of

accountability in every aspect of professional organizations, sports, business, or military.

Throughout the research sections of a commitment to improvement, and environment;

however, just like expectations, oftentimes research regarding already established

accountability in professional cultures, not as much of developing or establishing

accountability within that culture.

Accountability is a concept that rarely gets discussed in professional cultures, simply because that is a given: individual, unit, and team accountability. When expectations are not met or something goes awry, a plethora of job losses, personal losses, or even personal injury can occur. Accountability, however, cannot just be pushed out to individuals without some considerable foundational groundwork to be effective. In this case, the risk of lack of buy-in, which was considered extremely imperative to the coaches in this study, as well as Hall of Fame college basketball coach, Bob Knight (Knight & Hammel, 2002). Accountability exists as a result of trusting relationships, establishing high expectations, and being held accountable to those expectations.

Throughout the findings, a number of the participating coaches placed a heavy emphasis on accountability as the rationale for their success and to why their culture had been turned around. The emphasis was placed on being accountable to small details during practice or meetings, accountable to giving maximum effort in all phases of practice or meetings, accountable to being on time, and especially accountable to the expectations set forth by the organization and its leadership. Those accountability measures are very apparent in professional organizations. The New England Patriots documentary, *Do Your Job*, (Zucco, 2015) is foundationally based on being accountable to expectations and taking ownership of each player's role to the team. If a player or coach is found not meeting the expectation, taking ownership, or accountability for their role, that individual would not be with the organization for every long. The sense of accountability, much like those that the coaches accounted during their interviews as the rationale behind their success. The New England Patriot's success could be considered

because of the high degree of accountability that is held for each member of the organization.

In the military, accountability is in place for every single small detail those individuals encounter -- from the way servicemen and servicewomen walk, talk, salute, and think. Willink and Babin (2017) and Van Camp and Symonds (2020) discuss the United States Navy SEALS training as a method to build accountability to each other, to their unit, the United States, and to past Navy SEALS before them. A connection between the tradition of the SEALS organization and the tradition within some athletics organizations could be linked from this example. This connection confronts the concept of accountability to tradition. Coach Clout, Coach Carter, and Coach Howard discussed at length about being part of something greater, igniting personal accountability to passing something along to the next generation or not letting the organization be in worse condition than before that individual arrived.

Relationships

Relationships are a vital part of developing and communicating expectations, as well as holding individuals accountable to those expectations. The relationships are built on trust, equality, and personal connection. Considering the positive effects expectations and accountability have on success and effectiveness in teams, relationships are at the center of the deep entrenchment of those aspects. Relationships and the connection with expectations and accountability make up the core of the *Culture for Learning*. There is a vast amount of research regarding how relationships affect learning, culture, performance, and improvement methods. However, without the additions of expectations and accountability, relationships could be viewed as a personal connection between

individuals without tapping into the potential effects of performance enhancement and learning, just as the famous quote from James Comer (1995) claims, "No significant amount of learning can take place without a significant relationship." The quote can imply that if a coach, teacher, or supervisor can develop significant relationships with those in their charge, performance could be exponentially improved, as seen through research in the literature review and the findings of this study.

The performance improvements linked to relationships tend to be viewed as players, students, or employees going above and beyond for that person rather than average, expected performance. Research in sports or business shows the positive effect relationships can have on a team's and organization's performance. Relationships can be linked to a feeling of trust, vulnerability, connection, and belonging (Coyle, 2018). At the foundation of performance and improvement, relationships built on trust. Relationships are at the heart of the foundational structure of the *Culture for Learning*, displaying how expectations and accountability give way to the environment on which learning, performance, and improvement stand upon.

Relationships have been a long-standing aspect of culture. Building relationships and trust can be done by spending time with individuals, or in the instance of athletics, time spent with players other than just at practice. Spending time with people leads to building personal relationships, knowing more than superficial details about the individual, but working within the constructs of "can I trust this person? or "can they trust me?" A strong network of relationships built through trust and personal connection can be referred to as a family-type atmosphere. However, even in a family atmosphere, expectations and accountability still exist. The element of trust plays a pivotal role in

building relationships in addition to a sense of fair treatment, along with an emerging

sense of equality.

Equality within a team signifies that each team member is important, each team

member's role is equal, showing no evidence or trace of inequality. Team unity should

focus on equality greatly affecting the culture surrounding the team. The strong

overarching ideology, however, remains the same: no one individual is more or less

valued based on environmental factors existing in society today. Several athletics coaches

in the study, as stated in the findings, even discussed diversity and its positive role in

athletics. Inequality or diversity issues can be greatly reduced based on the relationships

within the program or organization. Relationships lean on trust from one person to the

next, no matter the differences, erected upon the foundation of equality. Building trust

equals building relationships. Relationships built on trust give leaders the ability to create

high expectations and hold individuals accountable for those expectations without turning

to a defensive mechanism or rejection. The three resounding elements of the *Culture for

Learning* provide a firm foundation where performance and improvement can thrive and

propel toward the pathway to maximize learning in athletics.

Performance / Improvement

An absolute imperative on the pathway to maximizing learning are cycles of

performances and improvement for learning. Continual improvements must consist of

small tweaks and changes along the pathway to continue to progress toward becoming an

expert, as Ericsson, et al (1993) proclaims, "At increased levels of performance, the

practice activities obviously change and so do the criteria for evaluation" (p.369).

Although the *Culture for Learning* is built for adaptations through constant and

continuous cycles of performance and improvement, the essential elements of culture, or as Coach Clout states, "core values and core beliefs" must not change. The *Culture for Learning* theoretical model follows the fundamental foundation of culture allowing for performance and improvement methods through chunking, repetitions, fundamentals, evaluation, assessment, and feedback based around setting and resetting of goals and learning from failure. The components are employed using a variety of individual, small group, and whole-group instructional sessions. During these sessions, demonstrations, modeling, and direct instruction along with the use of video recordings to teach, reteach, and critique are highly utilized.

The themes that emerged revolve around what effective athletic coaches do to maximize learning from their teams: constant cycles of performance and improvement. The improvement phase begins with assessment and evaluation to determine where the current state of performance exists and the methods of observation and video recordings to do so. Feedback based on those evaluations accompanies other strategies that are used to improve. A necessary component of improvement relies on an underlying concept of using failure as an opportunity to learn. Performance, however, includes the acquisition and development of fundamental skills, the process of breaking those skills down during instruction, repetition of those skills, the use of several demonstration methods used for instruction, and setting goals or a focus of the performance.

Performance

Performance begins with skill acquisition and learning of those specific skills needed to perform. The performance section of the findings is aligned to research on how those skills are acquired and learned. Coaches present fundamentals skills through

demonstrations from themselves, from other players, and through the use of video

recordings to show other players performing the skills correctly. Mental representations

are created through these demonstrations and modeling. The skills are then taught

through broken-down chunks of skills or smaller units combining and scaffolding to

create a whole. These chunks as well as entire skill sets are perfected through repetitions

creating automaticity. The acquisition of skills takes place through spaced and interleaved

retrieval, and in some instances, deliberate practice is used. Practices formed around

those methods utilize sessions of individual periods, small group periods, and team

periods. The live simulation periods are generally the most effective in determining true

performance, because of the requirement of skill retrieval and effort.

Goal setting emerged as an aspect of the performance section that in the literature

review appeared as a cultural component. Goals are part of the subtle nuances that the

study has promoted, yet not originally the way it is presented in research, as the

underlying connection goal setting plays within the study's review of literature and the

theoretical model. Goals provide direction and purpose to performance through

chronological games, weeks, and years by a constant reset of goals or targets. Coach

Cadena pinpointed deliberate practice ideology as he discussed there was no need to

move on until a skill was mastered. Deliberate practice methodology of skill development

does not move on until mastery of a target has been reached. Goal setting also sets the

stage for practices to be highly detailed and organized.

