CLASS IN SESSION?: A CASE STUDY EXPLORATION OF THE X'S AND O'S BEHIND TEACHING A *SPORT AND PERFORMANCE PSYCHOLOGY* COURSE AT THE HIGH SCHOOL LEVEL

BY

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DISSERTATION

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ABSTRACT

The purpose of this case study was to explore the extent to which an innovative *Sport and Performance Psychology* course could be designed and implemented effectively at the secondary level for high school student-athletes. The innovative goal of this course was to help student-athletes strengthen their mindset in school and sport by building mental skill in 14 different mental skills like goal-setting, mental toughness, and leadership. It was hypothesized that mental skill development could help address various self-actualization needs within athletic performance and well-being. While there is a growing base of literature in the field of sport psychology, there is a limited amount of literature covering its incorporation in education. In fact, school sport psychology is especially limited at the high school level where very few sport psychology courses are taught. This dissertation was conducted for the purpose of expanding the literature in teaching sport psychology at the high school level. As a result, the present study designed, implemented, and evaluated an innovative *Sport and Performance Psychology* course with 21 high school student-athletes who attended a small public high school in the Midwestern United States during the 2020-2021 academic year. The proposed design theory utilized educational and psychological principles found within the literature to create a course anchored in sport and performance psychology concepts. Specifically, humanistic learning theory was used as the main theoretical foundation for pedagogy and Maslow's theory of self-actualization served as the central motivational tenet to inspire student-athletes to become the best version of themselves. Similarly, cognitive-behavioral theory was used as the main underpinning for curriculum development as Event + Response = Outcome served as the primary cognitive-behavioral system to teach and apply sport and performance psychology concepts. Finally, case study methodology was utilized to examine the effectiveness of this semester-long elective class

within building mental skill and addressing self-actualization needs. The performance evidence was gathered using a mixed methods approach, as quantitative and qualitative data was collected through pre- and post-course surveys and participant interviews. Pre-course data included a baseline assessment of mental skill and a needs analysis. Post-course data collection included a final assessment of mental skill and participant feedback on course effectiveness. Overall, the findings of this dissertation suggested that a *Sport and Performance Psychology* course could be successfully designed and implemented at the high school level. Specifically, certain curricular and pedagogical elements seemed to be effective at building mental skill and addressing the self-actualization needs of high school student-athletes. Furthermore, an overwhelming majority of participants appreciated the course, reporting a vast array of positive benefits from what they learned. This dissertation thus adds to the existing literature by contributing one of the first published accounts of a high school *Sport and Performance Psychology* class-in-action. The implications of this study were discussed alongside several suggestions and recommendations for those wishing to incorporate sport psychology at the high school level.

To My Mother and Father

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CHAPTER 1: INTRODUCTION

1.1 Study Rationale

Most high school student-athletes can benefit from learning about sport psychology and building mental skill in constructs like goal-setting, mental toughness, and leadership (Afremow, 2018). In fact, sport psychologists and mental coaches have been working on building mental skill with college, professional, and Olympic athletes for many decades now in order to improve their athletic performance and enhance their personal well-being (Weinberg & Gould, 2019). During this time, many research studies have captured the effectiveness of various sport psychology skills training programs (Vealey, 2007). As a result, a few research pioneers have argued for bringing sport psychology into the schools (Gilbert, 2017; Rockwood, 2011; Lamberth, 2007; Gilbert et al., 2006; Maher, 2005; Weissman, 2003; Lyons, 2001). The literature, however, does not adequately address how sport psychology can be implemented into the curriculum of secondary education to benefit the almost eight million high school student-athletes who participate in high school sports (National Federation of State High Schools Association, 2018). Consequently, this case study explores the validity of an innovative high school *Sport and Performance Psychology* class-in-action.

1.2 Research Questions

The purpose of this research study was to design, implement, and evaluate an innovative *Sport and Performance Psychology* course. This course was designed to help high school student-athletes build mental skill in 14 different mental constructs like goal-setting, mental toughness, and leadership. This was implemented by the teacher-researcher over an 18-week period beginning in January 2021 and ending in May 2021. This study intended to analyze course effectiveness by examining mental skill development within individuals and across the

class. The study also intended to investigate curricular and pedagogical elements that were perceived to be effective within building mental skill. As a result, the following research questions guided this case study exploration of a *Sport and Performance Psychology* course that was documented in this dissertation:

Research Question 1: To what extent could a *Sport and Performance Psychology* course be designed and implemented to build mental skill within high school student-athletes?

Research Question 2: What self-actualization needs are addressed through mental skill development?

Research Question 3: What course curriculum or pedagogy is perceived by student-athletes to be effective within building mental skill?

1.3 Significance

The significance of the present study is that it aims to fill a gap in the literature by exploring the process behind designing and implementing an innovative *Sport and Performance Psychology* course at a high school in the Midwestern United States. Specifically, this dissertation examined how to effectively teach a course that is predicated on building mental skill and helping students with the psychological side of the game. By introducing these mental skills into a sport psychology curriculum, the course aimed to inspire and ultimately equip student-athletes with the skills necessary to chase the best versions of themselves on and off the field. Unfortunately, sport psychology research with high school student-athletes is very limited. While the effectiveness of sport psychology programming with high school student-athletes has been researched, there has never been a case study of an actual *Sport and Performance Psychology* course. In this case, the course was offered as an elective class within the school's educational curriculum, providing a rare opportunity to explore the effectiveness of a sport

psychology classroom in-action. Thus, this study aims to make a significant difference in the lives of many high school student-athletes who could benefit greatly by learning about sport psychology. Additionally, because sport psychology is rarely taught at the secondary level, curriculum guidance is limited within what content to teach and how to effectively teach it. As a result, the present case study research strived to break new ground by capturing the effectiveness of one teaching approach for others to possibly consider when designing and implementing a sport psychology course in their school district. In the end, audiences interested in this research may include future sport psychology teachers, coaches, student-athletes, guidance counselors, athletic directors, school district administrators, and sport psychology consultants.

1.4 Theory

The theoretical framework of this present study was supported by several theories common to sport psychology and education: Humanistic Theory of Learning (Maslow, 1943), Cognitive-Behavioral Theory (Beck, 2011), and Social Learning Theory (Bandura, 1971). Humanistic Theory of Learning informed the course mission of becoming the best version of oneself as a student-athlete. Cognitive-Behavioral Theory provided a systematic Event + Response = Outcome approach to building mental skill and facilitating self-actualization. Social Learning Theory supported the cognitive and behavioral modeling of these mental skills within teaching pedagogy.

1.5 Methodology

The present study deployed a mixed methods, explanatory, single case study. The unique 'case' will consist of a *Sport and Performance Psychology* course taught by the teacher-researcher at a small public high school in the Midwestern United States. Participants for the present study included 21 student-athletes who elected to take the class for elective credit during

their junior or senior year. This research study took place over one academic semester from January 2021-May 2021. Data sources for this study included surveys and interviews, which yielded both quantitative and qualitative data. Quantitative strategies were used within a pre- and post-course survey to numerically assess the level of mental skill within each student-athlete. Qualitative strategies were also used to capture data, including interviews which provided a richer perspective on mental skill development within the course. Qualitative data was used to support quantitative findings through participant responses and quotes. Field notes were also used to capture informal participant feedback, including sentiments and testimony about the course. Limitations due to the COVID-19 outbreak of 2020-2021 were also considered within data collection and findings.

CHAPTER 2: LITERATURE REVIEW

Student participation in sports has been an integral part of the educational experience in the United States (Maher, 2005). In fact, sport has been consistently recognized as a potentially influential context to learn and build mental and physical skill (Dickinson, Coulter, & Mallett, 2019). Historically, however, sport psychology has been limited within its incorporation in the formal educational setting (Singer, Hausenblas, & Janelle, 2001). With an expanding base of literature, the emerging field of sport and performance psychology has never had more to offer to schools looking to maximize the positive development of their student-athletes on and off the field (Gilbert, 2017). While literature focused on school sport psychology is extremely limited, the purpose of this literature review is to examine as much research as possible that may be relevant to the present study. This will be done throughout this chapter by reviewing literature associated with the general field of sport psychology, performance psychology, and education overall. The chapter will also place a special emphasis on any educational research associated with sport psychology curriculum, design, and implementation at the high school level.

2.1 Definitions

Sport psychology is an extremely young and evolving specialization within the broader field of psychology. **Psychology** is the scientific study of human behavior and mental processes and is one of the most popular courses to take at the high school and collegiate level. Within the lesser-known discipline of sport psychology, definitions are wide-ranging, diverse, and difficult to pinpoint. In general, **sport psychology** is a science in which principles of psychology are used within a sport or exercise setting (Cox, 2012, p. 4). According to the American Psychological Association (2019), "Sport psychology is a proficiency that uses psychological knowledge and skills to address optimal performance and well-being of athletes, developmental and social

aspects of sport participation, and systemic issues associated with sport settings and organizations". Rockwood (2011) makes a claim for two main branches of sport psychology:

1. **Academic sport psychology** is the scholarly, knowledge-based branch of sport psychology which is concerned with the academic study of psychological factors that influence sport participation and performance. These factors include mental skills like goal-setting, self-discipline, motivation, leadership, focus, and confidence.
2. **Applied sport psychology** is the application-based branch of sport psychology which is concerned with applying mental skills to improve sport performance and enhance well-being.

The American Psychological Association (n.d.) defines applied sport psychology as "the study and application of psychological principles of human performance in helping athletes consistently perform in the upper range of their capabilities and more thoroughly enjoy the sport performance process" (p. 9). Similarly, Williams (1993) states: "The goal of psychological training is to learn to consistently create the ideal mental climate that unleashes those physical skills that allow athletes to perform at their best" (p. 1). Because some definitions of applied sport psychology emphasize performance, enjoyment, and well-being to differing degrees, members of Division 47 (Exercise and Sport Psychology) of the American Psychological Association have argued for greater conceptual clarity of this the branch, suggesting that a definition of applied sport psychology should be thought of as a subfield of performance psychology. **Performance psychology** is the study and application of psychological principles of human performance to help people consistently perform in the upper range of their capabilities and more thoroughly enjoy the performance process. In this definition, a **performance** is a discrete event where a performer, oftentimes in public, showcases a specific set of developed

knowledge, skills, and abilities that are generally directed towards a goal or standard of success. (American Psychological Association, n.d., p. 9-10). Sport psychology would be seen as a subfield of performance psychology due to the fact that performance is an overarching element of general human living and an objective of everything we do each day. Historically, the psychological study of performance was formally and informally a traditional topic of study across all disciplines of life like education, medicine, and business. Today, the goal of performance psychologists is to not only optimize the performance of their performers, but also ensure they had the appropriate coping skills to meet the demands of their field so as to sustain healthy, long-term involvement (Schack & Hackfort, 2007, p. 46). These performance-based ideas were eventually applied to the field of sport psychology, covering topics like mental toughness, goal-setting, and cognitive reframing (Schack & Hackfort, 2007, p. 11). While the fields of performance psychology and sport psychology are inherently related to helping people perform better, there are unique demands within sport which require specialized training beyond general philosophies of performance (American Psychological Association, n.d., p. 14). As a result, sport psychology has been further broken down into two distinct specializations:

1. **Sport and exercise psychology** is defined by Cox (2012) as "the study of the effect of psychological and emotional factors on sport and exercise performance, and the effect of sport and exercise involvement on psychological and emotional factors" (p. 5).
2. **Sport and performance psychology** focuses on helping athletes and all other performers reach their goals by building mental skill in performance-based arenas like athletics, school, and the military, scientifically tapping into the best of individual human potential (American Psychological Association, 2019).

Nonetheless, sport psychology is still used as a general term within the sport psychology literature (American Psychological Association, n.d.), oftentimes used interchangeably or as an abbreviated version of sport and exercise psychology or sport and performance psychology. This lack of consistent definitional clarity has caused some researchers to call for the separation of sport psychology and exercise psychology, arguing that sport psychology should officially pair up with performance psychology, while exercise psychology should formally connect with health psychology (Olander, 2009). The remaining literature review will try to adhere to the terminology used within each respective scholarly work. However, the conceptual basis for this dissertation will gravitate towards the specialization of sport and performance psychology when discussing sport psychology, with performance defined as an aggregate of mental skill and physical skill within a sporting or life context.

While physical skills in sport are external capabilities like speed, strength, and endurance, **mental skills** are internal capabilities that contribute to success in sport. Mental skills, also called psychological skills, can help athletes engineer their minds in accordance with their sport-related goals (Lubbers, 2021). Similar to physical skills, mental skills can be learned and improved with instruction and practice (Lesyk, 1998). This is commonly done with athletes through mental skills training programs which assist athletes in the development of psychological skills critical to performance and well-being (Sheard & Golby, 2006). According to the sport psychology literature, the following mental skills are some of the most critical mental skills pertinent to athletic performance and well-being (Lesyk, 1998; Thomas, Murphy, & Hardy, 1999; Zaichkowsky, 2007; Weinberg & Gould, 2019; Lubbers, 2021):

- Positive attitude
- Motivation

- Goal-setting
- Commitment to excellence
- People skills
- Self-talk
- Visualization or Imagery
- Managing anxiety
- Arousal control
- Managing emotions
- Focus or Concentration
- Confidence
- Making routines

2.2 History of Sport Psychology

Leading members of the American Psychological Association familiar with the field of sport psychology point to the diverse history of sport psychology as the main reason for sport psychology's "conceptual and definitional elusiveness" (American Psychological Association, n.d., p. 6). Historically, sport psychology practice dates back to ancient Greek and Asian civilizations, who recognized the power in harnessing the mind-body connection to promote excellence in performance and personal development (Williams, 1993). Beginning in the 1800s, Eastern European countries like Germany and Russia started to devote a great deal of attention to sport, exercise, and performance psychology's ability to facilitate excellence within their athletes. European sport psychology theorizing started with Wilhelm Wundt, who studied reaction times and mental processes in 1879, and gained credibility in the field of science after Pierre de Coubertin put forth the first real definition of sport psychology (Chroni & Abrahamsen, 2017).

However, the founding father of Eastern European sport psychology would be Avksenty Tcezarevich Puni, who pushed an applied approach to the mental training of USSR athletes in the early 1900s. Eventually, in 1952, the Soviet Union would make applied sport psychology world-famous when they used sport psychology to enhance the performance of their Olympic teams, peaking in the 1980 Olympics, when their systematic approach to psychological preparation and mental training was largely credited for winning a staggering 195 total medals (Ryba & Wright, 2005).

In the United States, the first illustration of using psychology to explore human potential in sport was documented by Norman Triplett in 1897-1898. During this time, he published what some claim to be the first true research literature in sport psychology (Vaughan & Guerin, 1997), discovering that cyclists who rode together performed better due to the social dynamics of performance.

Eventually, sport psychology as a science would develop further in the United States with the emergence of Coleman Griffith and his sport psychology laboratory at the University of Illinois in 1925. Griffith's work in sport psychology would eventually be recognized as he was hired to help athletic coaches improve the performance of their players and eventually as a sport psychologist for the Chicago Cubs (Williams, 1993).

Sport psychology truly emerged as a new field of study in the 1960s, when it permanently took conceptual roots in academia as a separate sub-discipline within physical education departments. A leading figure during this time was Bruce Ogilvie, an applied sport psychologist who wrote the book *Problem Athletes and How to Handle Them* in 1966. By the 1970s, many colleges and universities began to offer sport psychology graduate programs. This educational development was set up by the creation of the *International Journal of Sport*

Psychology in 1970. This was the first journal dedicated to publishing scholarly research on sport psychology and was soon followed up in 1979 by the *Journal of Sport Psychology* (Singer, Hausenblas, & Janelle, 2001).

In the 1980s, the United States Olympic Committee began to mirror the Soviet Union (Russia) by adopting similar sport psychology tactics within their athletic programs (Ryba & Wright, 2005). Yet, even as sport psychology's scholarly influence continued to expand, critics of the field were quick to point out its lack of applicability in real-world settings outside of academia. This critique was partially answered by the development of the Association for the Advancement of Applied Sport Psychology in 1985, which was an organization focused on applied sport psychology research. It was this same year in which the American Psychological Association approved a Division of Sport and Exercise Psychology called Division 47. As a result, the 1980s marked a major shift in sport psychology research, from laboratory research to more field-based research, where it became more popular to apply psychological theories to sport (Williams, 1993). Rainer Martens, a professor of sport psychology at the University of Illinois, is credited with driving this applied psychology movement. doing more for sport psychology's advancement in North America than any other single individual. Today, he is recognized as the father of modern sport psychology (Cox, 2012).

Despite ongoing criticism concerning sport psychology's identity and practical validity, sport psychology literature continued to grow in number and scope well into the 1990s. This scholarly uptick also "paralleled a shift from quantitative, experimental research to more qualitative and conceptually driven approaches...[the] result of increased interest and preoccupation with the development of sport psychology applications in real settings...[leading] to the first edition of the *Handbook of Research on Sport Psychology* in 1993" (Weissman, 2003,

p.16). Most importantly, it was the birth of a brand new era in which the "mental game" was bred into the American psyche (Ryba & Wright, 2005, p. 195).

2.3 The Sport Psychologist

Most sport psychologists help athletes build mental skill in order to improve performance and enhance well-being. Sport psychologists can help athletes in the performance arena by applying the general goals of psychology. This includes observing and describing an athlete's behaviors and mental processes to help the athlete improve their thought processes and better control their actions. By working within an athlete's psychological constructs, sport psychologists believe they can help enhance an athlete's performance and use sport as a vehicle for self-actualization (Cox, 2012, p. 5). Kumar and Shirotriya (2010) support this notion arguing that sport psychology is a critical component to athletic performance and fulfilling one's potential. While there are a variety of careers contemporary sport psychologists can now pursue in the 21st century to assist athletes on this mission, most careers generally serve three primary roles: consulting, teaching, and conducting research (Weinberg & Gold, 2019). As a result of these three primary roles, certain specialties exist within the sport psychology profession like the following: the clinician, the educator, and the researcher. The clinical or counseling sport psychologist is a person trained in counseling psychology and is generally a licensed psychologist able to treat individuals with emotional or behavioral disorders. These licensed sport psychologists can also take on a consulting role when hired by athletes, teams, or even the military (Weinberg & Gold, 2019). The educational sport psychologist has a strong knowledge base and uses the medium of education to teach sport psychology to athletes and coaches. Their goal as a "mental coach" is to teach athletes to develop mental skills for performance enhancement while also helping them improve their quality of life through sport. This teaching

role is usually fulfilled by teaching university courses such as personality psychology or developmental psychology if they work in the psychology department, or courses such as motor learning and control or sport sociology if they work in a kinesiology or sport science program (Weinberg & Gold, 2019, p. 5). Finally, the research sport psychologist is a person dedicated to the scholarly research of sport psychology and growing the scientific body of knowledge within the field, also usually within the university setting (Cox, 2012, p. 11-12).