The detailed practice plans are aligned with the practice section of research

founded on specific details of improvement needs as well as the goals that are in place.

Practice session planning is not haphazardly approached, in turn leading to the creation of

a process of effective practice to efficiently and effectively acquire skills and knowledge. The process is generated through repetitions of skills and discussed frequently by all coaches involved in the study. Repetitions could be practiced and perfected in the same drill and through different drills utilizing interleaved and spaced retrieval practice. However, it is unlikely that the participating coaches understand the research-based learning strategy that is being used. The coaches in the study used repetitions to a point of automaticity of some skills to keep working memory open for other details of the performance.

Coach Shields commented his players may take a six-inch jab step up to thirty (30) times within an individual time period, creating automaticity of that skill where brain functions and working memory is not taken up to accomplish that six-inch jab step and it can be used for cognitive functions. This is a key concept that Coach Patrick and Coach Brunt referred to as coaching how to do things and not necessarily what to do. Coaching and refining techniques and performance rather than coaching the initial skill can save time, energy, and resources. Coach Brunt also brought up introducing things through meetings, whether in person or online. The combination of teaching methods such as these aid in skill acquisition, development, and automaticity. From this point, practices can then focus on the refinement of skills, scaffolding to more complex levels rather than introductory or foundational skills. The refinement phase is considered in the *Culture for Learning* as improvement.

Improvement

Through highly effective practice along with continuous evaluation and feedback, performance can constantly progress toward maximizing learning. The improvement

aspect is an essential element of the constant cycles of performance and improvement that parallel the findings from the study and research. Research depicts the improvement section from evaluation, feedback, reflection, and performance analysis. Performance analysis can be defined as the use of video to provide an outlet for the other essential improvement aspects. An additional cultural element of improvement falls to an environment that embraces failure to learn through a commitment to improve. Improvement strategies are essential to reaching maximum performance and maximizing learning.

Constantly practicing to never evaluate and assess performance could end up being detrimental to performance and learning as well as hindering goal setting for continuous improvement. Evaluation and assessment are imperative to pinpoint the current level of performance in order to progress and improve. Hattie & Clarke's (2019) quotation, "practice alongside improvement" (p.17) can perfectly describe the constant looping to give way to the nonstop cyclical nature of performance and improvement. Within the improvement element of the cycles, specific feedback on performance under the umbrella of a culture built on growth and encourages learning through failure embracing an "openness to feedback" (Hattie & Clarke, 2019, p.17). While the improvement cycle is comprised of critical aspects, the coaches involved in the study as well as research contest that expert athletic performance and learning can be achieved and maximized during this process.

The process of assessment and evaluation from research and the findings allow the documentation and ability to pinpoint the current state of performance. The initial evaluation in some instances is used as a baseline to begin improving performance.

Observations, statistics, and video recordings are used during evaluation. Video recordings, known as performance analysis in research, allow for both the notational and biomechanical analyses of performance, whether it be evaluating team performance or individual skills to provide feedback and improve performance through an objective outlet. No matter if observations, video recording for performance analysis, or statistics from the previous practice session, game, or year are used, the goal of evaluation is to assess the current level of performance in order to set goals to move forward. The forward progress after evaluation and goals depends on the feedback from the coach and providing it.

Discussions regarding feedback in the findings noted that positive feedback combined with improvement methods were the most effective way to improve player performance, while others stated that very specific, detailed feedback made the difference. Research suggests specifically detailed, accurate feedback has the most impact on improving performance, while positive feedback is utilized to increase motivation rather than improving performance. Considering the principles of deliberate practice, highly intensive feedback is imperative along with immense levels of intrinsic motivation. Based on the findings, the coaches involved in the study seem to utilize these principles of maintaining and increasing motivation while simultaneously improving performance through feedback. This is especially important for novice performers, as was previously noted in the literature review from Coach John Wooden (Tharp & Gallimore, 1976, Wooden & Jamison, 1997, Collins, 2009, Wooden & Jamison, 2010, & Collins & Hansen, 2011). The simultaneous actions of feedback including details to improve and praise are not the only continuously paralleling activities.

The *Culture for Learning*, while foundationally generated through culture, emphasizes performance and improvement methods to improve performance. It is a vital aspect of the theoretical model that performance and improvement, evaluation, practice, and feedback are not singular points on the improvement line, but simultaneous series of actions. It's not evaluation, then practice, then feedback, then assess as all separate points. These stages can be very difficult to distinguish between segments of the performance improvement process currently taking place. The simultaneous series of actions and constant revolution of performance and improvement are essential for learning and improving performance. A major issue that could arise during the constant revolution, however, can be the ability to assess through strict observation during real-time. Because of this major issue, research promotes performance analysis and the participating coaches advocate for the use of video recordings during the improvement phase.

The use of film and video that is highly utilized by all coaches in the study is evident in the findings. Coach Howard discussed that even know he is a very experienced, 40-plus years, coach and could be considered a domain expert in baseball, he knows exactly what he is looking for from his players and that the use of technology and video was vital for his program going forward. He also mentioned the rationale for the use of video was to drastically decrease or eliminate the reliance on memory and of subject ability in coaching his players. Performance analysis research leans on these same ideals providing objective analysis without relying on limited working memory (Hughes & Bartlett, 2015). Coach Day pointed out that this was especially important when coaching more players at once, very similar to what performance analysts refer to as notational analysis. The element of video comes in for improvement from an evaluation

standpoint, from a feedback standpoint, and also from a reteaching standpoint. The use of video analysis that is highly utilized might not be as evident in other learning environments, but provides potential benefits of objective feedback and learning that far outweighs the reliance on memory and subjective analysis. Performance analysis and the use of video also open the door for the aspect of culture that appears within the improvement phase, the opportunity to use failure for learning to improve performance.

Aspects of culture roll over into the performance and improvement cycles. Constant goal setting was essential in the performance section while creating an environment where the opportunity to fail is encouraged allowing for learning to be maximized. This type of environment can be difficult for individuals because it is basic human nature to succeed and not want to accept failure. Human nature to succeed is a societal issue where success is praised, and failure is vilified. Placing individuals within an environment where improvement is the focus, practice can occur, and success is not a relevant factor that can maximize learning. Failure can be an excellent teacher and provide necessary outlets of where to go next, what to do next, and how to improve. The environment that promotes improvement consists of the underlying understanding that failure is not only a satisfactory event but is encouraged. The coaches involved in the study provided that while this was a difficult environment to develop, they wanted their players and teams to perform to the best of their ability and succeed. This ideology can play a pivotal role in creating a culture that sees failure as not a negative or unsuccessful event, but an opportunity to improve learning and performance.

Implications

Several implications for future research emerge from this grounded theory qualitative research study. The research includes following up on some previously published literature regarding the topic of expectations, accountability, relationships, performance, and improvement. Other implications include possible future practical applications emerging based on the findings of the theoretical model of learning as seen through effective athletics coaches.

Implications for Research

The research on the expectations focuses on those that are already in place rather than developing or setting expectations. Professional athletics, professional business persons, or professional military staff enter those fields that have predetermined expectations they must reach. Future research absent from the review of literature should be focused on developing expectations that can promote motivation and maximal performance, as well as attempting to create or establish culture through high expectations. Another absent research example is organizing the ideology of effectively changing culture and the positive effect culture change has on effectiveness, results, success, and even learning (Schroder, 2010).

Other research endeavors revolve around, similar to expectations, how accountability within an organization affects productivity and success along with how it affects culture. Also, further research may help uncover how to develop or create more specific accountability, rather than generalized ownership to a cause. Research on teamwork and team cohesion could provide insight on how accountability is developed or created though the implications of team roles and team unity (Carron, Bray, & Eys, 2002,

Carron, Colman, & Wheeler, 2002, Eys, Hardy, Carron, & Beauchamp, 2003,

Beauchamp, 2005, Eys, Beauchamp, & Gray, 2006, Loughead, Hardy, & Eys, 2006,

Carron, Martin, & Loughead, 2012, McEwan & Beauchamp, 2014, & Worley,

Harenburn, & Vosloo, 2020). Accountability among team members can be further

cemented through networks of relationships that can solidify accountability to the set

expectations.

Implications regarding another key aspect of research were discussed by one of

the coaches involved in the study. Goal setting and progression were referred to by Coach

Day as bringing players along slowly based on skill level, experience level, how much

exposure they had had to these things, which could be considered differentiated goal

setting to players. Further research on differentiated goal setting could lead to the use of

this methodology, commonly associated with deliberate practice. Differentiated goal

setting within a team setting could potentially lead to deliberate practice among a team,

resulting in expert performance of specific individual domains within a team setting.

Other future research implications include questioning the rationale based on the

number of codes from the coaches that discussed teaching and instruction, repetitions,

and how the chunking process of instruction versus coaches that had more interview data

regarding improvement, evaluation, feedback, and how do they improve skills. This

provides an interesting potential research study of athletic coaches' time spent on

introduction and teaching skills versus the improvement and refinement of them. Could

more of one element more than the other take the effective coaches to another level of

that much more effectiveness and success? Were the coaches that spent more time on

improvement more successful than the ones that spend more time on the instructional

introduction strategies? This would involve observations of more practices, for longer periods of time across multiple practices, times of the year, and different phases of the season.

Another research study could look at building expectations, accountability, and relationships through head coaches of teams versus assistant coaches of teams. What does those elements' generation look like from a head coach's point of view or the assistant coaches' points of view? In this qualitative research study, the athletic coaches were equally sampled as head coaches and assistant coaches; some serving as head coaches in one sport and assistants in another. The athletic coaches sampling within this study came from theoretical methods and guidelines; however, the distribution of the majority of athletics coaches are from the standpoint that the majority of athletic coaches are found in the high school. The athletic coaches in the study were also sampled from different levels of the sport. Would this theoretical model look different if further research was conducted from athletic coaches that were predominantly college coaches versus high school coaches or versus middle school coaches? Would the theoretical model consider different components if research were conducted and compared with male and female coaches and if they coached male or female sports? Would the theoretical model look different if you divide data from each subgroup and extrapolated it to compare? Does the model look different if the extrapolated data from the subgroup divisions were compared to the whole? These various research study questions could be used to further develop or test the accuracy of the theoretical model of learning as seen by effective athletics coaches.

Implications for Practice

Implications for future studies and practice for the *Culture for Learning* theoretical model is to allow its use within arenas that have the potential to positively influence and maximize learning on a larger scale than an athletic team or teams. An immediate implication for practice could be to test the validity of the model with either coaches that are new to a team or coaches that could be considered ineffective based on similar criteria as was used to define effective. Ineffective coaches would be considered those coaches that do not have a substantial win/loss record or have not shown trending improvements with their teams in wins over a period of time. A study focused on testing the *Culture for Learning* could provide valuable data on the accuracy of the model.

The theoretical model presented in this study shows that many aspects of how learning is generated appear much differently than in the academic setting of classrooms within schools. Grades based on attendance, discipline, participation, and other aspects dominate the landscape in classrooms as a measure of learning. It can also be marred with trying to achieve government-mandated accountability measures based on achievement scores on summative assessments that may or may not be reliable and valid assessments. Learning in the classroom is also judged by a complicated growth formula, Educational Value-Added Assessment System, or EVAAS (SAS, 2020), so complex that is not easily explained. Learning in athletics, however, is not measured by grades and based on summative assessments. Learning in athletics is based on measures of performance. Growth and learning are displayed through the demonstration of highly effective performance of skills and concepts. Because of the expert level of performance and

learning the *Culture for Learning* can produce, the question continues to be pondered regarding the use of the model in classrooms?

As was uncovered previously, the motivation of individuals plays a major role in learning. Athletics allows the opportunity to be voluntary in participation, meaning that at any time, individuals can choose not to participate and practice anymore. In schools, compulsory attendance legislation requires ALL individuals to be enrolled in school until the age of eighteen (18). This requirement inhibits an individual to choose whether or not they participate, thus depleting motivation as Pink's (2011) formula refers to, making the *Culture for Learning* even more imperative for this intense learning environment. District and school leaders could potentially lean on athletic coaches to provide insight into developing relationships to mitigate the loss of motivational incentives created by compulsory attendance. Mitigating this loss helps increase the opportunity to maximize learning in classrooms within schools.

The *Culture for Learning* can be used to improve learning in classrooms when the culture is conducive to doing so, as the athletics coaches' theoretical model displays. Athletic coaches' view on learning could be replicated to be used within classrooms as long as the culture components are developed and foundationally implemented. Expectations and accountability measures that are provided by athletic coaches could allow for learning to be maximized within classrooms and schools because of the internal structures of expectations and accountability rather than on relying on state or district offices to set expectations and provide accountability measures.

Impacts on classroom learning could also be felt from the subcomponents of performance and improvement. Repetitions of skills were highly utilized by the coaches

participating in the study. Repetitions of skills within academic subjects could produce increases in learning; however, obvious obstacles exist. The number of standards teachers are responsible for teaching limits the amount of time that could be used for repetitions for skills. This could lead to implications for policy changes at state and federal levels to reduce the number of standards that teachers and students are expected to interact with. Other potential implications for policy and practice surround assessment in schools.

Assessment, as previously noted, is a highly utilized aspect in schools as well as the *Culture for Learning*. However, it should be noted the marked differences. Assessment in schools revolves tremendously around accountability. There was no mention of assessment being an accountability measure by the coaches participating in the study. Assessment is also the foundation of EVAAS, which is used to measure and track performance and learning over time but is highly utilized in most state education departments and districts to provide accountability measures. Assessment, in the context of the study, is a method to determine current states of performance and utilized to set future goals to improve performance and learning, not to serve as an accountability measure. Federal, state, district, and school leaders could utilize the *Culture of Learning*'s methodology and uses of assessment and evaluation to maximize learning. These methods and uses should also be used to inform practice and policy within their sphere of influence and impact.

A future implication for practice would be to implement the theoretical model within a classroom setting and compare student outcomes quantitatively to one another determining any statistically significant differences that could be linked to effectiveness that the *Culture for Learning* could positively affect learning within a school setting.

While this could be a method in determining the accuracy or effectiveness of the model from a quantitative standpoint, another implication for practice could be to compare the *Culture for Learning* theoretical model to a newly generated model as seen by highly effective teachers, of the same subject or grade level, of the same discipline, or by the same grade bands. The comparison of the theoretical models could also promote and determine whether the models could cross over into each respective domain. This future study could, again, test the accuracy of the *Culture for Learning* across various domains, thus further solidifying the potential to maximize learning, not only in athletics for athletics coaches, but across many domains of education, business, military, and countless others that value high rates of learning. Future implications for research and for practice can also lead to amending the theoretical models that the limitations reveal.

Limitations

Aspects of the findings that the coaches in the study discussed that were not part of the research involved in the literature review looks at the role of team members within a team. Upon reflection of aspects of research, unintentional absence of research regarding teamwork, roles of team members, role ambiguity, and group dynamics were made. This absence does not, however, determine that those elements are not a part of effective teams and programs, yet, could reveal limitations from the interview protocol created for the research study. The concepts of teamwork creating more well-defined roles, role ambiguity or the clarity of roles within a team, and more clarified definitions of group dynamics -- how athletic teams function together and how the culture affects that are future research implications for the study (Eys & Carron, 2001, Beauchamp, 2005, Beauchamp, Bray, Eys, & Carron, 2005, Eys, Beauchamp, & Gray, 2006,

Loughead, Hardy, & Eys, 2006, Schroder, 2010, Carron, Martin, & Loughead, 2012, McEwan & Beauchamp, 2014, & Worley, Harenburn, & Vosloo, 2020). Through this research, the question is pondered: how could the *Culture for Learning* theoretical model's foundational cultural aspects fit within research definitions of teamwork and defined roles within a team?