No matter the role, sport psychologists want to help athletes become the best version of themselves. According to Gee (2010), an athlete's absolute potential is what an athlete's 100% performance potential would be on paper. However, sports, in general, are inherently diverse, unpredictable, and intense on both a physical and psychological level, which ultimately leads to variances in performances and thus outcomes. While genetics play a critical role within talent and absolute performance potential (Guth & Roth, 2013), sport performance is still a complex result of sport socialization (Mack, 2003) and mental and physical training factors (Tucker & Collins, 2012). As a result, one of the primary goals of the sport psychologist is to help athletes get as close to their 100% absolute performance potential as possible.

To achieve this goal, the sport psychologist usually focuses on one or more of the following dimensions (Singer, Hausenblas, and Janelle, 2001; Lamberth, 2007):

- Learning, performance, and skills: Understanding cognitive and perceptual processes, dealing with demands of events, practice techniques, learning processes, and receiving feedback
- Youth: Understanding children, capabilities, and motives alongside influence of coaches, parents, and peers on youth sport participation and character development

- Mental skills and programs: Understanding goal-setting, mental toughness, motivation, self-regulation and imagery to determine those procedures that contribute to performance achievement and personal well-being
- Counseling: Understanding coping mechanisms associated with injury, substance abuse, anxiety, and maladaptive behavior
- Group dynamics: Understanding organizational structures and systems of leadership and productivity in order to provide guidelines as to how groups or teams can best function to attain goals
- Evaluation: Understanding psychological attributes, talent selection, and prediction of success through the development of sport-specific tests
- Well-being: Understanding how sport participation impacts quality of life

While these are all different dimensions a sport psychologist could work within, it is understood that many of these topics are intricately interwoven and not mutually exclusive. In an educational setting, topics likely to be included in curriculum would be learning, performance, and skill, youth, mental skills and programs, group dynamics, and well-being. Oftentimes, these topics are grouped together underneath the umbrella term ‘mental skills’ or ‘mental skills training’.

As commonly demonstrated in the literature, this help oftentimes comes in the form of psychological skills training programs developed by sport psychologists. Many of these programs have been proven to enhance athletic performance alongside cognitive and affective states (Sheard & Golby, 2006). Because of research like this, psychological skills training programs have been developed as interventions for athletes of all ages to address these self-actualization needs. For example, Sheard and Golby (2006) developed a psychological skills training program for 14-year-old swimmers. After this seven-week intervention, swimming

performance improved alongside positive psychological attributes like mental toughness and self-esteem. In the educational setting, the Swedish and Australian school systems have had great success designing and implementing psychological skills training programs which focus on mental skills like goal-setting, imagery, relaxation, and stress management.

Unfortunately, most American schools and coaches only seem to focus on the physical (strength) and technical skills (mechanics) of their sport, dedicating very little training towards psychological preparation. This lack of mental skill development could have consequences as it may lead to psychological performance inhibitors like precompetitive anxiety, which is the number one most cited psychological issue amongst athletes (Gee, 2010, p. 393). This finding has been supported by other research by Bali (2015) which examined factors like anxiety as a component of mental readiness, which was determined to be the most statistically significant mental skill associated with Olympic ranking (p. 92), illustrating a need to address anxiety when it comes to sport performance.

2.4 Mental Skills Training

It is important to remember that psychological development is not automatic, and is a result of parental, social, environmental, and cultural experiences (Viseky, Harris, & Blom, 2013) and can be influenced by mental skills training. Vealey (2007) provides a framework to consider for the holistic design of a mental skills training in Figure 2.1:

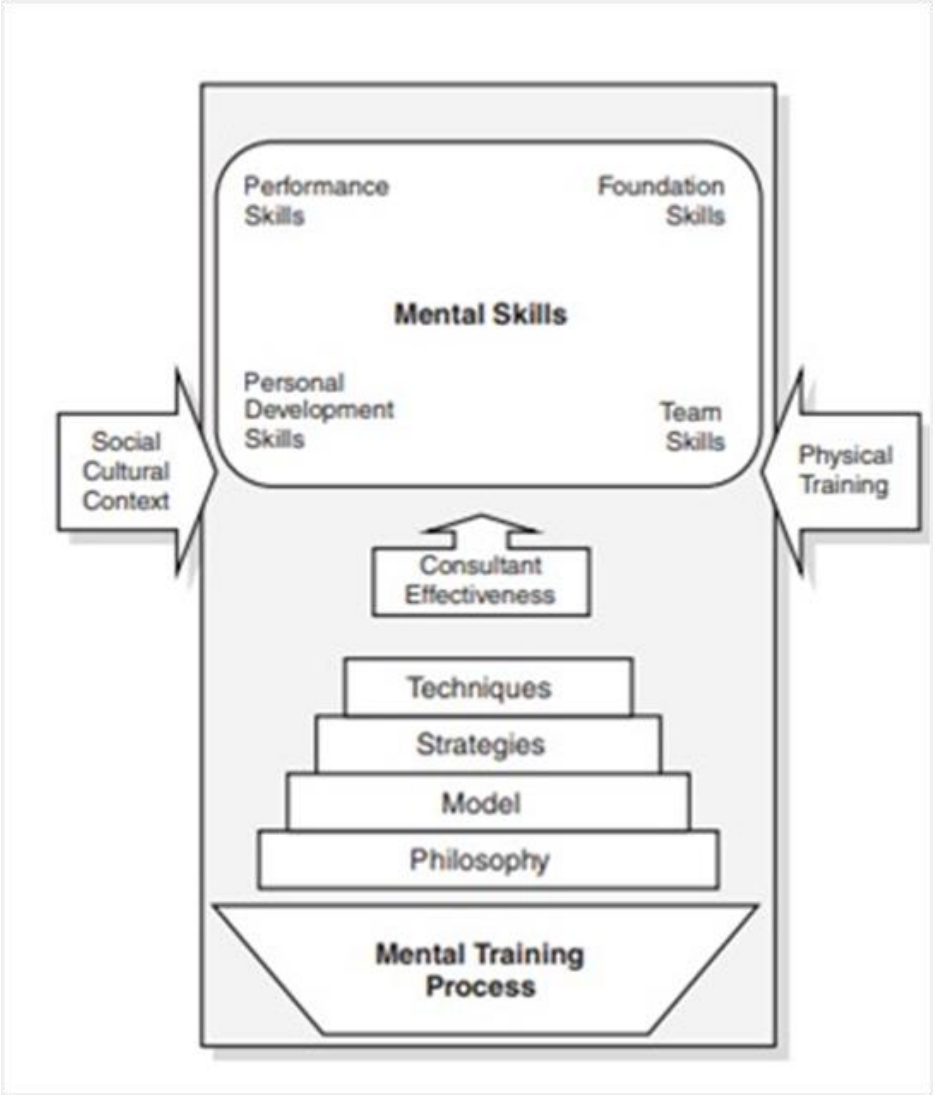


Figure 2.1 *A framework for mental skills training in sport (Vealey, 2007)*

Vealey (2007) also provides a model of the various mental skills that would be associated with a mental skills training program for athletes and coaches in Figure 2.2:

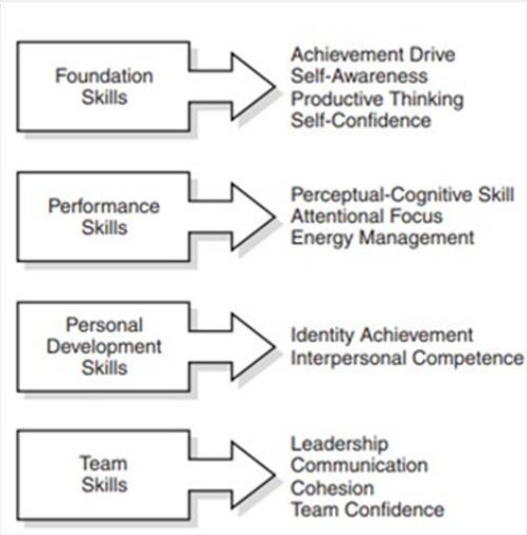


Figure 2.2 *A model of mental skills for athletes and coaches (Vealey, 2007)*

Effective mental skills training requires sport psychology professionals who are able to tailor their programs to address the needs of the athletes they work with. This individualized approach is exemplified in Figure 2.3 as illustrated by Tenenbaum and Eklund's research review in Vealey (2007):

Authors	Philosophy	Model	Strategies	Techniques
Vealey, 2005	Help athletes attain optimal development, experiences, and performance; coaches serve as educational mental trainers.	Getting the Inner Edge, foundations to mental training toolbox to big three mental skills.	P^3 Thinking Goal Mapping Energy Management Special Recipes sample programs.	Self-monitoring, thought-stopping self-talk, imagery, physical relaxation, goal setting, behavior management.
Martin, Thompson, and McKnight, 1998	Goal is to teach athletes to teach/manage themselves; focus is on education and mental health (not illness).	Integrative psychoeducational approach; combines reality therapy and behavioral counseling.	Problem-focused process: 1. Identify problem category. 2. Identify problem type. 3. Determine problem cause. 4. Select problem solution.	Goal setting, goal attainment scaling, self-management plans, self-talk.
Danish & Nellen, 1997; Danish, Petitpas, and Hale, 1992	Optimization, not remediation; teacher/skill trainer, not therapist; problems as imbalances that precede personal growth; developmental-educational focus.	Live development intervention; life skills, GOAL (Going for the Goal), SUPER (Sports United to Promote Education and Recreation).	Ten 1-hour skill-based workshops, peer teaching and modeling. STAR (stop and chill out, think of choices, anticipate consequences of choices, respond effectively).	Goal setting, skits for mastery modeling, imagery, self-talk, physical relaxation, behavior management.
Singer, 1988	Direct instruction of mental strategies can enhance learning and performance by activating appropriate cognitive processes.	Information-processing metastrategy for self-paced sport skills.	Five-step strategy: 1. Readying. 2. Imaging. 3. Focusing. 4. Executing. 5. Evaluating.	Self-talk, imagery, focus plans, centering, physical relaxation.

Figure 2.3 *Examples of mental skills training programs (Vealey, 2007)*

Overall, according to Kumar and Shirotriya (2010), the field of sport psychology is "striving hard to investigate athletic performance, to stabilize it and to improve sports performance by seeking an appropriate balance between physiological and psychological dimensions of performance" (p. 1). In the end, most sport psychology literature supports this claim that mental skills training, in addition to physical training, can improve psychological development and performance much more than physical training alone.

2.5 Theory in Sport Psychology

In general, sport psychology is challenged by the lack of a unified theory or even atheoretical scholarly work. As opposed to sport psychology's parent discipline, psychology, sport psychology research tends to be intervention-based, and at best, abstractly interwoven within an oftentimes unarticulated theoretical framework (Aoyagi & Poczwardowski, 2012, p.

xvi). In fact, very few sport psychology theories exist that are truly homegrown within the field. Nonetheless, the development of most sport psychology programming inside and outside of education is grounded in various implicit and explicit theoretical foundations.

By definition, a theory is constructed through a "set of interrelated facts that present a systematic view of some phenomenon in order to describe, explain, and predict its future occurrences. Theory allows scientists to organize and explain large numbers of facts in a pattern that helps others understand them" (Weinberg & Gould, 2019, p. 16). In sport psychology, the term 'theory' is oftentimes used in reference to theories behind interventions, techniques, and methods, and not necessarily theoretical paradigms (Aoyagi, 2013). While dissertation work incorporating sport psychology in secondary education has been limited to Weissman (2003) and Lamberth (2007), the general literature review supports this notion that the theoretical approaches used within school sport psychology research have mainly included intervention-based theory as opposed to large theoretical paradigms. As a result, Singer, Hausenblas, and Janelle (2001) argue that clarifying and expanding upon sport psychology theory should be a mission for sport psychology researchers and professionals: "Although atheoretical research is published (and is often pragmatically valuable), contemporary sport psychology research tends to be conceptually grounded. Indeed, if sport psychology is to continue to emerge and mature as a scientific discipline, and as a respected applied field of endeavor, at the heart of these advances must be a foundation of theory-based research" (p. xvi).

The following theories found in the literature have been associated to various degrees with sport psychology researchers, teachers, consultants, and clinicians. In turn, these theories provide sport psychology professionals implicit or explicit guidance within their theoretical interventions, approaches, frameworks, models, and/or paradigms. The next two sections will

explore theories associated with sport participation and sport performance. Theories associated with sport performance will be explored to a greater extent due to their relation to the present study's research questions, specifically humanistic theory and cognitive-behavioral theory.

2.5.1 Sport Participation

Sport participation research analyzes why athletes do or do not participate in sport and the holistic impact of their participation. Theory behind sport participation oftentimes serves as the theoretical foundation for sport psychology research, as evidenced within Weissman (2003) and Lamberth's (2007) dissertation work on designing and implementing sport psychology services in secondary schools. Common theories associated with sport participation include self-determination theory, Harter's competence motivation theory, and Duda's achievement goal theory. First, Self-determination theory is a conceptual framework which can be used to explain sport participation by understanding an individual's self-determined motivation through the fulfillment (or lack thereof) of three basic psychological needs: a sense of originating their own behavior (autonomy), a sense of being able to influence their environment (competence), and a sense of belonging (relatedness) (Calvo et al., 2010; Aoyagi et al., 2017). Next, Harter's competence motivation theory proposes that when youth athletes feel that they have control over an outcome goal, they become more motivated to achieve excellence (Weissman, 2003) and thus maintain their interest in sport. Last, Duda's achievement goal theory states that children who have a high need for mastering performance and achieving success maintain more motivation in sport and thus participate more, even if they perceive their talent levels as low (Weissman, 2003).

2.5.2 Sport Performance

Two central goals of sport and performance psychology are to improve athletic performance and enhance personal well-being. Sport and performance psychology theory is largely concentrated on explaining the athlete's play and mental health on the basis of their thoughts, behaviors, actions, and personality overall. As a result, most sport and performance psychology literature incorporates some major theoretical paradigms of psychology. Considering the influence of people's thoughts on their personal behaviors and actions, it makes sense that some theories from mainstream psychology would be applied to the sport context in order to understand issues that influence performance and well-being (Saint Martin, 2018). This theoretical choice is important for the sport psychology professional and the athlete because there are teaching and learning ramifications of adopting different theoretical orientations (Cox, 2012).

First, humanistic theory can be seen as one of the main psychological theories associated with performance found within the sport psychology literature. Humanism is a basic psychological framework that is concerned with the personal growth and holistic development of the whole person (Farmer, 1984). This theory was made famous by Carl Rogers and Abraham Maslow and has been adopted by coaches (Perrin, 2015), educators (Farmer, 1984), and sport psychologists (Dickinson, Coulter, & Mallett, 2019; Pottratz, 2019; Cox, 2012; Aoyagi & Poczwardowski, 2012). At the center of humanistic theory is the sub-theory of self-actualization. The concept of self-actualization references the process by which an individual reaches his or her potential. Maslow's theory of self-actualization is a theory of innate human needs and motivation in which he contended that individuals are motivated to become the best version of themselves in life (Maslow, 2014). Maslow hypothesized that certain physical and psychological needs should

be addressed to help facilitate personal growth. While each individual has a unique set of skill sets and capacities, the need for self-actualization is universal among the human species, with psychological problems like anxiety, depression, and purposelessness arising if those needs are not met (Farmer, 1984). As a result, this motivational context has been used by sport psychologists to encourage athletes of all levels and backgrounds to be all they can be on and off the field. This humanistic concern with the quality of a person's life includes, but extends beyond objective achievements like winning and medals. By avoiding the tendency to only focus on performance outcomes, humanistic sport psychology inherently addresses well-being as strong as any other theoretical framework.

This humanistic strength has been solidified further in the 21st century through its theoretical ties to positive psychology (Dickinson, Coulter, & Mallet, 2019). Positive psychology gained momentum as a theoretical approach behind former American Psychological Association president Martin E.P. Seligman. Positive psychology's direction was orienteered by Seligman's claim of "psychology's forgotten mission: to build human strength and to nurture genius" (Compton & Hoffman, 2013, p. 1). Thus, positive psychology strived to build positive qualities and virtues as opposed to focusing only on mental illness (Seligman, 1999). This was done by focusing more on strengths, less on weaknesses, and more on building the good in life and less on repairing the bad (Ackerman, 2018). While so much of psychology focuses on the negative, positive psychology looks at one's core character strengths, and the implementation of those strengths, to enhance well-being, flourish, and ultimately live their best lives (Compton & Hoffman, 2013). Since positive psychology's inception, its approach has been adopted by many in the performance psychology field who saw happiness and meaning in life as an important part of developing performance excellence (American Psychological Association, n.d., p. 17). For

example, Richard H. Cox (2012) defined positive psychology as "an approach to human behavior that focuses upon wellness and not merely absence of disease. A focus upon quality of life and the positive aspects of psychology will have the effect of preventing mental illness before it can start" (p. 4). Cox (2012) goes on in his extended definition to show positive psychology's theoretical influence on sport psychology: "The true sport psychologist is interested in much more than performance enhancement and sees sport as a vehicle for human enrichment. A win-at-all-costs attitude is inconsistent with the goals and aspirations of the best sport psychologist. The sport psychologist is interested in helping every sport participant reach his or her potential as an athlete" (p. 5).

Similar to positive psychology's focus on human enrichment, existentialism can be linked to the humanistic paradigm and applied to sport psychology (Ronkainen & Nesti, 2015). Existentialism is a theoretical approach concerned with human existence and meaning (Frankl, 1978). When applied to sport psychology, its principles are concerned with the athlete as a total person. Existential sport psychology focuses on the establishment of a mission or goal to strive towards in combination with an athlete's freedom to choose and the consequences of those choices (Ravizza, 2002). The importance of existential focus, awareness, and personal experience ties this theoretical approach to another theory concerned with personal development and growth called gestalt theory. This theoretical approach can also be applied to sport psychology and "focuses on a person's own experience and presumes that becoming aware of one's own functioning in the organismic/environmental field can support personal growth, development and fulfillment of one's potential" (Bednarova, 2009, p. 17). This humanistic method stresses individual responsibility and awareness of physical and psychological needs on and off the field.

Second, cognitive-behavioral theory is another main psychological theory which is tied to performance in the sport psychology literature. Cognitive-behavioral theory sees 'cognition', or thoughts, as central to determining emotion and behavior (Beck, 2011; Weinberg & Gould, 2019). Grounded in cognitive theory's perspective that one's thoughts can be assessed and modified to alter their thinking, feeling, and behaving, cognitive-behavioral theory is the "hybrid of cognitive processes and behavioral strategies, with the goal of achieving cognitive and behavioral change" as a result of cognitive-behavioral intervention or therapy (Kalodner, 2011). In theory, because cognitions mediate or lead to behavioral change, functional thought processes can lead to enhanced well-being while dysfunctional thought processes can lead to psychological problems (Kalodner, 2011; Didymus, 2018). This psychological theory has been applied to the sport and performance domain (McArdle & Barker, 2016) to teach athletes how to identify and evaluate thoughts in order to change them to achieve the desired emotional state and behavioral outcome (Saint Martin, 2018). This can be done through a technique called 'cognitive restructuring' where an athlete's cognitions or thoughts are analyzed and restructured to facilitate better outcomes within an athlete's well-being and performance (Didymus, 2018).

Rooted in cognitive-behavioral theory, action theory has been a longstanding theoretical perspective in sport psychology. This theory is based in psychology and was first adopted within performance psychology and then eventually applied to the sport psychology domain. In general, action theory states that actions are more or less cognitively based and can be characterized by three fundamental assumptions (Schack & Hackfort, 2007, p. 16):

1. The basic nature of humans is substantiated by the necessity and capability of organizing life by actions.

2. Action is a system process based on the integrated response of an agent to their present situation in the world.
3. Psychological processes, states, and traits are considered as fundamentally related to action.

When applied to sport psychology, action theory provides a 'cognitive map' to performance as it recognizes that peak performance is understood to be the final result thoughts and actions (Schack & Hackfort, 2007, p. 26). This 'cognitive map' breaks down the processes of sport action to be an intentional response carried out to attain a specific outcome goal, thus giving all psychological processes an "action regulating function" within the dynamic interplay of person (athlete), task (goal in sport), and environment (competitive conditions) (Schack & Hackfort, 2007).

2.5.3 Key Theoretical Challenges

While humanistic and cognitive-behavioral theories seem to be common across the sport psychology landscape, there is seemingly an unstated premise that performers and athletes are open and willing to embrace change to enhance performance (Raab, 2016). However, if a performer or athlete is not interested or committed to these changes, then these aforementioned theoretical interventions, approaches, and paradigms become increasingly less effective. Because of this, the transtheoretical model of change was developed as model within the field of psychology which addresses readiness for behavioral change. In general, the transtheoretical model of change posits that eliminating negative behaviors and enhancing positive behaviors can unfold through a series of five stages of change: precontemplation, contemplation, preparation, action, maintenance (Prochaska & Velicer, 1997; Raab, 2016). This model is grounded in numerous theoretical foundations (i.e., transtheoretical) including humanism and cognitive-

behavioralism (Prochaska & Velicer, 1997). While an older model, this model has still been cited within recent works by sport psychology researchers like Gilbert and Lewis (2013) to help develop awareness of where a performer or athlete sits in regards to their readiness to change. Some have even suggested that this theoretical model has been overlooked in its value to sport psychology (Grove et al., 1999).

In conclusion, no matter the theory, some would still argue that sport psychology has relied too heavily on the assumed transferability of psychological theory into sport psychology (Aoyagi, 2013): "Although it is not currently common practice in sport psychology to discuss theoretical orientation, when it is discussed it is typically in the context of systems of psychotherapy and personality theories [like humanistic or cognitive-behavioral theory]. Certainly a theoretical grounding in personality theory is better than none at all, but these theories were developed in order to understand and explain pathological human behavior; not the firmest foundation from which to attempt to understand and explain performance excellence" (p. 141). While Aoyagi (2013) may be correct in his assessment, the usage of theory is seemingly dependent on the complex intersection of the sport psychology professional, their purpose, and the topic overall. With that said, whether the theoretical foundations have been born in psychology or sport psychology, there is an argument to be made that human behavioral change is too complex to be accounted for within one single theory (Prochaska & Velicer, 1997). Likewise, critics point out that the mental side of sport cannot be easily seen, measured, or quantified, making it difficult to analyze psychological impact on performance (Taylor, 2014). While this state of theoretical confusion is a challenge to the field as it exists today, it also represents an opportunity for growth to strengthen sport psychology's scientific foundation through refined theoretical approaches to sport psychology program design and implementation.

2.6 Research Methods in Sport Psychology

Methodology can be defined as an approach for how inquiry should proceed, including methods of research such as data collection and analysis (Culver, Gilbert, & Sparkes, 2012). Most leading names in the sport psychology literature like Martens, Singer, Gould, and Weinberg agree that sport psychology's scholarly evolution as a field should be focused on bridging the gap between research, theory, and practice, supporting the use of qualitative knowledge gained through more real-world sport settings (Williams, 1993). This would lead to greater epistemological alignment in sport psychology research by better connecting theory to methodology. In general, the three most common psychological research approaches adopted within sport psychology include quantitative methods, qualitative methods, and mixed methods.

First, quantitative methods seem to be the traditionally dominant approach in sport psychology (Biddle et al., 2001). According to Creswell and Creswell (2018): "Quantitative research is a means for testing objective theories by examining the relationship among variables. These variables can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures" (p. 250). This approach includes research designs or strategies of inquiry which include quantitative tests, techniques, and methodologies like the experimental designs, surveys, and regression analysis (Mellalieu, 2015).

Next, while qualitative methods were found in only 6% in sport psychology papers between 1985-1994 (Biddle et al., 2001), qualitative methods have become an increasing trend in sport psychology research over the last two decades (Culver et al., 2012). According to Creswell and Creswell (2018): "Qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures; collecting data in the participants' setting;

analyzing the data inductively, building from particular themes; and making interpretations of the meaning of the data" (p. 250). Recently, interviews appear to be the current dominant method of data collection is sport psychology qualitative research (Mellalieu & Hanton, 2015): "Sport psychology researchers, it seems, like to interview athletes. A recent 'decade review' of qualitative research in sport psychology journals revealed that 78.1 percent of studies from 2000-2009 used interviews (most often 'semi-structured' ones) as a method of data collection (Culver, Gilbert, & Sparkes, 2012). The reasons for this dominance of interviews are perhaps understandable; when done well, they can result in good, rich, storied data from athletes about their sport experiences over time and across contexts" (p. 202). Mellalieu and Hanton (2015) go on to recommend other qualitative methods which could help diversify the sport psychology literature like field notes, case studies, observational methods, and narrative research.

Finally, mixed methods have emerged as a third methodological approach within sport psychology. According to Creswell and Creswell (2018), “Mixed methods research is an approach to inquiry that combines or integrates both qualitative and quantitative forms of research” (p. 249). While quantitative and qualitative research approaches were once thought incompatible with one another, sport psychology researchers have explored how these two approaches could be interwoven within a mixed methods approach (Matthews & Kirby, 2011). As a result, the mixed methods approach could include convergent, explanatory sequential, or exploratory sequential. Using a mixed methods approach within these various research designs allows sport psychology researchers "to enhance the validity of the findings by checking the results of the quantitative data against the results of the qualitative data, and guide the development of the intervention" (Shipherd et al., 2014, p. 34).

Overall, while the majority of sport psychologists use surveys in mental training with athletes, interviews and observations are still the most dominant form of assessment to assess athletes (Vealey, 2007). In total, these methodological trends in sport psychology literature were important to consider when designing the present study.

2.7 Perceptions of Sport Psychology

Most schools and sports teams still do not systematically include mental skills training or sport psychology in general (Taylor, 2014). However, perceptions of sport psychology continue to undergo a remarkable shift in the 21st century. This positive evolution of the sport and performance psychology field is reflected within its advancement in numerous performance arenas with individuals of all levels.

First, traditional perceptions of sport psychology tend to suffer from 'guilt by association' with the broader field of clinical psychology. During this time, negative stigmas were often attached to those who sought psychological help, by-default casting a shadow over the sport psychology field (Taylor, 2014). While newspaper portrayals of sport psychology from 1985-1993 were "neutral in tone towards sport psychology, portraying the field in objective terms" (Brewer et al., 1998), past research (Linder, Pillow, & Re, 1989; Linder et al., 1991) has found individuals to have a negative attitude about the field of sport psychology and especially those athletes who consult with sport psychologists. This negative attitude was seemingly a direct result of people in the public viewing those athletes who consulted with a sport psychologist as a 'head case' who was abnormal, broken, and needing 'fixed'.

Blom et al. (2003) contributed to this literature by narrowing down the target audience to high school athletes' perception of sport psychology while also looking at their preference for the service. These findings showed that high school athletes had an overall positive perception of

sport psychology and preferred group and team sessions in a 'class-like setting' for their sport psychology services. High school athletes also mentioned the importance of peers and coaches recommending the use of sport psychology services as a way to help alleviate the fear of "what people would think" if someone used sport psychology services.

Overall, Blom et al.'s (2003) research suggests that sport psychology services need to be "normalized," especially for high school athletes worried about judgment from their peers. These general findings were supported by Bell, Knight, Lovett, & Shearer (2020), who used focus groups to study the knowledge and perceptions of thirty-four elite athletes, ranging from 13-20 years of age. They found that these athletes' overall perceptions and understandings of sport psychology were mixed. Two main variables which seemed to influence their views of sport psychology and its effectiveness included their amount of individual knowledge and their coaches' perceptions of sport psychology. As a result of these mixed reviews, Bell et al. (2020) recommended that athletes should be provided with the opportunity to be educated on sport psychology's utility as a performance enhancer within athletics.

Upon review, most of the literature found on current perceptions of sport psychology has been done by sport psychology consultants on the consulting experience and not on attitudes associated with sport psychology in the educational setting. Nonetheless, it is important to dispel common misunderstandings that still may exist which create these negative attitudes about sport psychology (Martin, 2005). In the future, perceptions of sport psychology will continue to be a major driving force behind its incorporation in consulting, education, and beyond.

2.8 Sport Psychology and Olympic, Professional, and Collegiate Athletes

`Today, at the Olympic, professional level, and collegiate level, it is becoming more and more the norm to incorporate sport psychology. This is oftentimes done through the hiring of a

sport psychologist or a sport psychology consultant. These individuals provide mental skills training programs which generally seek to improve the performance and/or enhance the well-being of their clients.

At the Olympic level, the United States Olympic team carries numerous sport psychologists and had one sport psychologist for every nine athletes during the 2014 Winter Olympics (Clarey, 2014). These kinds of sport psychologists tend to help with player development by creating player profiles and hosting seminars on how to handle stress and pressure, while also working within individual athletes on personal performance enhancement techniques. The importance of a sport psychologist became especially prominent during the 2020 Summer Olympics when Olympic gymnast Simone Biles withdrew from several events in which she was favored to win the gold medal, citing her mental health (Longman, 2021).

At the professional level, Pete Carroll, the head football coach of the Seattle Seahawks, was one of the first professional football coaches to embrace sport psychology and its positive psychology underpinnings. In fact, Carroll (2010) claims it was his sport psychology class in college that forever changed his outlook on performance and competition, citing Abraham Maslow's "hierarchy of needs" and the theory of self-actualization which shifted Carroll's perspective to a new, positive way of thinking about the human personality, its potential, and its needs (p.19). Similarly, Brad Stevens, the head coach of the NBA's Boston Celtics, is a member of the "Positive Coaching Alliance," an organization dedicated towards applying positive leadership styles influenced by positive psychology theory. Stevens cites sport psychology research within his teaching and coaching habits, stressing the importance of responding appropriately to negative emotions (Positive Coaching Alliance, n.d.). In fact, the NBA recently unleashed a mental health initiative aimed at improving the well-being of its players, a sector of

health that has been largely ignored until now. As NBA Commissioner Adam Silver stated, "When I meet with (NBA players who have expressed concern on about mental health), what strikes me is they're truly unhappy. A lot of these young men are generally unhappy" (Amick, 2019). Outside of professional sports, the United States military continues to incorporate sport psychology into their training regimens as they aim to holistically build the mental and physical prowess of each and every soldier. In 2006, the Army Center for Enhanced Performance was established to optimize the performance of soldiers through mental skills training. To build on this, Meyer (2018) suggested a cognitive-behavioral program called "Sport Psychology for the Soldier Athlete" to help provide additional support for the mental and physical readiness of United States troops. To this day, the largest employer of people with applied sport psychology training can be found within the United States Army (American Psychological Association, n.d.).

At the collegiate level, sport psychologists are also becoming more and more widespread working within athletic departments and programs. Additionally, sport psychology is commonly taught as an undergraduate course by professors associated with sport and performance psychology or exercise science. In fact, more and more graduate programs have emerged since sport psychology's inception into academia in the 1970s (Singer, Hausenblas, & Janelle, 2001, xiv). For example, Boston University developed an innovative graduate training program in sport psychology that effectively integrated positive psychology, sport science, and school counseling (Zaichkowsky, 2007). In general, there is a decent amount of sport psychology literature on college student-athletes. This is most likely due to the fact that the college student-athletes are a convenient sample population for research being conducted at universities. Nonetheless, even with sport psychologists commonly employed within many colleges and universities, there still

lacks scholarly documentation of these real-world experiences incorporating sport psychology services and programming (Lamberth, 2007, p. 19).

2.9 Sport Psychology and High School Student-Athletes

While sport psychology is oftentimes researched in association with elite athletes or members of the military, there is little focus in the literature on sport psychology and high school student-athletes. As shown in Table 1, high school student-athletes represent one of the largest possible target audiences for sport psychology services and education.

***Table 2.1**: Number of High School Student-Athletes (2017-2018)*

H.S. Sport (Boys)	**# of Participants**	**H.S. Sport (Girls)**	**# of Participants**
Football	1,036,842	Track and Field	488,592
Track and Field	600,097	Volleyball	446,583
Basketball	551,373	Basketball	412,407
Baseball	487,097	Soccer	390,482
Soccer	456,362	Softball	367,861
Cross Country	270,095	Cross Country	223,518
Wrestling	245,564	Tennis	190,768
Tennis	158,151	Swimming/Diving	175,594
Golf	144,024	Competitive Spirit	162,669
Swimming/Diving	138,935	Lacrosse	96,904

The 2017-2018 school year marked the 29th consecutive year in which the population of high school student-athletes has increased (National Federation of State High Schools Association, 2018). In fact, the number of participants almost breached the eight million plateau with 4.5

million boys and 3.4 million girls participating in high school sports. According to Child Trends (2019) and Figure 2.4, the percentage of students participating in sports has remained high over the past three decades, with approximately 55% of seniors participating on school athletic teams during this period of time:

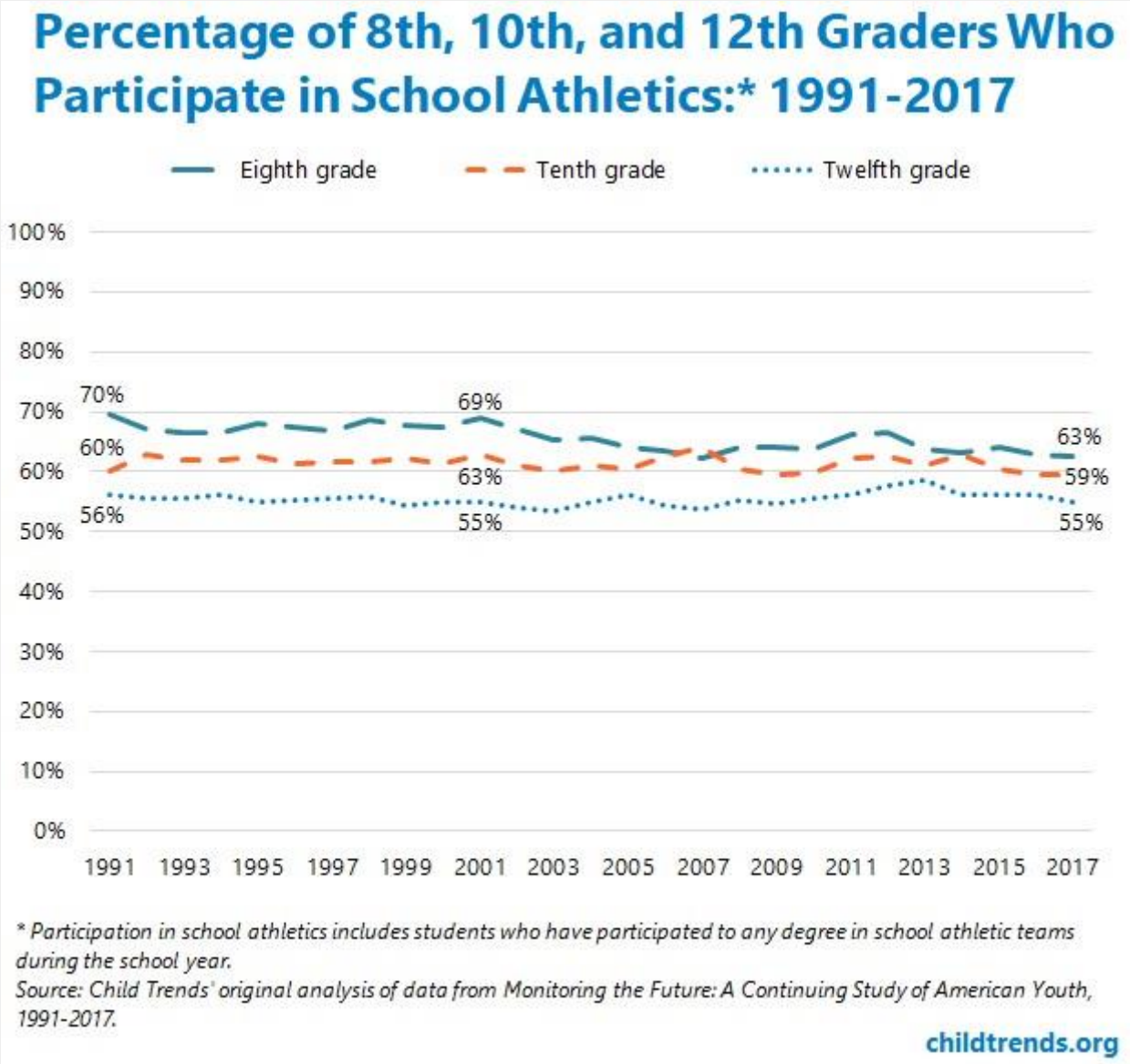


Figure 2.4 *Student Participation Rate in School Athletics (1991-2017)*

This evidence helps illustrate not only the sheer volume of student-athletes which exist within the American educational system, but the large percentage of students who choose to make sports a part of their life. As NFHS executive director Karissa Niehoff stated, "The model of sports within the education-based school system continues to thrive in the United States" (National Federation of State High Schools Association, 2018, para. 11).