Other limitations that exist within the generation of the theoretical model could be related to the time the study took place, as some of the coaches did not hold practice sessions during the time parameters. The grounded theory qualitative study took place during the global COVID-19 pandemic causing limitations with face-to-face contact with coaches and observational data for the study. The CDC's guidelines for social distancing along with governmental mandates for school closures greatly affected athletic practices and contests. Many practices and athletic events were suspended due to the guidelines put in place to combat the COVID-19 pandemic. Due to the pandemic, those interviews that had not already taken place were conducted through an online platform or through text-based or email exchange. This limited the ability to gather data from the coach's office and other face-to-face observational data.

Some of the athletic coaches participating in the study also denied observations of their practice sessions. The researcher has spent several years as an athletic coach in the sport of football for a prominently known high school. Due to the nature of athletic coaching in the sport of football, some football coaches agreed to participate in interviews but denied access to practice observations in order to keep privacy to his/her team. These same coaches were reluctant to share any documents/artifacts with the

researcher for the same rationale. Due to these limitations, subsequent interviews or follow-up questions for saturation and the emergent theory were requested and granted.

Conclusion

Throughout the findings of the grounded theory qualitative research study of effective athletics coaches' theoretical model of learning, the *Culture for Learning* is very much aligned to research from the literature review. However, it is not as easily defined into sections as is displayed in the review. There are definite aspects of research-based methods to improve performance, to create a culture that is conducive to maximizing learning and performance. Learning theories derive the foundational aspects of what learning is and how it is achieved; practice describes the application of learning, while analysis and feedback evaluate learning. Culture allows for opportunities for performance and improvement to reach the maximum potential of learning. The *Culture for Learning*, Fig. 5, syntheses the findings from the study, aligning to research.
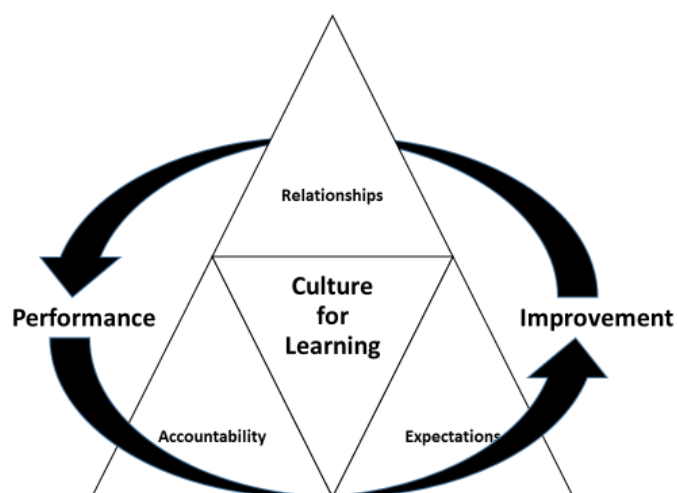
Figure 5. *Culture for Learning* theoretical model of learning

The model utilizes various styles and sequences of repetition, modeling, and other instructional based practices for performance. The improvement element considers continuous analysis, evaluation, and feedback components that are used to constantly progress performance forward. The cultural aspects revolve around relationships, expectations, and accountability, goal setting, and learning through failure. The *Culture for Learning* theoretical model provides an avenue to maximize learning across all domains of athletics and for all athletics coaches.

REFERENCES

Ackerman, P.L. (1987). Individual differences in skill learning: An integration of
psychometric and information processing perspectives. *Psychological Bulletin*,
102(1), 3-27. Doi: 10.1037/ 0033-2909.102.1.3.

Afremow, J. (2013). *The champion's mind: How great athletes think, train, and thrive.*
New York, NY: Rodale.

Aerily, D. (2016). *Payoff: The hidden logic that shapes our motivations.* New York, NY:
TED Books, Simon & Schuster, Inc.

Allen, J. (2014). Gregg Popovich: In Pop we trust. *Rolling Stones*. 2 June 2014.

Anderson, L. (2019). *Chasing the bear: How Bear Bryant and Nick Saban made
Alabama the greatest college football program of all time.* New York, NY:
Hachette Book Group.

athletic coach. (2020). In *Merriam-Webster.com*. Retrieved August 29, 2020, from
https://www.merriam-webster.com/dictionary/coach.

Bartholomew, B. (2017). *Conscious coaching: The art of building buy-in.* Omaha, NE:
Bartholomew Strength LLC.

Bartlett, R. (2001). Performance analysis: Can bringing together biomechanics and
notational analysis benefit coaches? *International Journal of Performance
Analysis in Sport, 1*(1), 122-126. Doi: 10.1080.24748668.2001.11868254.

Beauchamp, M.R. (2005). Towards an applied model of role perceptions and group
dynamics in sport: From theory and research to practice. In S. Jowett & M. Jones
(Eds.) *Psychology of sports coaching* (pp. 44-54). Leicester: British Psychological
Society.

Beauchamp, M.R., Bray, S.R., Eys, M.A., & Carron, A.V. (2005). Leadership behaviors and multidimensional role ambiguity perceptions in team sports. *Small Group Research, 36*(5), 5-20.

Bergmann, D.S. (2000). An examination of the relationship between coaching and teaching. *Quest, 52*, 79-88.

Bernstein, R. & Greenburg, R. (2008). *The UCLA Dynasty.* [Film]. HBO Box Office Inc.

Birks, M. & Mills, J. (2011). *Grounded theory: A practical guide.* Los Angeles, CA: SAGE Publications.

Bloom, G.A., Stevens, D.E., & Wickwire, T.L. (2003). Expert coaches' perceptions of team building. *Journal of Applied Psychology, 15*(2), 129-143. Doi: 10.1080/10413200305397

Bransford, J.D., Brown, A.L., and Cocking R.R. (2000). *How people learn: Brain, mind, experience, and school.* Washington, D.C.: National Academy Press.

Brown. P.C., Roediger III, H.L., & McDaniel, M.A. (2014). *Make it stick: The science of successful learning.* Cambridge, MA: The Belknap Press of Harvard University Press.

Bryant, K. (2018). *The mamba mentality: How I play.* New York, NY: Melcher Media.

Buckingham, M. & Goodall, A. (2019). The feedback fallacy. *Harvard Business Journal, 97*(2), 92-101.

Burkus, D. (2014). *The myths of creativity: The truth about how innovative companies and people generate great ideas.* San Francisco, CA: Jossey-Bass.

Carron, A.V., Brawley, L.R., & Widmeyer, W.N. (1998). The measurement of cohesiveness in sport groups. In J.L. Duda (Ed.), *Advances in sport and exercise*

psychology measurement (pp. 213-226). Morgantown, WV: Fitness Information Technology.

Carron, A.V., Bray, S.R., & Eys, M.A. (2002). Team cohesion and team success in sport. *Journal of Sports Sciences, 20*, 119-126.

Carron, A.V., Colman, M.M. & Wheeler, J. (2002). Cohesion and performance in sport: A meta-analysis. *Journal of Sport & Exercise Psychology, 24*, 168-188. Champaign, IL: Human Kinetics.

Carron, A.V., Martin, L.J., & Longhead, T.M. (2012). Teamwork and performance. In S. Murphy (Ed.) *The Oxford handbook of sport and performance psychology* (pp. 309-327). New York, NY: Oxford University Press.

Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. In N.K. Denzin & Y. Lincoln (Eds.) *Handbook of Qualitative Research, 2nd Ed.* (pp. 509-535). Thousand Oaks, CA: SAGE Publications.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis.* Thousand Oaks, CA: SAGE Publications.

Chase, W.G. & Simon, H.A. (1973). Perceptions in chess. *Cognitive Psychology, 4*(1), 55-81.

Church, S. & Hughes, M.D. (1986). Patterns of play in association football: A computerised analysis. *Communication to First World Congress of Science and Football*. Liverpool, April 13-17.

Clarke, A.E. (2005). *Situational analysis: Grounded theory after the postmodern turn.* Thousand Oaks, CA: SAGE Publications.

Creswell, J.W. (2013). *Qualitative inquiry & research design: Choosing among five approaches (3rd ed.).* Thousand Oaks, CA: SAGE Publications.

Creswell, J.W. (2016). *30 essential skills for the qualitative researcher.* Thousand Oaks, CA: SAGE Publications.

Collins, J. (2009). *Good to great.* New York, NY: HarperCollins Publishers.

Collins, J. & Hansen, M.T. (2011). *Great by choice: Uncertainty, chaos, and luck -- Why some thrive despite them all.* New York, NY: HarperCollins Publishers.

Comer, J. (1995). Lecture given at Education Service Center, Region IV. Houston, TX.

Couros, G. (2015). *The innovator's mindset: Empower learning, unleash talent, and lead a culture of creativity*. San Diego, CA: Dave Burgess Consulting, Inc.

Cote, J. & Gilbert, W. (2007). Coaching and officiating for junior sport participants. In S. Hooper, D. Macdonald, & M. Phillips (Eds.) *Junior sport matters: Briefing papers for Australian junior sport* (pp. 49-60). Belconnen: Australian Sports Commission.

Cote, J. & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching, 4*(3), 307-323.

Coyle, D. (2009). *The talent code*. New York, NY: Bantam Books.

Coyle, D. (2018). *The culture code*. New York, NY: Bantam Books.

Cruickshank, A. & Collins, D. (2012). Culture change in elite sport performance teams: Examining and advancing effectiveness in the new era. *Journal of Applied Sport Psychology, 24*(3), 338-355.

Cruickshank, A., Collins, D., & Minten, S. (2013). Culture change in a professional sports team: Shaping environmental contexts and regulating power a response to commentaries. *International Journal of Sports Science & Coaching, 8*, 319-325.

Csikszentmihalyi, M. (2008). *Flow: The psychology of optimal experience.* New York, NY: Harper Perennial Modern Classics.

Csikszentmihalyi, M. (2013). *Creativity: The psychology of discovery and invention*. New York, NY: Harper Perennial Modern Classics.

Davis, S. (2016). Gregg Popovich has a brilliant philosophy on handling players, and it exemplifies the spurs unprecedented run of success. *Business Insider,* 18 March 2016.

Deci, E.L. & Ryan, R.M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.

Deggs, M. (2018). *The pack.* CoachDeggs.com/Pack

Doshi, N. & McGregor, L. (2015). *Primed to perform: How to build the highest performing cultures through the science of total motivation.* New York, NY: HarperCollins Publishers.

Dreyfus, H.L. & Dreyfus, S.E. (1986). *Mind over machine: The power of human intuition and expertise in the era of the computer.* New York, NY: The Free Press.

Duckworth, A., Peterson, C., Matthews, M.D., & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087-1101. Doi: 10.1037/0022-3514.92.6.1087.

Duckworth, A. (2016). *Grit: The power of passion and perseverance.* New York, NY: Scribner.

Ericsson, K. A., Krampe, R.T., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychology Review*, *100*(3), 363-406. Doi: 10.1037/0033-295X.100.3.363.

Ericsson, K.A. (2006). The influence of experience and deliberate practice on the development of superior expert performance. In K.A. Ericsson, N. Charness, R.R. Hoffman, & P.J. Feltovich (Eds.), *The Cambridge handbook of expertise and expert performance* (pp. 685-706). New York, NY: Cambridge University Press.

Ericsson, K.A., Prietula, M.J., & Cokely, E.T. (2007). New research indicates that experts only become experts with practice and coaching. *Clinic Leadership and Management Review, 22*(4), E1-E9.

Ericsson, K.A., Prietula, M.J., & Cokely, E.T. (2007b). The making of an expert: New research shows that outstanding performance is the product of years of deliberate practice and coaching, not of any innate talent or skill. *Harvard Business Review, 85*(7-8), 114-121.

Ericsson, K.A. & Ward, P. (2007). Capturing naturally occurring superior performance in the laboratory: Toward a Science of Expert and Exceptional Performance. *Current Directions in Psychological Science, 16*(6), 346-350.

Ericsson, K.A. & Williams, A.M. (2007). Capturing naturally occurring superior performance in the laboratory: Translational research on expert performance. *Journal of Experimental Psychology: Applied*, *13*(3), 115-123.

Ericsson, K.A. (2008). Deliberate practice and acquisition of expert performance: A general overview. *Society for Academic Emergency Medicine*, *15*(11), 988-994.

Ericsson, K. A. & Pool, R. (2016). *Peak: Secrets from the science of expertise*. New York, NY: Houghton Mifflin Harcourt.

Ericsson, K.A. (2020). Towards a science of the acquisition of expert performance in sports: Clarifying the differences between deliberate practice and other types of practice. *Journal of Sports Sciences, 38*(2), 159-176. Doi: 10.1080/02640414.2019.1688618

Erickson, K., Cote, J., & Fraser-Thomas, J. (2007). Sport experiences, milestones, and educational activities associated with high-performance coaches' development. *The Sport Psychologist, 21*(3), 302-316.

Eys, M.A., Hardy, J. Carron, A.V., & Beauchamp, M.R. (2003). The relationship between task cohesion and competitive state anxiety. *Journal of Sport and Exercise Psychology, 25*(1), 66-76.

Eys, M.A., Beauchamp, M.R., & Bray, S.R. (2006). A review of team roles in sport. In S. Hanton & S.D. Mellalieu (Eds.) *Literature reviews in sport psychology* (pp. 227-255). Hauppauge, NY: Nova Science Publishers.

Foulds, S.J., Hoffman, S.M., Hinch, K., & Carson, F. (2019). The coach-athlete relationship in strength and conditioning: High performance athletes' perceptions. *Sports, 7*(244). Retrieved from www.mdpi.com/journal/sports.

Galton, F. (1892). *Hereditary genius: An inquiry into its laws and consequences*. New York, NY: MacMillan and Co.

Gladwell, M. (2008). *Outliers: The story of success*. New York, NY: Back Bay Books, Little, Brown, and Company.

Gencer, E. & Ozturk, A. (2018). The relationship between the sport-confidence and the coach-athlete relationship in student-athletes. *Journal of Education and Training Studies, 6*(10), 7-14.

Glaser, B.G. & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* New Brunswick: Aldine Transaction.

Gould, D., Greenleaf, C., Guinan, D., & Chung, Y. (2002). A survey of U.S. Olympic coaches: Variables perceived to have influenced athlete performances and coach effectiveness. *The Sport Psychologist, 16*(3), 229-250.

Greenleaf, C., Gould, D. & Defffenback, K. (2001). Factors influencing Olympic performance: Interviews with Atlanta and Nagano U.S. Olympians. *Journal of Applied Psychology, 13*(2), 154-184.

Guthrie, E.R. (1952). *The psychology of learning (Rev. Ed.).* New York, NY: Harper & Brothers.

Hattie, J. & Clarke, S. (2019). *Visible learning: Feedback*. New York, NY: Routledge.