As a result, the opportunity exists for sport psychology to advance from the Olympic, professional, and amateur levels of sport to the high school level. While hiring a sport psychologist or consultant is likely improbable for most secondary school districts, the conceptual incorporation of sport psychology is not unfathomable. However, is there any evidence that sport psychology could be helpful at the high school level?

2.9.1 Mental Health in Sport

Adolescent mental health in sport is largely made up of genetic and environmental factors. While some areas of mental health must be addressed by a clinical sport psychologist, there are mental skills in sport psychology which could be helpful to the lives of millions of high school student-athletes in the United States. “Historically, the belief that sports provide training for life can be traced to early Greek and Mayan cultures…[it] also formed the primary argument in proposals to include athletics and physical education in United States school curricula in the early 1900s. It was not until the 1970s that this belief began to be called into question with some regularity by psychologists and sport scientists who suggested that the emphasis on winning at all costs was having a detrimental effect on young participants' psychosocial development” (Petitpas et al., 2005, p. 64).

Current sport psychology literature suggests that participation by high school students in school sports is largely influenced by both positive and negative psychological factors which

determine not only performance, but psychological well-being. According to Muscatell (2018, para. 1), sports are generally a positive platform for personal growth: "As a whole, sports participation provides physical, emotional, and social benefits for adolescents." At the same time, Muscatell (2018) also warns of worrying trends in athlete mental health which are going unnoticed at the high school and collegiate level. As Brian Hainline, NCAA Chief Medical Officer stated in 2017, "Mental health isn't apart from, but rather a part of athletic health. Student-athletes, they look fit so, basically, they must be healthy and they must be immune to things like depressive thoughts and suicidal thoughts. At times, student-athletes are idolized and worshiped as heroes, so of course there can't be something dark and dire inside of them" (Muscatell, 2018, para. 2).

There is perhaps no better model of this than Olympic swimmer, Michael Phelps, who was a 28-time Olympic medalist. Phelps recently revealed that his mental health struggle with anxiety and depression almost led to his suicide. Phelps stated this was triggered as an adolescent by "living a life of dedication, high expectations, challenging physical workouts and dealing with disappointment associated with the pursuit of big goals" (Wood & Bryant, 2019, para. 10). Today, Phelps is a major advocate for mental health and sport psychology techniques which address performance issues and mental health.

Similar to Phelps' experience as an athlete, one-third of all high school students meet the criteria for anxiety disorder. These numbers have likely only worsened across the country during the COVID-19 pandemic (McGuine et al., 2020). In general, student-athletes oftentimes experience common stressors in sport which trigger or exacerbate common psychological issues like anxiety. These stressors include overtraining, early specialization, and simply meeting the demands of the sport overall. Likewise, athletes who tie their personal identity to sport

performance can experience negative psychological reactions which influence well-being and self-worth. In fact, some sport psychologists claim that negativity, anxiety, and depression have increased more in student-athletes over the past decade than those who do not participate in sport (Flanagan, 2019).

As a result, it is important to note past research like Camire (2014) which concluded that the positive development of youth in the sporting context is not an automatic process as most assume. This is oftentimes due to the inherent belief in the "magical" power of sport itself to automatically educate and transform, thus limiting the impact sports programs could have on an athlete's performance, character development, and values education overall (Knijnik & Tavares, 2012). Instead, it needs to be understood that while the sporting context offers up the potential for positive outcomes, it is the "social processes inherent within the programs, and the explicit focus on personal development, that are most significant in effecting behavioral change" (Sandford, Duncombe, & Armour, 2008, p. 422). And while sport participation can have positive developmental outcomes, sport participation can also have negative developmental outcomes. While positive developmental outcomes have garnered a great deal of attention in the literature, studies have found that negative experiences were generally associated with adverse experiences with peers (being ridiculed), coaches (poor leadership), parents (feeling pressured), and with oneself (anxiety). Because of this, three recommendations were made to improve high school sport for all youth, two of which are pertinent to this present study:

1. Supportive relationships defined by an emphasis on adult leaders [like teachers] who communicate well, are caring, and offer guidance.
2. Opportunities for skill building, meaning that youth are provided with opportunities to acquire physical, mental, and social skills.

As a result, greater sport psychology coverage is needed in high school education to build these skills. As Henriksen et al. (2014) stated, a high school student-athlete's athletic career is a "long and winding journey during which an athlete must go through a number of transitions within sport and others spheres of life, each presenting different challenges and opportunities for growth or crisis, and each demanding different types of psychological support" (p. 246).

This psychological support, however, is seemingly lacking, as little is being done in formal education to address the sporting experience and build the skills necessary to ensure sports remain a positive and meaningful playing ground from which to not only win, but also develop and grow. This real-world problem is also reflected in the literature, where there is limited documentation of sport psychology's entrance into the high school world (Lamberth, 2007, p. 20). For most high school student-athletes, their experiences with sport psychology are usually restricted to their sport and coach. While many high school coaches accumulate knowledge through their past experiences playing sport, very few have any formal education in teaching the mental aspects of sport. One conversation with a varsity basketball coach captured by Gilbert (2017) illustrated the idea that some coaches have in which visualization and other sport psychology skills are perhaps a by-product of their coaching practices (p. 52):

Author: Did you teach sport psychology to your athletes?

Coach: Not if it didn't happen in terms of practice. There was no specific class or no specific guideline other than just talking about the things that athletes need to do to be prepared to play or how to react to adverse situations.

Author: So you talked about it but maybe you didn't specifically teach it, is that what you're saying? Did you give them time in practice to visualize, or did you teach them how to visualize?

Coach: No, no visualization, and very few examples in terms of video. We never had them write down their thoughts, or anything like that.

While most coaches acknowledge the importance of the mental part of the game, there is unfortunately a limited amount of time in-season and out-of-season to teach all the physical, technical, and mental skills involved with the sport. However, for schools to ensure the value of extracurricular sports within the personal development of their student-athletes, more should be done to systematically teach sport psychology skills that proactively influence performance and well-being.

2.9.2 Sport Psychology Frameworks and Programming

Sport psychology can be designed in many ways to address the needs of a wide range of athletes and repackaged within various programs, products, or services. This design must take into account age, competition level, and delivery setting, as these variables will influence program curriculum and pedagogical implementation. When considering high school student-athletes as the target population, most of these individuals who become sport psychology clientele are within the mid-adolescence ages of 15-17 years old. Generally, these sport psychology services are provided outside of the school setting and limited to the select few. As a result, there still seems to be a gap within the provision of sport psychology services to high school youth, despite the growth in applied sport psychology at the professional and collegiate level (Visek, Harris, & Blom, 2013). While research over the past few decades has consistently demonstrated the positive link between sport psychology interventions and athletic performance (Singer, Hausenblas, and Janelle, 2001), the frameworks and programs behind these improvements limited, especially at the high school level. As a result, the following review

analyzes sport psychology frameworks and programs that have been developed for youth in various settings.

In general, sport psychology frameworks offer up basic underlying ideas and concepts to guide and structure more complex programming. First, Petitpas et al. (2005) offered up a framework for planning youth sport programs that foster psychosocial development, using sport as a vehicle to build character rather than character disorders. This framework was based upon practices identified by youth development experts, which revealed that positive psychosocial growth is most likely to occur when young people are engaged in a desired activity within an appropriate environment, surrounded by caring adult mentors and a positive group or community, learning or acquiring skills that are important for managing life situations, and benefitting from the findings of a comprehensive system of evaluation and research (Petitpas, 2005, p. 80). Next, Visek, Harris, and Blom (2013) built upon this framework by recommending several strategies and techniques when conducting mental training with youth sport teams (p. 4-5):

- Purpose of mental training services: Performance approach or life skills approach
- Equitable treatment: Treatment of all individuals is fair, equal, and without favoritism or bias
- Use of language: Linguistically clear and simple
- Session delivery: Length of time (15-30 minutes) with more interactive and hands-on activities than didactic sessions

Similarly, Henriksen et al. (2014) developed a framework that reflected the advice of sport psychology practitioners who worked with young athletes. These practitioners recommended

three strategies when trying to effectively develop physical, technical, tactical, and psychological capacities (p. 245):

1. Young athletes should be equipped with a holistic skills package that enables them to handle a number of existential challenges.
2. Young athletes are embedded in an environment (coaches, experts, teammates, etc.) that should be involved in the interventions.
3. Interventions with young athletes should maintain a long-term focus.

While these frameworks incorporated numerous variables to consider when designing and implementing a pedagogical approach, the validity and effectiveness of these frameworks are rarely measured in a real-world setting with high school student-athletes. Implementation limitations like these were consistently found within other published accounts of various frameworks and guidelines put forth by sport psychologists. Nonetheless, these frameworks are critical to consider when contemplating a potential framework for designing and implementing sport psychology programming with high school student-athletes in education.

As a result, the school setting is a critical variable to consider when converting a sport psychology framework into an actual sport psychology program. Perhaps because of their perspectives as sport psychology researchers, neither Petitpas et al. (2005), Henriksen et al. (2014), or Visek, Harris, & Blom (2013) focused their sport psychology work directly within the educational setting. Unfortunately, not much documented progress has been made within sport psychology programming to address these limitations as there are still few resources available for those interested in the educational deployment of sport psychology. While sport psychology has grown at the undergraduate level, research shows that sport psychology is rarely even included as subject matter in classes like psychology, sociology, kinesiology, exercise science,

physical education, coaching, and health (Stanley & Robbins, 2015). This is not to say the interest is nonexistent, however, as Harry (2018) found *Sport Psychology* to be the number one course of interest within a hypothetical athletics performance minor (p. 22).

One of the first individuals to dedicate part of their lives to bridging this gap between sport psychology and education was Mitch Lyons. Lyons, an attorney and coach, seemingly became the first true advocate of a written curriculum based on sport psychology for high school sports teams. Lyons (2001) stated, "Amazing as it seems, the one-hundred-year-old science of sport psychology is hardly taught in any systematic way in our public schools. It would be tragically laughable if geography was being taught without maps or chemistry without the Table of Elements. Yet high school sports, the zenith of most people's sports career, is taught without regard to the science upon which peak performance is based. That science is sport psychology" (p.1). As a result, he developed a groundbreaking after-school sport psychology program called “Get Psyched Sports!”. In this program, curriculum was centered upon the value of personal self-worth to individual performance and well-being. This curriculum was the first-of-its-kind and was to be instituted by high school sports teams across the country and run by coaches with their student-athletes. Lyons (2001, p. 3-5) recommended the following basic sport psychology skills, activities, and outcomes within his curriculum:

Basic Sport Psychology Skills

- Practice giving the most mental and physical effort you can as a skill of its own
- Set realistic, challenging short-term goals
- Focus on the specific details of each task and not on the outcome
- Be positive with yourself and others and throw out all negativity

- Visualize successfully executing the details of each task repeatedly until your mind knows it

Mental Activities

- Talk to others in a respectful, sensitive, and positive way
- Develop a mantra that you can repeat back to yourself when negative
- Set controllable short-term goals which are realistic, yet challenging
- Consciously think about how hard you are working and practice exerting maximum effort
- Practice focusing for longer stretches of time by consistently asking yourself questions about what you should be doing
- Break a task down into the smallest details and think about accomplishing each of those details as well as you can as opposed to the long-term goal
- Imagine doing certain tasks in detail over and over again in your mind and seeing success

Student Outcomes

- Student will learn and understand the principles of sport psychology and its terminology, including the value derived from self-worth and how to attain it
- Student will demonstrate competency and exhibit some of the basic fundamental self-worth building skills such as being positive with others, giving maximum effort, goal setting, and focusing
- Student will demonstrate other self-worth building skills such as positive self-talk, task-orientation, and visualization
- Student will apply mental skills in games
- Student will apply mental skills to academics
- Student will apply skills for building self-worth outside of school

Overall, this written curriculum seems to have made a short-term difference in Massachusetts, but the progress of this program has not been recently reported or updated, perhaps mirroring the slow developmental progress school sport psychology has made nationwide. While he said many coaches, athletic directors, and schools were in favor of this change, Lyons (2001) knew this journey was going to difficult: “Make no mistake about it, a written curriculum based on the science of sport psychology for high school sports teams is innovative. It has never been done before. Implementation of this program nationally (two generations or more away) will change amateur sports in America..." (p. 10).

Similar to Lyons, Steven J. Danish became a major proponent within the sport psychology literature for using sport to build life skills, recognizing the need for sport-based life skills programming in the schools. Danish, Forneris, and Wallace (2005) began their research by studying environments which allowed youth to learn "life skills", which they defined as "transferable behaviors and attitudes that enable students to succeed in the different environments in which they live, such as school, home, and in their neighborhoods" (p. 12). As a result of their findings, Danish and others at the Life Skills Center created two major programs to deliver sport psychology to student-athletes called GOAL (Going for the Goal) and SUPER (Sports United to Promote Education and Recreation). Within GOAL, high school students were trained to teach ten one-hour sport psychology sessions to middle school students, with an emphasis on goal setting (Gilbert et al., 2006). This program became a precursor to SUPER, which was a sport-based program taught by college-level students to middle and high school student-athletes in conjunction with their basketball, soccer, and volleyball teams. This peer-led program, conducted in both a school and community setting, consisted of 18 modules approximately 30 minutes in length, with topics ranging from teamwork to goal-setting for life.

While these programs have been effective (Gilbert, 2011), they have struggled to gain traction due to research limitations and an inability to translate research findings into widespread applicable practice (Danish, Forneris, & Wallace, 2005). Few researchers before or after Danish, Forneris, and Wallace (2005) have documented sport psychology programs like GOAL or SUPER, especially at the high school level. While interactive online programs in student-athlete leadership development have been created as an educational program for young athletes (Pierce, Blanton, & Gould, 2018), these kinds of sport psychology programs are led by state organizations and limited in scope, nature, and outreach.

2.9.3 Sport Psychology Programming in High School

Michael Weissman became what seems to be the original pioneer for truly bringing sport psychology into high school. In fact, his work likely helped pave the way for future researchers on school sport psychology like Rebecca Lamberth and Jenelle Gilbert, whose research will be detailed later on in this section. While Weissman and Lamberth each wrote a dissertation documenting innovative sport psychology programming at the high school level, Gilbert has authored numerous research studies on teaching sport psychology to high school student-athletes.

First, Weissman's (2003) dissertation was centered on his experience as an in-district school psychologist developing a sport psychology program at his urban high school. His groundbreaking work was inspired by the following gap in the school sport psychology literature: "Some research has indicated the need for psychological interventions and programs, which will address the unique needs of the adolescent athlete. However, there is virtually no documented literature that addresses these needs. While there has been some research-based work on the development of programs to address drug use with high school athletes, there is no documentation regarding the development of a more global sport psychology program to address

various other needs of high school athletes such as: personal adjustment within the sport context, performance enhancement skills and mental strategies (i.e., visual imagery, goal-setting, meditation) or balancing sport with academics. It is evident that the development of a systematic program is necessary..." (Weissman, 2003, p. 32). Weissman's role as a school psychologist and sport psychology consultant provided a natural opportunity to teach student-athletes mental skills that would impact their performance and well-being. As a result, he designed, implemented, and evaluated his own sport psychology program for student-athletes and coaches by following Maher's (1996) programming approach. This program was designed and implemented within case study methodology and specifically focused on three sports teams at a New Jersey public high school. To help address student-athlete needs on these teams, Weissman's (2003) program used individual and team educational sessions alongside on-site consultations to teach student-athletes mental skills like anxiety management, motivation, discipline, confidence, intensity, focus, composure, communication, teamwork, accountability, and goal-setting. While the provision of these sport psychology services were oftentimes limited by time constraints, the main finding of this study revealed that a school sport psychology program designed and implemented for high school student-athletes was, in fact, feasible and could address the needs of those student-athletes in a satisfactory way (Weissman, 2003).

Next, Lamberth's (2007) study built upon Weissman's (2003) work in the school sport psychology literature by also designing and implementing a sport psychology program for high school student-athletes at the secondary level. Using Prochaska and Velicer's (1997) Transtheoretical Model of Change as a theoretical guide, a case study approach was implemented to understand how to design and implement three distinct sport psychology programs for Highland Park High School's (New Jersey) football, basketball, and baseball teams during the

2005-2006 school year. As a sport psychology researcher and consultant, Lamberth chose to embed herself at a deeper and more intensive level than Weissman by spending more time with each sports team. During this time, Lamberth examined the steps involved within designing and implementing a sport psychology program which included team psychoeducational sessions, individual player sessions, onsite player and coach consultation, and player and coach feedback sessions. For example, during the baseball season, seven team psychoeducational sessions were held after school during practice where she taught sport psychology skills like goal-setting, mental discipline, and focus. This was done in a classroom setting. Individual work with baseball players was also done, especially as time to deliver sport psychology services became more limited. Formative program evaluation was done through player and coach reactions to these programs, providing crucial feedback on the effectiveness of her curriculum and design. At the conclusion of her study, Lamberth's three sport psychology programs were endorsed by all parties involved as individuals reported gaining benefits from their participation. Specifically, her program was deemed effective in addressing specific needs and equipping them with the mental skills necessary to manage themselves appropriately and optimally (Lamberth, 2007, p. 33). As a result, Lamberth's findings help solidify the argument for incorporating sport psychology in high schools stating, "Sport psychology programming is justified as having a place within the schools based on the principles that it draws from within the discipline of school psychology, namely prevention approaches, social and emotional learning (SEL), and character education" (Lamberth, 2007, p.1). Overall, Weissman and Lamberth's dissertations were two of the first published accounts of sport psychology programming being taught to student-athletes in the high school setting.

Building upon the work of Weissman and Lamberth over the next decade, Jenelle Gilbert proved to be one of the next, if not one of the only, mainstay figures within teaching sport psychology to high school student-athletes at the secondary level. Gilbert wanted to teach sport psychology skills in a meaningful and practical way, and believed most athletes were not mentally prepared to train and compete. Gilbert believed that while some student-athletes may have access to various sport psychology services, she knew that outreach was still limited at best: "When coaches seek sport psychology services for their high school athletes, they have several options. Often, they hire a sport psychology consultant to conduct a one-time workshop or they bring this individual in for several sessions over the course of a season...Although these resources are valuable, a coach lacking a formal background in sport psychology and/or time to invest in exploring the information may still be unsure about how best to teach sport psychology skills" (2011, p. 2). As a result, beginning with the 2004-2005 and 2005-2006 school years, Gilbert partnered with a local university and introduced sport psychology programming into an inner-city high school in California. Similar to Weissman and Lamberth, case study methodology was used based in Prochaska and Velicer's (1997) Transtheoretical Model of Change. Driven by this theory of behavioral change, Gilbert et al.'s (2006) sport psychology program was intended to help 150 student-athletes who had accepted a culture of losing. In the end, this study wanted to see how a sport psychology program could be designed to meet the needs of various athletes (Gilbert et al., 2006, p. 70). As a result, she had graduate sport psychology students teach a 12-week sport psychology curriculum using her innovative UNIFORM approach and Game Plan Format. This curriculum was offered in 50-minute lessons, twice per week during 6th period 'Athletic PE' classes. The curriculum consisted of three 4-week units on the following mental skills: confidence, belief, and positive attitude; desire, visualization, and commitment; and

competitive greatness and character development. While no formal data collection occurred, general feedback from all parties involved within the process confirmed that high school student-athletes could successfully learn and implement sport psychology skills through Gilbert's sport psychology program. This study was the one of the first studies to document sport psychology curriculum being taught to high school students as part of a separate academic course (Athletic PE).

The overall effectiveness of Gilbert's innovative UNIFORM approach and Game Plan Format was further analyzed by Gilbert (2011). First, the Psychological UNIFORM was an acronym which stood for some of the most common mental skills needed in sport. Figure 2.5 from Johnson and Gilbert (2004) illustrates how this curriculum would be assessed in a preliminary needs analysis:

Skills	Skill Ability				
	Excellent	Good	Average	Fair	Poor
Use Goal Setting Short-term & long-term goals	5	4	3	2	1
No Mistakes, Only Learning Opportunities Pull out lessons	5	4	3	2	1
Imagery Internal & external	5	4	3	2	1
Full Focus Commitment to be in the moment	5	4	3	2	1
Overtly Positive Self-talk	5	4	3	2	1
Relaxation Stress control strategies	5	4	3	2	1
Make Routines Practice & competition	5	4	3	2	1

Figure 2.5 Psychological UNIFORM Rubric (Gilbert, 2004)

After a needs analysis was conducted, these mental skills were then taught within the Game Plan Format. This format used sports terms to help teach the UNIFORM curriculum, as shown in Figure 2.6:

Game Plan Format Component	Description	Purpose
Teams	Athletes divided into small groups—groups work together throughout program	Enhance team camaraderie Provide structured peer group to learn with throughout program
Warm-up	One-page handout to introduce the skill/concept—found in Lesson A	Provide background or science behind skill/concept Used to organize an interactive lecture about the skill/concept
Conditioning	Paper and pencil in-class activity—found in Lesson A	Provide opportunity for athletes to apply newly-learned information
Proof it Works	Athlete or coach testimonial about use of skill/concept—found in Lesson A	Enhance credibility about using the skill/concept to improve performance
Films	Brief clip from popular movie that shows sport psychology "in action" —athletes complete the accompanying guiding question worksheet—found in Lesson A	Teach the athletes about skill/concept by engaging them with another medium
Practice	Homework assignment—found in Lesson A	Provide opportunity for athletes to review the skill/concept individually
Chalk Talk	Interactive lecture—found in Lesson B	Question and answer format used to review skill/concept—includes review of the Practice assignment
Drill	Physical activity—found in Lesson B	Provide experiential-based learning opportunities
Game	10-point quiz (includes true/false, multiple choice and fill in the blank questions)—found in Lesson B	Test athletes' knowledge of skill/concept
Playbook	Journal entry that includes starter sentences to facilitate writing process—found in Lesson B	Safe place for athletes to discuss their use of skill/concept Athletes can privately ask facilitator questions about skill/concept
Statistics	Documentation of athletes' grades on Games (i.e., quizzes)—individual and team grades can be recorded—used throughout the program	Enhances credibility of overall program as athletes are graded on their knowledge

Figure 2.6 Game Plan Format (Gilbert, 2011)

Similar to Gilbert et al. (2006), Gilbert (2011) delivered this sport psychology program during a physical education class that was solely dedicated for student-athletes (Athletic PE). This curriculum was taught in a classroom setting by Gilbert and other graduate students with grades being given just like any other class to ensure the UNIFORM curriculum was being learned within the Game Plan Format. In the end, results were favorable that Gilbert's sport psychology teaching approach was effective within this high school setting. Still, Gilbert's acknowledged the program was specifically geared to be taught by high school coaches themselves during the offseason, regular season, or any other time deemed appropriate, and not by outside sport psychology consultants (Gilbert, 2011). Nonetheless, Gilbert's (2011) study validated her curricular and pedagogical approach while providing further evidence of sport psychology's utility in the classroom setting.

Literary evidence continued to mount for the value of this pedagogical approach with Gilbert and Lewis' (2013) study incorporating mental skills training with high school student-athletes using the UNIFORM and Game Plan format. Within this research, greater emphasis was seemingly put on the theoretical basis for the pedagogical approach, which in this case, was the Transtheoretical Model of Change. This model was constructed to address the readiness of individuals to change attitudes and behaviors, and was a key tenet within the continued revisions of the UNIFORM and Game Plan Format. Overall, through pre-test and post-test surveys, data collection revealed student-athletes were able to learn mental skills, use them in competition, and change behavioral stages as related to the Transtheoretical Model of Change. Once again, however, Gilbert and Lewis (2013) recommended that a coach should become the teacher as opposed to graduate students and/or sport psychology consultants. Gilbert argued that a coach could take advantage of their interactions with their student-athletes while "normalizing" sport

psychology, even providing simplified teaching approaches for coaches (Gilbert, 2017). Gilbert, Moore-Reed, and Clifton (2017) concluded, “Regardless of the teaching organization, athletes can and should be taught to use sport psychology and life skills. Though there is not one "correct" way to do this, with its multimethod approach and sport-themed activities, the Psychological UNIFORM appears to be an effective vehicle to accomplish this task" (p. 98). Interestingly, however, despite these limitations noticed by Gilbert, little is mentioned within having this approach taught by teachers within an actual sport psychology course.

Overall, the necessity and viability of Gilbert's UNIFORM and Game Plan Format has shown sport psychology skills can be taught to high school student-athletes. Program effectiveness was consistently triangulated through pre- and post-course surveys, interviews with the student-athletes, and assignments given within the Game Plan Format. While Gilbert's curriculum and pedagogical approach continues to be revised and optimized, the most recent research proved that Gilbert's sport psychology program was effective even beyond the end of the 12-week period, with student-athletes continuing to use their mental skill they built even four weeks after the conclusion of the program (Gilbert et al., 2017). While Gilbert's program is groundbreaking within sport psychology's inclusion in the high school setting, questions still remain within who is teaching the program and how the program will be implemented in schools on a consistent basis.

2.10 Conclusion and Research Questions

The literature in sport psychology is becoming more and more voluminous. While the field continues to experience increased growth and popularity worldwide, more and more research studies are being conducted to better understand how mental factors influence performance and well-being (Saint Martin, 2018; Weinberg & Gould, 2019). Still, there

continues to be debate about how sport psychology is defined, what a sport psychologist does, and the theoretical foundations which guide its research and practice. Because of the current sociocultural demands of sport and performance within the United States, there is increasing attention being paid to sport psychology as individuals seek a greater understanding of peak performance and mental well-being. This is especially true at the Olympic, professional, and collegiate level as athletes are being provided more and more sport psychology services from sport psychologists and mental performance coaches. While there is no doubt that academic progress has been made in sport psychology education with 81 current graduate programs in sport and exercise psychology, the educational literature on school sport psychology is still limited, as "it is possible gaps remain in coverage in academia" (Stanley & Robbins, 2015, p. 163).

After reviewing the literature, there is a noticeable gap within the sport psychology literature on sport psychology's educational deployment at the high school level: "One wonders, however, who will provide sport psychology services to the coaches and players of millions of youth and high school sport teams that do not have the financial resources to employ a full- or even part-time sport psychologist" (Cox, 2012, p. 4). The answer to this could come in the form of an actual sport psychology course offered to high school student-athletes as part of the regular school curriculum. By bringing a high school sport psychology class into education, school districts could provide a structured opportunity for all student-athletes to learn the mental part of the game.

As a result, this study also aims to support and build upon Weissman's (2003), Lamberth's (2007), and Gilbert's (2006, 2011, 2014, 2017) positive findings regarding the educational deployment of sport psychology programming at the secondary level. Still, there are

additional educational gaps which exist within these research studies on a curricular and pedagogical level. While the frameworks provide guidance for what to do within various sport psychology programs, there is very little information provided on how or why these things should be done, especially when done by a teacher in school and not a sport psychologist. Likewise, the theoretical foundations which guide these decisions and actions are ambiguous at best, leaving theoretical models like Prochaska and Velicer's (1997) Transtheoretical Model of Change as a limited theoretical approach within much of the literature. Building a stronger theoretical foundation to guide sport psychology services could be critical to the advancement of the general field. Likewise, conducting a study of sport psychology, within an actual day-to-day class, could be a logical next step within sport psychology's educational outreach: "The large numbers of high school students that compete in sport, coupled with the benefits that can occur when they are exposed to sport psychology interventions, warrant the need for more published accounts of successful sport psychology interventions" (Gilbert and Lewis, 2013, p. 9).

This research study could be one of those published accounts which helps fill this gap in the literature and in the real-world. As a result, it is within the same spirit as Coleman Griffith's groundbreaking sport psychology course at the University of Illinois (Cox, 2012) that this research will be conducted, as the present study looks to design, implement, and evaluate a sport psychology course at the high school level.

2.10.1 Research Questions

The following research questions will guide a case study conducted with student-athletes at a small public high school in the Midwestern United States:

Research Question 1: To what extent could a *Sport and Performance Psychology* course be designed and implemented to build mental skill within high school student-athletes?

Research Question 2: What self-actualization needs are addressed through mental skill development?

Research Question 3: What course curriculum or pedagogy is perceived by student-athletes to be effective within building mental skill?

CHAPTER 3: THEORY AND METHODS

This chapter outlines key theoretical concepts related to the present study. The theoretical underpinnings of this research reflect a multi-theoretical approach drawing on various elements of humanistic theory, cognitive-behavioral theory, and social learning theory. These theories were selected because of their close alignment with sport psychology and education, setting the foundation for the creation of a sport psychology course designed to build mental skill within student-athletes. Specifically, humanistic and social learning theory guided pedagogical course design theory while cognitive-behavioral theory informed curricular course design theory. These theory to practice connections were illustrated within a logic model and followed by an expanded discussion on how each theory translated to curricular and pedagogical practice. These practices included decisions on what content the teacher-researcher would teach and how that content would be taught. This pre-course design step was the first technical step within the design, implementation, and evaluation of an innovative *Sport and Performance Psychology* course.

The chapter also provides an overview of key methodological concepts related to the present study. It outlines the implemented methodology, including the research design, data collection, and implementation procedures. Specifically, it makes an argument for a case study approach and a mixed methods research design. This rigorous methodological approach allowed course effectiveness to be quantitatively and qualitatively measured through the construct of mental skill. Evidence of mental skill development was captured in field notes, pre- and post-course surveys, and interviews. These data sources yielded a large amount of quantitative and qualitative data results, which were systematically collected, coded, and analyzed in relation to each research question of the present study.

3.1 Course Design Theory and Practice

Because a high school sport psychology course has never been documented in the literature, it was necessary to establish a theoretical framework for designing the course at the heart of the present study. As Merriam (1998) explains, "The theoretical framework is derived from the orientation or stance that you bring to your study. It is the structure, the scaffolding, the frame of your study" (p. 45). In the present study, course design theory and practice intersected two separate fields: sport psychology and education.

As demonstrated in *Section 2.5*, sport psychology literature seemingly tends to focus less on theoretical frameworks to explicitly guide its research and practice, educational literature tends to have a more articulated theoretical approach, drawing upon disciplines like psychology to orient its practice (Merriam, 1998). Because of this abstract theoretical approach within sport psychology, Aoyagi and Poczwardowski (2012) argue that a change is needed within sport psychology theory to better inform research design inside and outside of education: "Perhaps most important is a first step toward creating comprehensive, functional theories of performance excellence. A quick perusal of sport psychology textbooks reveals a largely intervention-based approach to the teaching and understanding of sport psychology. In other words, aspiring practitioners are taught the canon of sport psychology skills in a piecemeal approach (the "what"), but little is written about conceptualizing the "who," "when," "why," and "how" of utilizing (or not) these techniques. In order for such conceptualizing to occur, we are in need of overarching theories of performance excellence to guide and structure our models, methods, and techniques" (p. xvi). Currently, only Prochaska and Velicer's (1997) "Transtheoretical Model of Change" exists as a theoretical foundation related to school sport psychology and teaching sport psychology to students. While this theory of human behavioral change was referenced in

research by Weissman (2003), Lamberth (2007), Gilbert et al. (2006), and Gilbert and Lewis (2013), its guiding influence and overall impact was noticeably limited and inherently reflective of a major gap between school sport psychology theory and applied practice.

Thus, determining the theoretical basis of the present study was critical to designing a course aimed at building mental skill within high school student-athletes. As the teacher-researcher, this process was similar to that of sport psychologists who have personally implemented their own unique theoretical frameworks to enhance the athletic performance and well-being of their clients (Saint Martin, 2018). As a result, this section attempted to explain the theoretical basis and practical evolution of a sport psychology course called *Sport and Performance Psychology*. Contrary to most sport psychology literature, course design theory was focused less on theories associated with stages of behavioral change and more on motivational theories associated with personal growth. Additionally, theories which provided a framework for facilitating this personal growth were also analyzed. In the end, an innovative course design approach was constructed by incorporating the strengths of three separate theories all associated with sport psychology and education: humanistic learning theory, cognitive-behavioral theory, and social learning theory. This course design theory is illustrated in Figure 3.1:

Figure 3.1 *Rickels' Course Design Theory*

To detail how course design theory translated to practice, a pre-course logic model was created to better illustrate how theory was transformed into practical application. This was illustrated in Figure 3.2:

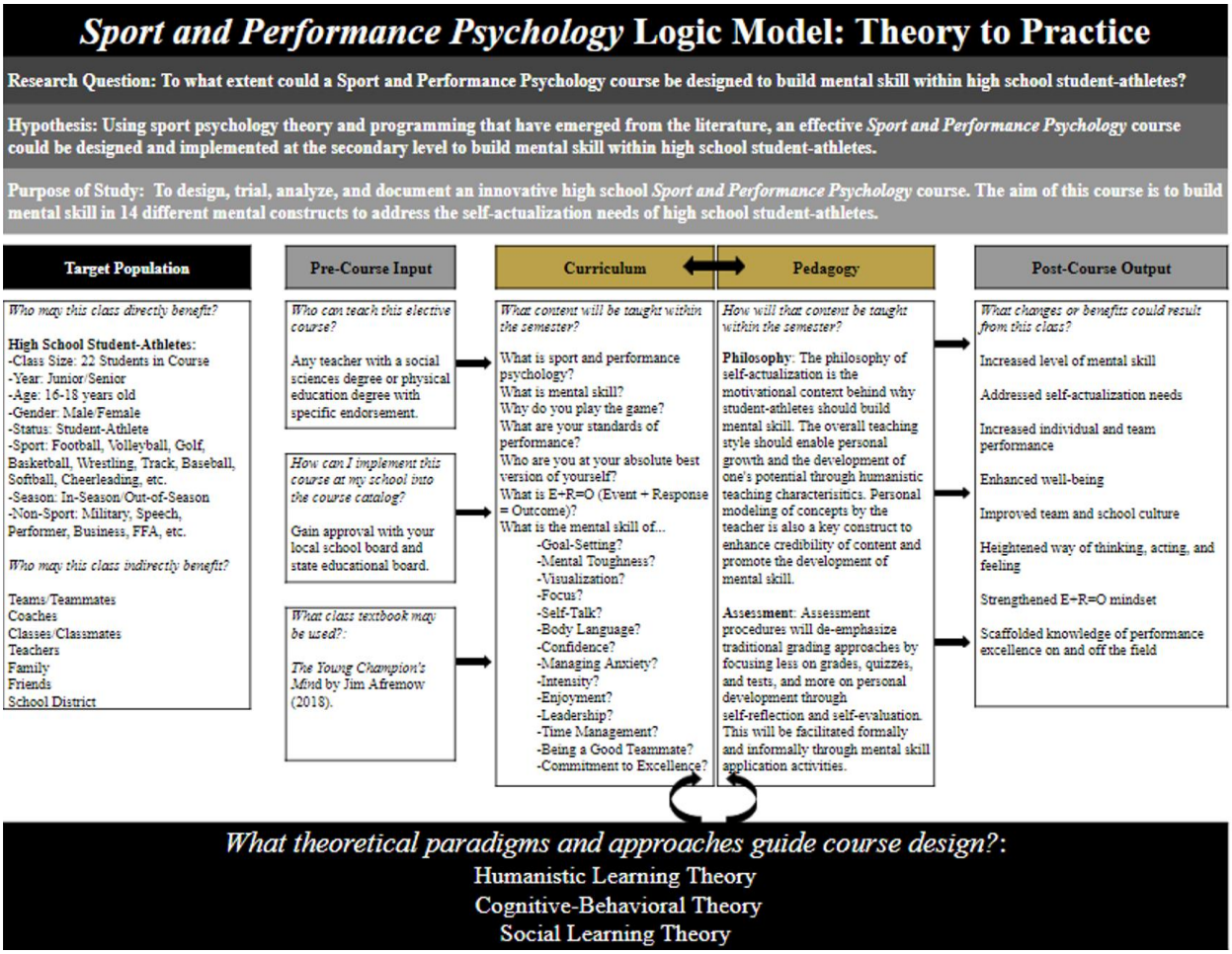


Figure 3.2 *Rickels' Sport and Performance Psychology Course Logic Model*

3.2 Humanistic Theory of Learning: Theory to Practice

Humanistic theory of learning was the main underpinning to teaching pedagogy and was anchored in Maslow's theory of self-actualization. This approach was reflected in the main mission of the course, which was to become the best version of oneself as a student-athlete one is capable of becoming. This section will explain humanistic theory and detail how humanistic elements were incorporated in the design of *Sport and Performance Psychology*.