Hancox, K. (2015). Gregg Popovich and the San Antonio Spurs: 20 years in the making. *Give me sport*.

Heheir, J. (2020). *The last dance.* [Film]. ESPN Films & Netflix

Holtz, L. (1998). *Winning every day: The game plan for success.* New York, NY: HarperCollins Publishers.

Horn, T.S. (2008). Coaching effectiveness in the sport domain. In T.S. Horn (Ed.) *Advances in sport psychology 3rd Ed.* (pp. 239-267). Champaign, IL: Human Kinetics.

Hughes, M. & Bartlett, R. (2015). What is performance analysis? In M. Hughes & I. Franks (Eds.) *Essential of performance analysis in sport 2nd Ed.* (pp. 18-28). New York, NY: Routledge.

Hughes, M.D. & Franks, I.M. (1997). *Notational analysis of sport.* London: E & F.N. Spon.

Hughes, M.D. & Franks, I.M. (2008). *Essentials of performance analysis.* London: E & F.N. Spon.

Jackson, P. & Delehanty, H. (2014). *Eleven rings: The soul of success.* New York, NY: Penguin Books.

Jowett, S. & Nezlek, J. (2011). Relationship interdependence and satisfaction with important outcomes in coach-athlete dyads. *Journal of Social and Personal Relationships, 29*(3), 287-301.

Jowett, S. & Poczwardowski, A. (2007). Understanding the coach-athlete relationship. In S. Jowett & D. Lavallee (Eds.). *Social psychology in sport* (pp. 3-14). Champaign, IL: Human Kinetics.

Knight, B. & Hammel, B. (2002). *Knight: My story.* New York, NY: Thomas Dunne Books.

Lang, J.M. (2016). *Small teaching: Everyday lessons from the science of learning.* San Francisco, CA: Jossey-Bass.

Lees, A. & Robinson, M. (2015). What is performance analysis? In M. Hughes & I. Franks (Eds.) *Essential of performance analysis in sport, 2nd Ed.* (pp. 180-197). New York, NY: Routledge.

Liebermann, D.G. & Franks, I.M. (2015). Video-based technologies, substitution of

    reality and performance feedback. In M. Hughes & I. Franks (Eds.) *Essential of*

    performance analysis in sport, 2nd Ed. (pp. 44-53). New York, NY: Routledge.

Lindbergh, B. & Sawchik, T. (2019). *The MVP machine: How baseball's new*

    nonconformists are using data to build better players. New York, NY: Basic

    Books.

Loughead, T.M. Hardy, J., & Eys, M.A. (2006). The nature of athlete leadership. *Journal*

    of Sport Behavior, 29(2), 142-158.

Luttrell, M. & Robinson, P. (2007). *Lone survivor: The eyewitness account of operation*

    redwing and the lost heroes of SEAL team 10. New York, NY: Little, Brown, and

    Company.

Macnamara, B.N, Hambrick, D.Z., & Oswald, F.L. (2014). Deliberate practice and

    performance in music, games, sports, education, and professions: A meta-

    analysis. *Psychology Science, 25*(8), 1608-1618.

Mallett, C. & Cote, J. (2006). Beyond winning and losing: Guidelines for evaluating high

    performance coaches. *The Sport Psychologist, 20*(2), 213-221.

Martin, B. (2008). *Urban's way: Urban Meyer, the Florida gators, and his plan to win.*

    New York, NY: Thomas Dunne Books.

Maslow, A.H. (1968). *Toward a psychology of being (2nd Ed.).* New York, NY: Van

    Nostrand Reinhold.

Maslow, A.H. (1970). *Motivation and personality (2nd Ed.).* New York, NY: Harper &

    Row.

McEwan, D. & Beauchamp, M.R. (2014). Teamwork in sport: A theoretical and
integrative review. *International Review of Sport and Exercise Psychology, 7*(1),
229-250.

Meece, J.L. (2002). *Child and adolescent development for educators (2nd Ed.).* New
York, NY: McGraw-Hill.

Middlemas, S. & Harwood, C. (2018). No place to hide: Football players' and coaches'
perceptions of the psychological factors influencing video feedback. *Journal of
Applied Sport Psychology, 30*(1), 23-44.

Nagowah, L. & Nagowah, S. (2009). A reflection on the dominant learning theories:
Behaviourism, cognitivism, and constructivism. *The International Journal of
Learning, 16*(2), 279-285. Doi: 10.18848/1447-9494/CGP/v16i02/46136.

Nelson, L., Cushion, C.J., Potrac, P., & Groom, R. (2014). Carl Rogers, learning and
educational practice: critical considerations and applications in sports coaching.
Sport, Education, and Society, 19(5), 513-531.

Patton, M. Q. (2015). *Qualitative research & evaluation method (4th Ed.).* Thousand
Oaks, CA: SAGE Publications.

Pavlov, I.P. (1927). *Conditioned reflexes* (G.V. Anrep, Trans.). London: Oxford
University Press.

Perry, W.G. (1999). *Forms of ethical and intellectual development in the college years.*
San Francisco, CA: Jossey Bass Publishers.

Phillips. D.T. (2001). *Vince Lombardi on coaching and leadership: Run to win.* New
York, NY: St. Martin's Press.

Phillips, M.B. & Jubenville, C.B. (2009). Student-athlete's perceptions of men's

    basketball head coaches' competencies at 15 selected NCCAA division II

    Christian colleges. *Journal of Sport Administration & Supervision, 1*(1), 39-51.

Piaget, J. (1968). *Six psychological studies, Anita Tenzer (Trans.)*. New York, NY:

    Vintage Books.

Pierce, R.G., Sarason, I.G., & Sarason, B.R. (1996). Coping and social support. In M.

    Zeidner & N.S. Endler (Eds.) *Handbook of Coping* (pp. 434-451). New York,

    NY: Wiley.

Pink, D.H. (2011). *Drive: The surprising truth about what motivates us.* New York: NY:

    Riverhead Books.

Posnanski, J. (2012). *Paterno.* New York, NY: Simon & Schuster.

Raidbard, M. (2019). How NCAA division I, II, and III men's college basketball coaches

    perceive themselves as leaders. *The Sport Journal, 22*. Retrieved from

    https://thesport journal.org/article/category/leadership/.

Ralph, N., Birks, M., & Chapman, Y. (2014). Contextual positioning: Using documents

    as extant data in grounded theory research. *SAGE Journals, 4*(3), 1-7.

Reade, I., Rodgers, W., & Spriggs, K. (2008). New ideas for high performance coaches:

    A case study of knowledge transfer in sport science. *International Journal of

    Sports Science & Coaching, 3*(3), 335-353.

Reilly, T. & Holmes, M. (1983). A preliminary analysis of selected soccer skills.

    Physical Education Review, 6, 64-71.

Rogers, C.R. (1951). *Client-centered therapy.* London: Constable & Robinson, Ltd.

Rogers, C.R. (1963). The concept of the fully functioning person. *Psychotherapy: Theory, Research, & Practice, 1*(1). 17-26.

Rogers, C.R. (1969). *Freedom to learn.* Columbus, OH: Merrill Publishing.

Rocha C.M. & Chelladurai, P. (2011). Relationship between organizational support and performance of college coaches: A mediational model. *European Sport Management Quarterly, 11*(3), 301-319. Doi: 10.1080/16184742.2011.577793.

Rutt-Leas, R. & Chi, M.T.H. (1993). Analyzing diagnostic expertise of competitive swimming coaches. In J.L. Starkes & F. Allard (Eds.) *Cognitive issues in motor expertise, 102* (pp. 74-94). Amsterdam: Elsevier Science Publishers.

Saldana, J. (2016). *The coding manual for qualitative researchers.* Thousand Oaks, CA: SAGE Publications.