3.2.1 Theory

Many in the field of sport psychology have advocated for a raised profile of applied sport psychology informed by humanistic theories of academic sport psychology (Ryba & Wright,

2005). Likewise, others have argued for its inclusion in education with the goal of helping each student self-actualize (Farmer, 1984). Humanism, in general, argues that each human is a unique being driven by various needs, particularly the need to actualize the self. The concept of self-actualization was made famous by humanistic psychologist Abraham Maslow. Maslow defined self-actualization as the desire and ability to become the best version of oneself, manifesting itself differently in different people due to differences in values, desires, and capacities (Maslow, 2014). Self-actualization can also be defined as the psychological process of maximizing one's abilities, whether in sport or in life (Cox, 2012). According to Maslow (2014), this concept belonged at the top of a human being's motivational hierarchy of needs. In fact, he hypothesized that lower levels of needs must generally be met before the higher levels of needs can be addressed.

Farmer (1984) argues that Maslow's theory could prove to be one of the best theories available to educators who desire to educate the whole child: "In order to justify the teacher teaching to the whole person, a theory of human nature is needed, one which makes evident that future, healthy contributing citizens need more from school than an opportunity to rote learn facts. Each individual has cross-cultural innate needs which must be satisfied if the person is to be sound of mind and body, whole and fully functioning. Maslow identified these needs and built a theory of human motivation around them. An educational program is for people and therefore must find theoretical support in a theory of human needs" (p. 163).

Humanistic theory in sport contends that athletes are motivated to fulfill their potential within the creative context of sport. This philosophy has also been shown to be effective with athletes remaining more enthusiastic and passionate about their sport while reducing burnout (Pottratz, 2019). These principles of humanism were even reflected within UCLA basketball

coach John Wooden's teaching and coaching theory as demonstrated in his “Pyramid of Success” illustrated in Figure 3.3. As Perrin (2015) stated, "In a humanistic way, Coach Wooden understood the true aim of teaching, whether English or basketball, isn't about attaining a predetermined product...His whole attitude was if you maximize your potential, then you have succeeded" (p. 1).

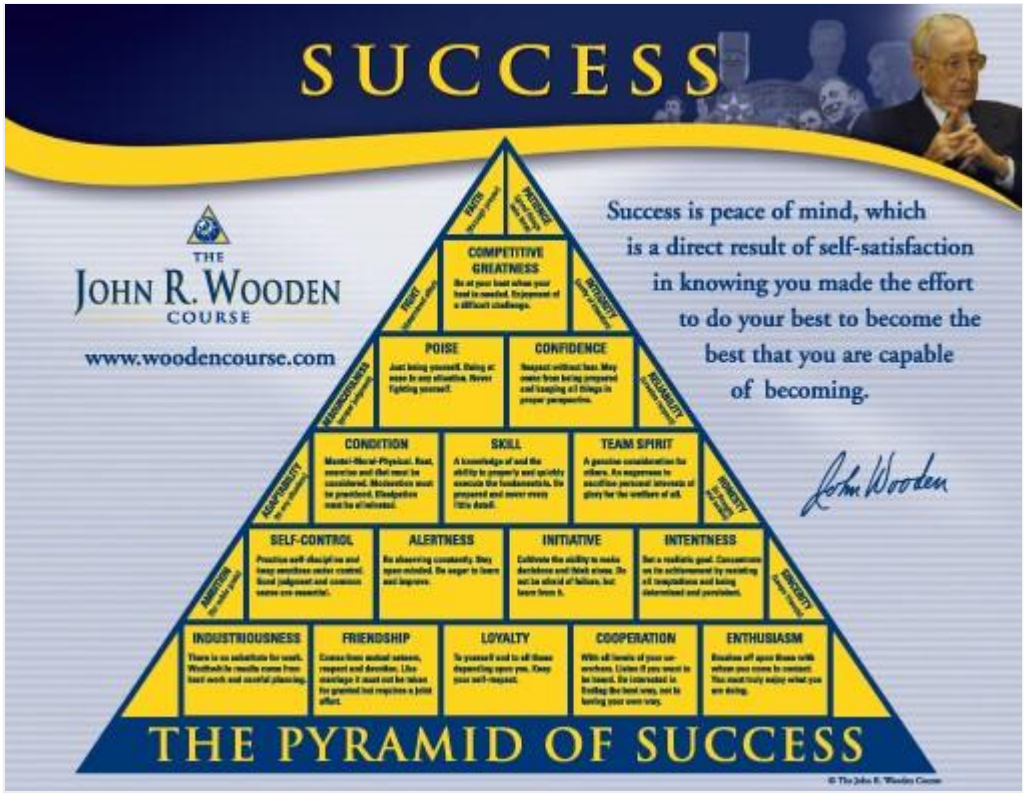


Figure 3.3 *John Wooden's Pyramid of Success (Wooden, 2005)*

Sport psychologists like Dr. Jim Bauman of the University of Virginia positively emphasize Coach Wooden's humanistic perspective (Aoyagi & Pocwardowski, 2013): "We know that both winning and feeling successful can, and do, occur at the same time. I am suggesting that winning is not the only measure of success. Instead, I am suggesting that consistent and progressive improvement over time is real progress and success. Winning will happen when the emphasis is placed on getting better. If athletes maintain a clear perspective about why they are engaged in

sport and continually clarify their vision of how they define success, they will move toward feeling successful and being profitable (winning)" (p. 30).

When humanistic theory is applied specifically to the field of education, humanism becomes a transformative learning theory called the humanistic theory of learning. This learning theory stresses the importance of growth in which the educator's primary responsibility is to create an environment in which students can do their own growing (Sekerci, 2009). According to Johnson (2019), humanistic learning theory explains learning as a "movement towards self-actualization that occurs as a result of instruction or experience. Such learning occurs in furtherance of students' predisposition and ability toward becoming good decision-makers, effective problem-solvers, and responsible world citizens who contribute to democratic societies" (p. 108). As such, humanistic education is defined by several main principles (Johnson, 2019, p. 105):

- Humans are by their very nature evolving, self-developing creatures. As such, there is a natural inclination to learn and develop fully.
- Humanistic education views learning in terms of personal growth, not just on an intellectual level, but also on an emotional, psychological, creative, social, and physical level. Learning is enhanced when educational experiences align with these natural desires.
- The goal of education should be to enable each person to develop his or her full potential.

As a result, there are five objectives a humanistic education must strive to fulfill within course curriculum and design (Johnson, 2019, p. 106):

1. Facilitate the development of fully functioning, self-actualized human beings who have the capacity to nurture themselves, others, and their environment.

2. Instill a joy of learning and a desire to be life-long learners.
3. Promote the discovery of each student's passions, special talents, and abilities.
4. Teach the knowledge and skills necessary for students to be good decision-makers and effective problem-solvers.
5. Enable students to be responsible world citizens who are able to contribute to democratic societies.

In support of a humanistic education, Farmer (1984) concludes, "Teaching methods and curriculum materials which enhance student self-actualization should be supported in the public schools...[as] without a theory of human needs on which to base curriculum decisions, the curriculum is most likely to be shaped mindlessly by unexamined traditions, fads, and other nonprofessional means (p. 170).

This humanistic educator philosophy is also closely tied to positive coaching. Positive coaching (or teaching) is a positive leadership strategy found within the positive psychology approach. This pedagogy was developed by sport psychologist and educator Dr. Rick McGuire of the University of Missouri-Columbia and is helpful to consider when teaching a sport psychology course. As a result, the following goals are reflective of positive coaching and teaching theory (Ackerman, 2018). These goals have been slightly adapted to fit the needs of the present study:

1. To positively impact the student-athlete's life--this goal is above all others, and all others feed into this goal.
2. To increase the student-athlete's experience of positive emotions.
3. Help student-athletes identify and develop their strengths and unique talents.
4. Enhance the student-athlete's goal-setting and goal-striving abilities.

5. Build a sense of hope into the student-athlete's perspective.
6. Cultivate the student-athlete's sense of happiness and well-being.
7. Help the student-athlete build and maintain healthy, positive relationships with others.
8. Help the student-athlete savor every positive moment.

Finally, overall learning within humanistic education should primarily be assessed through self-evaluation, a metacognitive practice also shown to be effective with athletes (Neil et al., 2013). This assessment strategy should be emphasized while rigorous, test-dominated approaches should be limited (Sekerci, 2009).

3.2.2 Practice

This section provides a pre-course proposal for utilizing humanistic theory to inform how the course is taught. As a result, humanistic theory of learning will be the primary theory underpinning the pedagogical approach of *Sport and Performance Psychology*. As a humanistic educator, the teacher-researcher should promote mental skill development within a humanistic approach that sees schools as a vehicle for self-actualization. Thus, the development of a positive classroom culture which helps student-athletes actualize their capacities and potentialities should be reflected within the teaching philosophy, style, and mode of assessment. The general focus will be on positive education and mental health (not illness) as the teacher serves more as a positive coach than a clinical therapist. Low levels of mental skill are seen through the lens of developmental needs which are simply a precursor to personal growth. As a result, direct teaching instruction will provide mental skills training that is informative, applicable, and reflective of this pedagogical philosophy.

For example, the overarching teaching philosophy of this proposed course will be anchored within the process of facilitating self-actualization. As a result, the main mission of the

course will be the following: "To become the best versions of ourselves as student-athletes that we are capable of becoming". This mission will be the course's north star with everything orienteered around this humanistic principle and the assumption that building mental skill will help student-athletes become a better version of themselves through improved sport performance and enhanced well-being. Accordingly, this mission will be identified in the syllabus and further explained in the opening lecture slides of the course. Within this process, the teacher will encourage and equip student-athletes to become the best version of themselves through the building of mental skill beyond their baseline level of skill identified at the start of the course. Because self-actualization is focused on helping individuals obtain optimal development, experiences, and performances, this teaching style will be student-centered within a transformative approach to learning where each student is afforded the opportunity to improve and get better each day. This growth and development will be inspired through teachings which use a combination of lecture enhanced by new media (game film, podcasts, video clips, etc.) to communicate knowledge about 14 different mental skills. Pedagogy will also include hands-on activities to work on the application of those mental skills. These application activities will reflect humanistic principles which suggest self-actualization assignments that are open-ended, meaningful, connect with students' lives, promote a greater understanding of self and others, allow students to share their ideas with others, and recognize multiple ways to demonstrate knowing. Finally, assessment will be focused less on testing and grades and more on personal development. This growth will be quantitatively and qualitatively detailed by the student-athletes themselves in a private Google Sheet called their "Mental Game Scorecard," a mental skills self-ratings system created by Afremow (2018). These ungraded assessment exercises will be done for each mental skill and serve as a style of formative assessment and as a platform for teacher

feedback. This teacher feedback will not focus on right or wrong content; instead; the feedback will be personalized to each student based on their sport psychology work and the sports they are currently playing. This feedback could be given formally within an assignment or interview or informally within a conversation. At the end of the semester, a final self-assessment will be given in which students will quantitatively and qualitatively reflect upon their degree of self-actualization in the course as it pertains to building mental skill and addressing self-actualization needs.

3.3 Cognitive-Behavioral Theory: Theory to Practice

In order for student-athletes in the course to achieve this humanistic objective, there needed to be a tangential behavioral system in place to help student-athletes become the best version of themselves. As a result, cognitive-behavioral theory was the main underpinning for the facilitation of self-actualization. This was primarily achieved by focusing on building skillfulness in 14 different mental skills. Mental skill development was guided by a cognitive-behavioral system called Event + Response = Outcome, commonly referenced as E+R=O. This section will further explain cognitive-behavioral theory and detail how cognitive-behavioral elements were incorporated in the curriculum of *Sport and Performance Psychology*.

3.3.1 Theory

Cognitive-behavioral theory is a common theoretical basis for sport psychologists to use with their clients. Developed within mainstream psychology by Aaron Beck in the early 1960s, cognitive-behavioral theory has roots in Beck's cognitive model, which proposed that people's responses emotionally and behaviorally are influenced by the perception of events, and not the events themselves (Beck, 2011). This inherent relationship between thought, emotion, and

behavior, is key to understanding how people choose to respond (Biesecker, Austin, & Caleshu, 2017; Saint Martin, 2018). This link is demonstrated in Figure 3.4:

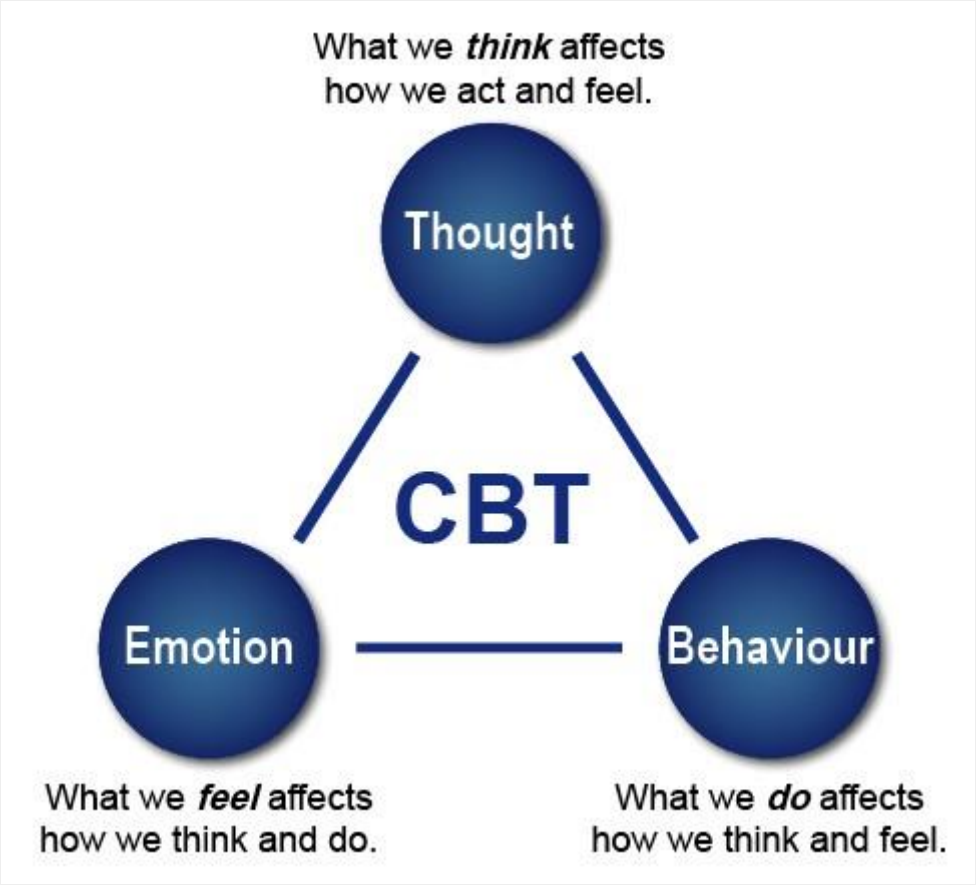


Figure 3.4 *Cognitive-Behavioral Theory (Pacific, 2021)*

In cognitive-behavioral theory, 'thought' is the focal point of most cognitive-behavioral interventions seeking to produce fast and lasting results in behavioral change (Beck, 2011).

In sport, this cognitive approach is used to reshape an athlete's thinking processes in order to function more optimally. This process usually begins by teaching athletes how to become more aware of their thoughts in order to make better decisions which produce more positive behaviors (Saint Martin, 2018). Aoyagi and Pocwardowski (2012) describe this as a process "whereby these self-defeating or dysfunctional thoughts are shifted to a more realistic

and constructive belief system. Once that occurs, subsequent cognitive, emotional, and behavioral changes result in a much more productive outcome, in and out of sport" (p. 24). Saint Martin (2018) builds on this perspective, stating that certain cognitive-behavioral techniques can be used help athletes identify, evaluate, and manage their thoughts, especially during practices and competitions (p. 6). Cognitive-behavioral techniques have even been applied in Olympic sports by sport psychologists like Dr. Sean McCann. McCann argued that behavioral change is the heart of performance improvement, and as such, needed to be first sparked by change in one's cognitive pathways (Aoyagi & Pocwardowski, 2012). Didymus (2018) confirms the validity of this cognitive-behavioral approach in sport psychology, finding that cognitive-behavioral therapy can lead to critical neurobiological changes in the athlete. Scientifically, from a neurological perspective, this mental skill development would take the shape of myelin in the brain (Coyle, 2009). As a result, every time a student-athlete uses sport psychology within their cognitions and behaviors, they are literally changing the physical components of their brain by insulating that neural circuitry with myelin. Thus, the scientific process behind the effectiveness of a cognitive-behavioral framework in sport psychology could look something like this (Coyle, 2019, p. 32):

1. Every human movement, thought, or feeling is a precisely timed electric signal traveling through a chain of neurons—a circuit of nerve fibers.
2. Myelin is the insulation that wraps these nerve fibers and increases signal strength, speed, and accuracy.
3. The more we fire a particular circuit [through a discipline-driven response] the more myelin optimizes that circuit, and the stronger, faster, and more fluent our movements and thoughts become.

Because of these positive results, cognitive-behavioral theory should be further extended beyond the clinical population, with a number of researchers exclaiming its usefulness for optimizing athletic experiences and performances (Saint Martin, 2018; McArdle & Baker, 2016).

While cognitive-behavioral theory and humanistic theory propose vastly different approaches, many sport psychologists adopt characteristics from both columns to form a hybrid style of delivery to service client needs (Keegan, 2016, p. 64-65). This is illustrated in Figure 3.5:

	Practitioner-led	Client-led	References
Compatible consulting philosophies	CBT, cognitive, behavioral, sophist and paternalistic	Humanistic, counseling and Socratic	
Characterizing assumptions (informally worded)	• Practitioner knows best • Diagnose and prescribe • Practitioner drives questioning/agenda • Find and then solve a 'problem' • Practitioner determines intervention strategy	• Client knows best • Collaborative exploration • Agenda/questions are set by client and their needs • There may not be a 'problem' per se. • Ideally, client arrives at their own 'intervention strategy', perhaps with input from practitioner where appropriate	
Consultant's role	• Educator/instructor • Assessor/analyst	• Facilitator/catalyst • Collegial, but may challenge or play 'devil's advocate'	Botterill (1990), Boutcher and Rotella (1987), Halliwell (1989), Ravizza (1990), Rotella (1990)
Areas/aims of service (and approximate priority)	• Performance enhancement • Talent identification/ development • Education	• Athlete welfare • Personal growth/development • Performance enhancement	Boutcher and Rotella (1987), Gipson et al. (1989), Gordon (1990), Weiss (1995)
Anticipated end products	• Improvements in performance • Providing optimal training/ competitive environments • Increased awareness of psychological factors in sporting performance (e.g., in athletes, coaches etc.) • Possession of, and ability to use, appropriate mental skills. Modifying thought patterns.	• Client independence (e.g., "you become your own psychologist") • Increased self-awareness and ability to 'navigate' through challenging experiences/situations	Botterill (1990), Gipson et al. (1989), Orlick (1989), Ravizza (1990; 2002).

(Continued on next page)

Figure 3.5 *Cognitive-Behavioral Theory vs. Humanistic Theory in Sport Psychology (Keegan, 2016)*

As a result, cognitive-behavioral theory in sport psychology education is feasible: "Broadly speaking, the goal of cognitive-behavioral therapy is to achieve symptom reduction and improvement in quality of life through the replacement of maladaptive emotional, behavioral, and cognitive response chains with more adaptive responses" (Craske, 2010, p. 20). While

cognitive-behavioral theory in education is oftentimes limited to an intervention-based approach by school psychologists to help fix severe individual behavioral problems, there are alternative school-based implementation approaches to be considered which could help change the landscape of learning for all students (Creed et al., 2016). One of these approaches could center on building mental skill through the modification of thought patterns.

3.3.2 Practice

This section provides a pre-course proposal for utilizing cognitive-behavioral theory to inform what course content will be taught. As a result, cognitive-behavioral theory will be the primary theory underpinning the curricular approach of *Sport and Performance Psychology*. The practical application of a cognitive-behavioral approach will take shape in designing curriculum which helps student-athletes build mental skill by establishing more adaptive patterns of thoughts and behaviors. This mental skill development is predicated on learning new ways of responding that promote performance-enhancing patterns of thinking and behaving (Craske, 2010). Curriculum must promote a deeper understanding of personal cognition and how one's internal thoughts can be mechanisms for change. This would begin by first establishing the mentality of a growth mindset as opposed to a fixed mindset (Dweck, 2009). For example, student-athletes must believe they can build mental skill and ultimately change their mindset to ensure a positive effort within the course (Blackwell, Trzesniewski, & Dweck, 2007, p. 247).

As a result, cognitive-behavioral techniques will be used to help students learn that they can change their lives through altering the way they think. This will be done through creating curriculum focused on developing mental skills, or science-based mind skills that help athletes forge a champion's mindset and achieve their potential (Afremow, 2018). After reviewing the literature, the following 14 mental skills will be taught from a cognitive-behavioral perspective

and enhanced through a cognitive-behavioral system, as these 14 mental skills have been consistently identified as critical to sport and performance (Thomas, Murphy, & Hardy, 1999; Johnson & Gilbert, 2004; Rockwood, 2011; Divine, 2018; Afremow, 2018):

1. Goal-Setting
2. Mental Toughness
3. Visualization
4. Focus
5. Self-Talk
6. Body Language
7. Confidence
8. Managing Anxiety
9. Intensity
10. Enjoyment
11. Leadership
12. Time Management
13. Being a Good Teammate
14. Commitment to Excellence

The primary cognitive-behavioral technique to build mental skill in these 14 mental constructs will be Event + Response = Outcome, or E+R=O. While largely unknown in the literature, this cognitive-behavioral equation will help facilitate mental skill development. Based in Stoic philosophy, E+R=O is part of a cognitive-behavioral system developed by Tim and Brian Kight of the Focus 3 organization. This mission of Focus 3 is to help their clients maximize their performance through discipline-driven behaviors (Focus 3, 2020). This is done

by designing training tools that are simple, engaging, and easy to use in the learning process. E+R=O, formally known as "The R Factor," is described in Figure 3.6:

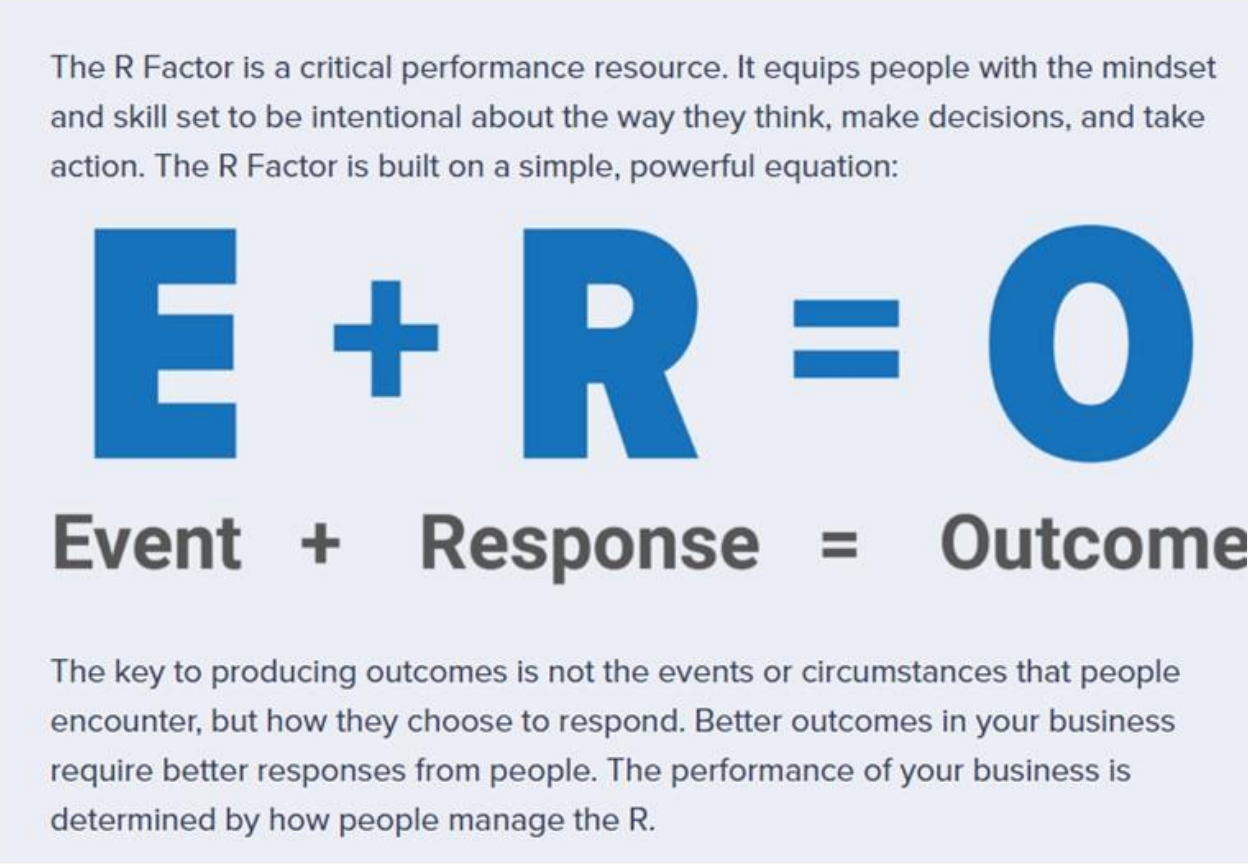


Figure 3.6 *Description of E+R=O (Focus 3, 2020)*

The premise of this cognitive-behavioral system is that success is not determined by the situations you experience; instead, success is determined by how an individual manages their response to various events. As Tim Kight stated, "The way you manage the R is the most powerful factor in your journey through life" (Focus 3, 2020). In E+R=O, all people are constantly responding and making decisions that either make them better or make them worse, whether at home, at school, or in sports. As a result, how an individual chooses to respond is the key variable within any sport and performance psychology arena, as the “R” is the only letter within E+R=O that is truly in one's control. In fact, an individual’s response is 100% controllable

no matter the circumstances. Focus 3 uses Dr. Viktor Frankl's personal account of his experiences surviving a Nazi concentration camp as anecdotal support for the power to choose one's response, because as Frankl discovered in his research, "Everything can be taken from a man but one thing: The last of the human freedoms—to choose one's attitude in any given set of circumstances, to choose one's own way" (Frankl, 2006). Thus, Focus 3 has constructed steps for individuals to take to get better at managing one's response to events, which is illustrated in Figure 3.7:

Figure 3.7 *Six "Response" Steps to Take in E+R=O (Focus 3, 2020)*

As illustrated in step “R:6 Build Skill”, mental skill can be built within this cognitive-behavioral system through one’s responses. It is hypothesized using E+R=O will be an effective system to apply when teaching the 14 different mental skills critical to sport performance and well-being. Anecdotal evidence of E+R=O’s successful implementation can be found in numerous performance arenas from businesses like Stanley Steemer to educational institutions across the country. For example, this system was successfully implemented by college football head coach Urban Meyer at Ohio State University (Meyer, 2015). This system has also been successfully adopted by powerhouse high school football programs like Kimberly High School (WI) led by head coach Steve Jones (Jones & Jadin, 2021).

As a result, E+R=O will be implemented in the present study as the main curricular framework for the curriculum and design of *Sport and Performance Psychology*. In general, E+R=O will provide a cognitive-behavioral system for student-athletes as they build mental skill within the landscape of academics and athletics. More explicit details on how each letter of E+R=O could translate from theory to practice in a sport psychology course can be found below:

Event (E)

To begin the breakdown of this cognitive-behavioral formula, an event will be defined as anything one experiences in life, from a thought or a feeling, to a missed tackle or delay at the airport. In general, life is a never-ending flow of events which people respond to in various ways. Events, for the most part, are outside of one's control. In a sport psychology context, a student-athlete could face hundreds of events each practice or game, and the way they would respond to those events would combine to create they outcomes they earn. According to Jones & Ladin (2021), "Great teams don't face fewer challenges [events] than everyone else. They've simply trained themselves to respond better to those challenges. Owning their response [to these events]

becomes their superpower" (p. 111). As a result, a main focus of a sport psychology course would be focusing on the events which are relevant to a student-athlete's performance and well-being on and off the field.

Response (R)

The response is the most important part of Event + Response = Outcome because it is recognized as the biggest variable in every organization and on every team (Focus 3, 2020). By definition, the response is a person's discipline or default-driven behavioral response to an event.

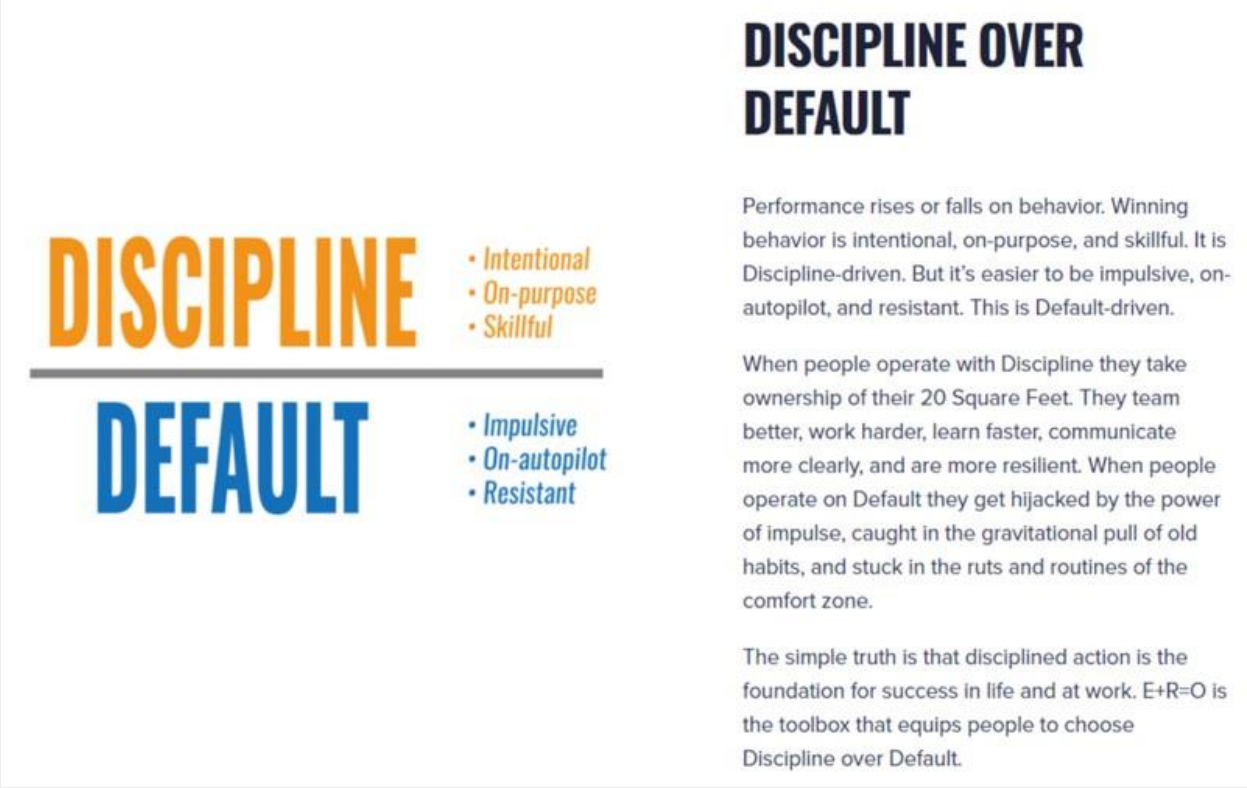


Figure 3.8 *Discipline over Default-Driven Responses (Focus 3, 2020)*

From a sport psychology perspective, one's discipline or default-driven response is a cognitive-behavioral choice made by a student-athlete in practice or during a game where their thoughts (cognitions) ultimately take the shape of their words, actions, attitudes, body language, or

performance (behaviors). It is during these occasions that student-athletes are responding to a multitude of things that are happening on and off the field. Positive responses reflect winning behaviors that are skillful while negative responses reflect losing behaviors that are impulsive and full of blaming, complaining, and defensiveness (BCD). As illustrated in Figure 3.9, eliminating BCD from student-athlete responses will be important to building mental skill and improving performance and well-being:

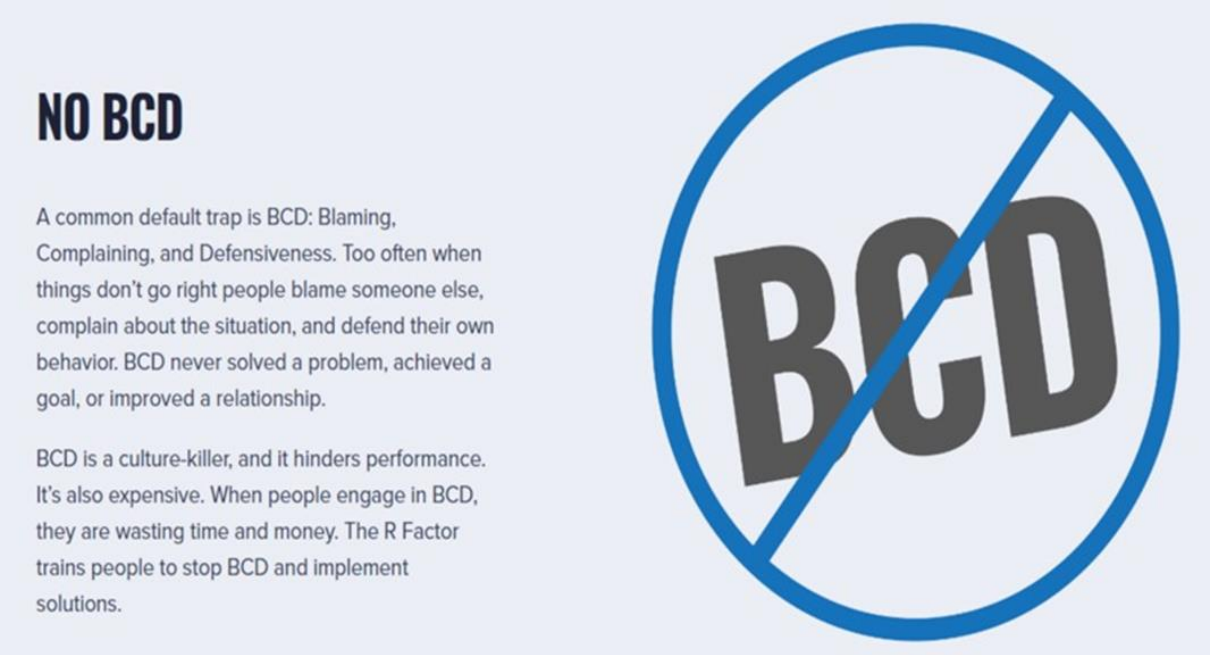


Figure 3.9 *Description of BCD in a Default-Driven Response (Focus, 2020)*

It is theorized that a student-athlete's level of mental skill can be influenced by providing them proper discipline-driven response patterns through various sport psychology strategies and techniques associated with each of the 14 mental skills.