Sawyer, K. (2013) *Zigzag: The surprising path to greater creativity.* San Francisco, CA: Jossey-Bass.

Schempp, P.G., McCullick, B. & Mason, I.S. (2006). The development of expert coaching. In R.L. Jones (Ed.) *The sports coach as educator: Re-conceptualizing sports coaching* (pp. 145-161). London: Routledge.

Schonbrun, Z. (2018). *The performance cortex. How neuroscience is redefining athletic genius*. New York, NY: Dutton.

Schroeder, P.J. (2010). Changing team culture: The perspectives of ten successful head coaches. *Journal of Sport Behavior, 33*(1), 63-88.

Schunk, D.H. (2012). *Learning theories: An educational perspective (6th Ed)*. Boston, MA: Pearson Education.

Schunk, D.H. (2016). *Learning theories: An educational perspective (7th Ed).* New York, NY: Pearson Education.

Simon, H.A. & Chase, W.G., (1973). Skill in chess. *American Scientist*, *61*(4), 394-403.

Sinek, S. (2009). *Start with why: How great leaders inspire everyone to take action.* New York, NY: Penguin Group.

Shields, D.L., Bredemeier, B.L., & Power, F.C. (2002). Character development and children's sport. In F.L. & R.E. Smith (Eds.) *Children and Youth in Sport: A Biopyschosocial Perspective, 2nd Edition (pp.537-559).* Dubuque, IA: Kendall/Hunt.

Skinner, B.F. (1938). *The behavior of organisms.* New York, NY: Appleton-Century-Crofts.

Stigler, J.W. & Miller, K.F. (2018). Expertise and expert performance in teaching. In Ericsson, K.A., Hoffman, R.R., Kozbelt, A. & Williams, A.M. (Eds.), *The Cambridge handbook of expertise and expert performance* (pp. 431-452). New York, NY: Cambridge University Press.

Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd Ed.).* Thousand Oaks, CA: Sage.

Studer, Q. & Pilcher, J. (2015). *Maximizing performance: Creating a culture of educational excellence.* Pensacola, FL: Fire Starter Publishing.

Tincknell-Smith, A.L., Ntoumanis, N., & Duda, J.L. (2010). An investigation of coach behaviors, goal motives, and implementation intentions as predictors of well-being in sport. *Journal of Applied Psychology, 22*(1), 17-33.

Tharp, R.G. & Gallimore, R. (1976). What a coach can teach a teacher. *Psychology Today, 9*(8), 75-78.

Tressel, J. & Fabry, C. (2008). *The winner's manual: For the game of life.* Carol Stream, IL: Tyndale House Publishers.

Van Camp, J.B.A. & Symonds, A. (2020). *Deliberate discomfort: How U.S. special operations forces overcome fear and dare to win by getting comfortable being uncomfortable.* Washington, D.C.: Ballast Books.

Vancil, M. (Ed.). (2004). *Michael Jordan: Driven from within.* New York, NY: Atria Books.

Vann, B.A., Coleman, A.N., & Simpson, J.A. (2014). Development of the Vannsimpco leadership survey: A delineation of hybrid leadership styles. *Swiss Business School Journal of Applied Business Research, 3*(1), 28-38.

Vogt, W.P., Vogt, E.R., Gardner, D.C., & Haeffeke, L.M. (2014). *Selecting the right analyses for your data: Quantitative, qualitative, and mixed methods.* New York, NY: Guilford.

Vygotsky, L. (1968). *Mind in society.* London: Harvard University Press.

Vygotsky, L. (1978*). Mind in society: The development of higher psychological processes.* Cambridge, MA: Harvard University Press.

Wagstaff, C.R.D. & Burton-Wylie, S. (2018). Organisational culture in sport: A conceptual, definitional, and methodological review. *Sport & Psychology Review, 14*(1), 32-52.

Walsh, B., Jamison, S., & Walsh, C. (2009). *The score takes care of itself: My philosophy of leadership.* New York, NY: Penguin Group.

Ward, P., Hodges, N.J., Starkes, J.L., & Williams A.W. (2007). The road to excellence: Deliberate practice and the development of expertise. *High Ability Studies*, *18*, 119-153. Doi: 10.1080/1359813 0701709715

Watson, J.B. (1924). *Behaviorism.* New York, NY: Norton.

Weiner, B. (1992). *Human motivation: Metaphors, theories, and research.* Thousand Oaks, CA: SAGE Publications.

Weston, C., Gandell, T., Beauchamp, J., McAlpine, L., Wiseman, C., & Beauchamp, C. (2001). Analyzing interview data: The development and evaluation of a coding system. *Qualitative Sociology, 24*(3), 381-400.

Wiliam, D. (2018). *Creating the schools our children need: Why what we're doing now won't help much and what we can do instead.* West Palm Beach, FL: Learning Sciences International.

Willingham, D.T. (2009). *Why don't students like school? A cognitive scientist answers questions about how the mind works and what it means for the classroom.* San Francisco, CA: Jossey-Bass

Willingham, D.T. (2009). Why don't students like school? Because the mind is not designed for thinking. *American Educator, 33*(1), 4-13. Retrieved from www.aft.org.

Willingham, D.T. (2014). Strategies that make learning last. *Educational Leadership*, *72*(2), 10-15. Retrieved from www.ascd.org.

Willink, J. & Babin, L. (2017). *Extreme ownership: How U.S. navy seals lead and win.* New York, NY: St. Martin's Press.

Wooden, J. & Jamison, S. (1997). W*ooden: A lifetime of observations and reflections on and off the court.* New York, NY: McGraw Hill Companies.

Wooden, J. & Jamison, S. (2010). *The wisdom of Wooden: My century on and off the court.* New York, NY: McGraw Hill Companies.

Worley, J.T., Harenberg, S., Vosloo, J. (2020). The relationship between peer servant leadership, social identity, and team cohesion in intercollegiate athletics. *Psychology of Sport & Exercise, 49*, 1-9.

Zucco, J. (2015) *Do your job: Bill Belichick and the 2014 New England Patriots.* [Film}. NFL Films.

APPENDICES

Appendix A

Table 1

Participants in Study – Effective Athletic Coaches

Name	Sport(s)	Level	Experience	Accolades
Coach Brandon	Softball / Football	Major College / High School	32	Coach of Year Conference Championship State Championship
Coach Slate	Softball / Football	High School / Middle School	8	Coach of Year District Championship
Coach White	Volleyball	High School/ Middle School	12	Coach of Year
Coach Howard	Baseball / Basketball	Major College	44	Hall of Fame, Coach of Year National Championship Conference Championship
Coach Ellington	Football	Major College	39	Coach of Year Conference Championship
Coach Street	Football	High School	14	District Championship Coach of Year
Coach Patrick	Football	Small College / High School	15	Conference Championship
Coach Clout	Baseball, Football. Basketball	High School / Middle School	21	Coach of Year District Championship State Championship
Coach Jones	Football / Strength & Conditioning	High School / Middle School	14	District Championship State Championship
Coach Hank	Baseball, Football, Wrestling	High School / Middle School	11	District Championship

Coach Klampe	Football / Strength & Conditioning	High School	15	District Championship State Championship
Coach Stack	Strength & Conditioning	Small College / Major College Professional	13	Conference Championship
Coach McClain	Football / Basketball	High School / Small College	13	District Championship Coach of the Year
Coach Carter	Softball / Football / Baseball / Basketball	Middle School / High School	13	District Championship State Championship Coach of Year
Coach Waters	Football / Track & Field	High School / Small College	17	Conference Championship District Championship Coach of Year
Coach Kregg	Football	High School / Youth	15	District Championship Region Championship
Coach Day	Football / Strength & Conditioning	High School / Middle School	11	District Championship Region Championship
Coach Dunbar	Football / Softball	High School	20	District Championship State Championship
Coach Walker	Football	High School / Major College	24	District Championship Conference Championship Region Championship Coach of Year
Coach Pratt	Football	High School	27	District Championship Region Championship
Coach Sands	Basketball / Volleyball	High School / Youth	10	District Championship
Coach Brunt	Football / Track & Field / Baseball	High School	14	District Championship Region Championship State Championship
Coach Taylor	Basketball	High School	3	District Championship State Championship

Coach Shields	Football	High School	15	District Championship Region Championship State Championship
Coach Cadena	Football / Baseball	High School	20	District Championship Region Championship State Championship
Coach Bard	Basketball	High School	22	District Championship Region Championship State Championship

Appendix B

Interview Protocol

(*Interview should take place via online capacity - Google Meet, Zoom, phone or FaceTime call*)

Opening Information: (*Email informed consent over the participant and ask them to read it and ask any questions that they have regarding it before moving into the Introduction*)

Intro: I have started doing research recently regarding learning in athletics. Athletics provides an opportunity for learning that appears differently than other domains. My aim is to discover how learning takes place in athletics through the lens of effective athletic coaches. I will record today's interview and will ask some demographic types of questions but will give you and your school both pseudonyms and will ensure that your personal identity is kept confidential in anything written on these findings. Do I have your permission to record the interview? Do you agree to provide informed consent and to participate in this study? Because of the inability of a face-to-face nature interview to uphold CDC health guidelines, your informed consent will be orally acknowledged.

If yes -> I will provide a copy of the informed consent via email (*for their records*). Thank you for your willingness to participate in this interview.

Continue: I am going to begin by asking you a few basic demographic questions and a question describing a typical practice session. From there, I will ask a set of questions that explore your perspective, strategies, and improvement methods you use that create learning.

Questions:

Set I: Demographic Questions

1) What is your primary coaching domain?
2) For how many years have you been coaching?

Set II: Practice Plan

3) Please illustrate, generalize, and describe a typical practice session.

Set III: Strategies and Improvement Methods

4) Explain the strategies used in introducing new skills to your players.
5) Explain the strategies used in introducing new material to your players.
6) How do you evaluate and assess your players' performance?
7) What do you do to improve your players' performance?

Set IV: Culture

8) What do you do to improve your players' character and team culture?
9) How would you describe your team's culture?
10) What about your culture makes your team effective?

Other:

11) Is there anything else you would like to add regarding your players' improvement or learning?

(Any other subsequent follow-up questions could be asked during or after the interview for additional information or clarification)

Debriefing: Thank you so much for taking the time to share your perspectives on this issue with me. If clarification or follow up questions arise, could I contact you again? Please do not hesitate to reach out and follow up with any questions (*provide contact information card*) and thank you again for your time.

Interviewer Notes

Notes about Interviewee:

Brief Description of Room:

General Reactions and Notes from Interview:

Points of Emphasis (priority placed by the interviewee, e.g.):

Appendix C

Institutional Review Board Approval

IRB

INSTITUTIONAL REVIEW BOARD
Office of Research Compliance,
010A Sam Ingram Building,
2269 Middle Tennessee Blvd
Murfreesboro, TN 37129

MIDDLE TENNESSEE
STATE UNIVERSITY

IRBN001 – EXPEDITED PROTOCOL APPROVAL NOTICE

Monday, June 22, 2020

Principal Investigator	James Benjamin Johnson (Student)
Faculty Advisor	Kevin Krahenbuhl
Co-Investigators	NONE
Investigator Email(s)	jbj4c@mtmail.mtsu.edu; kevin.krahenbuhl@mtsu.edu
Department	ALSI

Protocol Title	*A Theoretical Model for Learning through the Lens of Effective Athletic Coaches: A Grounded Theory Qualitative Research Study*
Protocol ID	20-2193

Dear Investigator(s),

The above identified research proposal has been reviewed by the MTSU Institutional Review Board (IRB) through the **EXPEDITED** mechanism under 45 CFR 46.110 and 21 CFR 56.110 within the category *(7) Research on individual or group characteristics or behavior.* A summary of the IRB action and other particulars in regard to this protocol application is tabulated below:

IRB Action	APPROVED for ONE YEAR		
Date of Expiration	6/30/2021	Date of Approval	6/22/20
Sample Size	50 (FIFTY)		

Participant Pool	Target Population:
	    Primary Classification: Healthy Adults (18 years or older)
	    Specific Classification: Athletics Coaches		

Exceptions	1. Data collection by virtual methods (like Zoom) is permitted. 2. Abbreviated informed consent administered virtually after the participants have received the approved full-length informed consent template. 3. Voice recording is permitted.		
Restrictions	1. Mandatory ACTIVE Informed Consent. 2. Identifiable data/artifacts, such as, audio/video data, photographs, handwriting samples, personal address, driving records, social security number, and etc., MUST be used for the proposed research purpose only. The data or artifacts collected or information obtained must be destroyed once the data analysis has been completed. 3. Mandatory Final report (refer last page).		
Approved Templates	MTSU Templates: Modified Signature Informed consent Non-MTSU Templates: Abbreviated verbal consent script & recruitment email		
Comments	COVID-19: Refer to the Post-Approval Action section for important instruction		

Institutional Review Board   Office of Compliance   Middle Tennessee State University

Post-approval Actions

The Investigator(s) indicated in this notification should read and abide by all of the post-approval conditions related to this approval (*refer Quick Links below*). Any unanticipated harms to participants, adverse events or compliance breach must be reported to the Office of Compliance by calling 615-494-8918 within 48 hours of the incident. All amendments to this protocol, including adding/removing researchers, must be approved by the IRB before they can be implemented.

Continuing Review   (The PI has requested early termination)
Although this protocol can be continued for up to THREE years, The PI has opted to end the study by 6/30/2021   The PI must close-out this protocol by submitting a final report before 6/30/2021 Failure to close-out may result in penalties including cancellation of the data collected using this protocol.

Post-approval Protocol Amendments:
Only two procedural amendment requests will be entertained per year. In addition, the researchers can request amendments during continuing review. This amendment restriction does not apply to minor changes such as language usage and addition/removal of research personnel.

Date	Amendment(s)	IRB Comments
NONE	NONE.	NONE

Other Post-approval Actions:

Date	IRB Action(s)	IRB Comments
06/22/2020	Due to the COVID-19 National Emergency, the Office of Compliance grants administrative authority to the Faculty Advisor (FA) to make the necessary changes or revisions to this protocol in the best interest of the health and welfare of the participants and student workers. The FA must notify such revisions upon implementation to the IRB via simple email or using suitable amendment documents. The IRB will audit the revisions at a later date and suggest any remedial measures if necessary.	COVID-19

Mandatory Data Storage Requirement: All research-related records (signed consent forms, investigator training and etc.) must be retained by the PI or the faculty advisor (if the PI is a student) at the secure location mentioned in the protocol application. The data must be stored for at least three (3) years after the study is closed. Additional Tennessee State data retention requirement may apply (*refer "Quick Links" for MTSU policy 129 below*). Subsequently, the data may be destroyed in a manner that maintains confidentiality and anonymity of the research subjects.

The MTSU IRB reserves the right to modify/update the approval criteria or change/cancel the terms listed in this letter without prior notice. Be advised that IRB also reserves the right to inspect or audit your records if needed.

Sincerely,

Institutional Review Board
Middle Tennessee State University

Institutional Review Board   Office of Compliance   Middle Tennessee State University

Quick Links:
- Post-approval Responsibilities: http://www.mtsu.edu/irb/FAQ/PostApprovalResponsibilities.php
- Expedited Procedures: https://mtsu.edu/irb/ExpeditedProcedures.php
- MTSU Policy 129: Records retention & Disposal: https://www.mtsu.edu/policies/general/129.php