Outcome (O)

By definition, the outcome represents the results that are earned through the quality of one's response to an event. Outcomes are determined by the event plus how an individual chooses to respond. As a result, the better one's response to an event, the more productive the outcome.

From a sport psychology perspective, the main outcome of focus in this course will be building mental skill to address self-actualization needs associated with sport performance and well-being.

Overall, each mental skill will be interwoven within the Event + Response = Outcome framework to help each student-athlete build mental skill and produce better performance outcomes inside and outside of sport. Event + Response = Outcome is a simple system which may be easy to remember (E+R=O) and implement when attempting to change cognitions and behaviors. This is critical to consider in mental skills training, as while most athletes believe in the efficacy of mental training, most fail to use it systematically as part of their sport (Vealey, 2007). It is hypothesized by teacher-researcher that Event + Response = Outcome can be an effective framework through which to teach mental skills and facilitate a stronger mindset by incorporating 14 different mental constructs important to sport performance and well-being.

3.4 Social Learning Theory: Theory to Practice

The hybrid application of humanistic theory and cognitive-behavioral theory will be modeled by the teacher-researcher in accordance with social learning theory. While a lesser focus within course design theory, applying social learning theory was a critical staple which reinforced the microdynamics of learning. This section will further explain social learning theory and detail how modeling was incorporated in the design of *Sport and Performance Psychology*.

3.4.1 Theory

The role of the teacher and students cannot be overlooked when it comes to learning. While related to components of humanistic education and cognitive-behavioral theory, social learning theory takes on a decidedly social approach to learning. Based in the work of Albert Bandura (1971), social learning theory perceives learning in the classroom to be a change in

behavioral, cognitive, and affective processes that occur as a result of observing model teachers and/or students (Johnson, 2019). In general, modeling occurs in education when a student is motivated to retain and replicate a positive mental or physical behavior. Furthermore, several studies have identified a positive relationship between teacher effectiveness and self-actualization. This has led researchers to understand the importance of role modeling positive traits in the classroom (Farmer, 1984). This type of personal role modeling involves incorporating one's own experiences into the curriculum, an element which may be necessary for teacher credibility, psychological safety, and overall course effectiveness (Google, 2019; Duhigg, 2016). Consequently, the importance of social learning theory within curriculum and pedagogy cannot be understated when it comes to learning sport psychology.

3.4.2 Practice

This section provides a pre-course proposal for utilizing social learning theory to enhance the effectiveness of course curriculum and pedagogy. Social learning theory, specifically the concept of modeling, will be critical as the teacher-researcher. The teacher must be a credible role model who practices the sport and performance psychology principles they teach every day in class. As a result, the teacher must be a co-participant within the learning process (Sekerci, 2009). For example, a teacher within this course must model the behaviors they wish to see in their student-athletes, especially behaviors in alignment with building mental skill and self-actualization.

Furthermore, in a class based on mental processes, it is important to specifically demonstrate 'cognitive modeling' when learning the cognitive-behavioral system of Event + Response = Outcome. According to Johnson (2019), "Cognitive modeling is thinking aloud to demonstrate a cognitive process. Here you make your thinking visible. Use this to let students

hear you think as you reason through a social problem or a dilemma involving values" (p. 53). As a result, cognitive modeling will be critical when going through how to respond with mental skill in the Event + Response = Outcome framework.

Overall, the teacher-researcher in the present study must be a role model for those self-actualizing attitudes, beliefs, and habits the course aims to foster within its curriculum and design. This should help enhance credibility of the teacher, facilitate social learning, and ultimately be a positive variable in mental skill development.

3.5 Limitations

While using a combination of theoretical approaches can help mitigate various conceptual deficiencies, there are still certain limitations to be acknowledged which were relevant to establishing a theoretical framework for *Sport and Performance Psychology* course design.

First, regarding humanistic theory of learning, humanistic education has been challenged for dismissing or diminishing traditional academic learning. Likewise, self-actualization has also come under criticism for its individualistic approach to life appearing selfish rather than concerned about the collective well-being of society. Most of this criticism comes from the word 'self', which Maslow has countered by proclaiming that truly self-actualizing people are actually altruistic, dedicated, self-transcending, and social (Maslow, 2014). Others have criticized Maslow's theory of self-actualization for its lack of empirical support alongside his general contention that lower needs must be met before self-actualization is possible. However, both of claims have been refuted through careful examination of the literature (Compton, 2018). If Maslow's hierarchy of needs must be met in order from bottom to top, schools would obviously be limited in their ability to address all physiological and psychosocial needs prior to self-

actualization, thus mitigating the main philosophical strivings of this *Sport and Performance Psychology* course. However, Maslow (2014) has stated that self-actualization can, in fact, occur even if previous needs within the hierarchy are not met, an important distinction within the present study. Similarly, in a course based on building mental skill to address self-actualization needs, there is a predicament within measuring this construct of self-actualization in a quantifiable and empirical manner. How can a teacher truly know if a student-athlete is closing the gap on their potential and self-actualizing? Farmer (1984) was aware of these limitations that existed both then and now: "Teaching methods and curriculum materials which enhance student self-actualization should be supported in the schools. However, much research needs to be conducted in order to establish exactly how and which methods and materials enhance student self-actualization. Student self-actualization should be a dependent variable in future research on the effectiveness of various teaching methods and materials" (p. 170).

Similarly, there are some disadvantages to a psychological approach incorporating cognitive-behavioral techniques, whether used with patients, clients, or students. First, the individual has to be consciously committed to the process. Second, individuals with learning disabilities may find it more difficult to operate within a cognitive-behavioral approach. Third, the underlying causes of these negative or dysfunctional thoughts are not always fully addressed. Finally, doing this mental work in real-life takes time (Miller, 2020) while educational courses inherently have time constraints with beginning and ending dates that do not always coalesce with student learning.

Furthermore, while social learning theory underscores the value of the teacher within the classroom, there are limitations which should be considered when implementing this theory in situations dealing with behavioral change. For example, this theory has been criticized for being

loosely organized around the unclear interplay of person, behavior, and environment. In fact, this theory is unable to confirm the degree to which social learning leads to changes in the person (LaMorte, 2019).

Overall, all of these limitations had to be understood and mitigated to the greatest extent possible within the present study. By better understanding these limitations as a researcher, it helped ensure student-athletes were given the best possible curriculum and pedagogy to build mental skill and address self-actualization needs on and off the field.

3.6 Conclusion to Theory and Practice

In total, there are three main theories which informed the present study. In fact, these theoretical foundations served as the conceptual framework for *Sport and Performance Psychology*: humanistic theory of learning, cognitive-behavioral theory, and social learning theory. While no single theory can account for everything within the dynamics of this research study, the interwoven nature of these psychological theories can help strengthen the footholds of the present study's theoretical propositions and practical applications. As Yin (2018) notes regarding theory development in similar research, "The desired theory should by no means be considered within the formality of grand theory in social science" and instead should be a "sufficient blueprint for your study" telling a story about why acts, events, structure, and thoughts occur (p. 35). As a result, this research design considered both the strengths and limitations of each theory, in turn capitalizing on what each of these theoretical foundations had to offer within the overall design, implementation, and evaluation of this *Sport and Performance Psychology* course.

3.7 Methods

This section provides an overview of the present study and outlines the implemented methodology. This information will be detailed in several sub-sections which discuss the context behind the present study, its research design, and the data collection procedures. Please refer to the *Appendix* for data collection instruments and other pertinent information.

3.7.1 Study Overview

Limited literature has been identified in secondary education to guide course design in the subject of school sport psychology. Because of this curriculum gap, sport psychology is taught as a class in very few high schools across the United States. By chronicling this educational process in a case study, a deeper understanding of how to build mental skill within high school student-athletes could be documented. This study makes a major knowledge contribution by being the first-of-its-kind in the sport psychology literature to research a high school *Sport and Performance Psychology* course.

The present study formally began in January 2021 and ended in May 2021. It was conducted by a teacher-researcher interested in designing, implementing, and evaluating an innovative high school *Sport and Performance Psychology* course. The present study deployed a mixed methods, explanatory, single case study. The unique 'case' consisted of a *Sport and Performance Psychology* course taught by the teacher-researcher at a small public high school in the Midwestern United States. Participants for the present study included 21 student-athletes who selected to take the class for elective credit during their junior or senior school year.

While designing and implementing this innovative high school *Sport and Performance Psychology* course set the foundation for the present case study methodology, evaluating course

effectiveness within building mental skill was central to the present study's mixed methods approach and overall research questions:

Research Question 1: To what extent could a *Sport and Performance Psychology* course be designed and implemented to build mental skill within high school student-athletes?

Research Question 2: What self-actualization needs are addressed through mental skill development?

Research Question 3: What course curriculum or pedagogy is perceived by student-athletes to be effective within building mental skill?

To help answer these research questions, surveys and interviews were used to collect both quantitative and qualitative data. Quantitative strategies were used within a pre- and post-course survey to numerically assess the level of mental skill within each student-athlete. Qualitative strategies were also used within a pre- and post-course survey to explain the level of mental skill. Additionally, three interviews were conducted with each student-athlete which provided a richer perspective on mental skill development and its impact on self-actualization needs. Specifically, qualitative data was used to support the quantitative findings through participant responses and quotes. Field notes were also used to capture informal participant feedback while student work was collected to illustrate course curriculum and pedagogy.

Overall, this mixed methods approach allowed for the triangulation of results and a more comprehensive understanding of themes associated with student-athlete mental skill development in *Sport and Performance Psychology*. This present study helped contribute to the sport psychology literature by analyzing and documenting educational strategies which can be implemented to help strengthen the mindset of high school student-athletes on and off the field.

The present study also aimed to build an exemplary, yet adaptable framework for a high school sport psychology course focused on building mental skill within its student-athletes.

3.7.2 Research Design

A case study research design was selected to explore the 'case' itself (Stake, 1995). The 'case' in the present study is a *Sport and Performance Psychology* course at a small public high school in the Midwestern United States. Creswell and Creswell (2018) argued that researching psychological trait development could be best understood through gathering different forms of data (Creswell & Creswell, 2018). As a result, because the present study's research questions focus on student-athlete mental skill development, a mixed methods approach was used. Mixed methods in research involves the collection of both quantitative and qualitative data. By integrating the data within a mixed methods case study, additional insight can be gained beyond the information provided by either the quantitative or qualitative data alone (Creswell & Creswell, 2018). While quantitative data served an important role in statistically enumerating the level to which mental skill was built within the course, the qualitative case study approach was still key within helping to explain the context of this mental skill development. As a result, using a mixed methods approach helped confirm or disconfirm findings gained through survey and interview methods, as quantitative numbers were compared to qualitative responses to best understand student perception of course effectiveness within building mental skill and addressing self-actualization needs. Quantitative data primarily came from pre- and post-course survey data while qualitative data primarily came from both the pre- and post-course survey and interviews. While the present study does not strive to establish generalizable results for every high school sport psychology course, it does intend to inform readers interested in school sport psychology of this particular case and encourage others to consider what might be relevant to their situation.

3.7.3 Strengths and Limitations

While there are numerous strengths to case study research design, there are also several possible limitations within this type of research. First and foremost, the present study benefits the teacher-research: "The process of writing case studies benefits practitioners by offering a means for structured reflection on philosophical and theoretical approaches, delivery design, implementation methods, and effectiveness" (Keegan et al., 2017, p. 86). However, it is also the goal of the teacher-researcher for this present study to be an important knowledge contribution within the school sport psychology literature. There is potential for this research to be of special interest to many parties inside and outside the parameters of the present case.

With that said, case studies have been criticized for not being rigorous enough (Yin, 2018). In fact, some sport psychology researchers have reiterated that the case study approach has weak internal validity as change in data could be the result of maturation, the personal qualities of the practitioner, or coincidental external factors (Anderson et al., 2002). This problem stems from the categorical singularity of case studies, in which the "n-of-one" focus is grounds for both criticism and praise (Hamel, Dufour, & Fortin, 1993). These limitations are a valid concern within the present study and must be considered within the results, as data on mental skill development could be influenced by student-athlete maturation, the teacher-researcher, or external factors like the COVID-19 pandemic.

As a result, a mixed methods case study design was implemented to capitalize on the strengths of each approach while mitigating the weaknesses. Because of this approach, a large volume of data was collected on both the quantitative and qualitative front. It was hypothesized that the qualitative data would help explain the quantitative results within the present study.

Quantitative data was collected within a pre- and post-course survey which asked participants to assess their level of mental skill in 14 different mental constructs. While not as expansive as the qualitative data, this quantitative data was still extremely important to numerically describing the outcomes of mental skill development in the present study. Because building mental skill was a central theme to the present study's research questions, this data was illustrated in numerous tables, graphs, and charts. However, numbers alone could not adequately comprehensively answer the research questions in this present study. Thus, the incorporation of qualitative participant explanations for any changes in mental skill were critical to providing a narrative behind the numbers.

Qualitative case study methodology is commonly deployed within both educational and sport psychology research methods (Culver et al., 2012; Merriam, 1998), the present study took advantage of qualitative strengths by capitalizing on variables like participants in the natural classroom setting, the teacher-researcher as key instrument, the usage of multiple sources of data, and the ability to create a holistic account of an innovative *Sport and Performance Psychology* course. Still, there are limitations to qualitative research that must be recognized. According to Stake (1995), this recognition of faults is necessary to understand: "Qualitative inquiry is subjective. New puzzles are produced more frequently than solutions to old ones. Its contributions to disciplined science are slow and tendentious. The results pay off little in the advancement of social practice. The ethical risks are substantial. And the cost in time and money is high, very high" (p. 45). In this case, hours and hours were spent collecting and coding interview and survey data. The present study does acknowledge the difficulties within analyzing this data and knowing when enough was enough from an evidentiary standpoint (Hancock and Algozzine, 2017).

Overall, a mixed methods case study approach helped mitigate the limitations of the implemented research methodology and methods. This was mainly done through the incorporation of both quantitative and qualitative methods, as quantitative methods helped lessen the risk associated with a solely qualitative approach. Data triangulation also helped mitigate the risk of teacher-researcher and participant subjectivity.

3.7.4 Designing a Case Study

While more common in the field of education, published case studies in sport psychology have been receiving more attention due to their descriptive and reflective value within applied practice (Keegan et al., 2017). The value of this case study approach was reflected within the limited number of dissertations and research studies which most closely align with this current research study (Weissman, 2003; Lamberth, 2007; Gilbert, 2011, 2017). Yin (2018, p. 15) offers up a twofold definition of case study as a research method:

1. A case study is an empirical method that investigates a contemporary phenomenon in depth and within its real-world context.
2. A case study benefits from the prior development of theoretical propositions to guide design, data collection, and analysis, relying upon multiple sources of evidence, with data needing to converge in a triangulating fashion.

According to Stake (1995), "A case study is expected to catch the complexity of a single case...We study a case when it itself is of very special interest. We look for the detail of interaction with its contexts. Case study is the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). In this case, the study of a high school sport psychology course is of special interest due to the limited number of sport psychology classes which exist across the nation. Stake (1995) argues that,

within case studies like this one, there is a personal responsibility of interpretation set upon the researcher as they describe what is happening alongside their personal assertions based upon experience or knowledge.

Baxter and Jack (2008) provide a simplified breakdown of case study methodology for novice researchers: "The case study is an approach to research that facilitates exploration of a phenomenon within its context using a variety of data sources" (p. 544). Merriam (1998) provides a similar definition: "A case study design is employed to gain an in-depth understanding of the situation and meaning for those involved...using intensive descriptions and analyses" to illustrate a process within a bounded system, such as an individual, program, event, group, or intervention (p. 19). Similarly, Dumez (2015) argues, "Cases are stories with a message" (p. 46). Hancock and Algozzine (2017) build on Dumez's assertion, claiming case study research is "richly descriptive because it is grounded in deep and varied sources of information. It employs quotes from key participants, anecdotes, narratives composed from original interviews, and other literary techniques to create mental images that bring to life the complexity of the many variables inherent in the phenomenon being studied" (p. 16).

As a result of these definitions that were mainly based on the foundational work of researcher's Robert E. Stake and Robert K. Yin, the following steps from Baxter and Jack (2008) were considered within this case study design:

Step 1: When should you use a case study approach?

A case study design should be considered when the focus of the study is to answer "how" and "why" questions. *The present case study explores how a high school sport psychology course could be designed and implemented to build mental skill within high school student-*

athletes. The present study also examines how mental skill development can address self-actualization needs.

Step 2: Determining the Case

In general, the case is defined as "a phenomenon of some sort occurring in a bounded context" (p. 545). *This case focuses on an innovative Sport and Performance Psychology course. The case is made up of the teacher-researcher and the student participants themselves.*

Step 3: Binding the Case

Binding the case includes determining exactly what the case will be and what the case will not be. The common pitfall for researchers is that there is a tendency for researchers to take on too much within ambiguous time, place, and contextual parameters. *The case focuses on mental skill development within high school student-athletes in an elective course. The bounded context is the class period within the day (5th hour) and the time in which the class is scheduled to meet in the classroom (12:21-1:03) over an 18-week period (January 4th, 2021-May 26th, 2021). Because this research is occurring within an educational classroom and conducted by a licensed teacher, the course must be studied in its natural context, bounded by time, space, and ethics. The COVID-19 pandemic also influences the binding of the case.*

Step 4: Determining the Type of Case Study

The selection of a specific type of case study design will be guided by the purpose of the study. This research methodology will incorporate an explanatory case study type as defined by Yin in Baxter & Jack (2018): "This type of case study would be used if you were seeking to answer a question that sought to explain the presumed causal links in real-

life interventions that are too complex for the survey or experimental strategies. In evaluation language, the explanations would link program implementation with program effects" (p. 547). *Using Yin's (2018) theoretical framework for case study design, this study explores the extent to which student-athletes can build mental skill in a Sport and Performance Psychology course. Through coded analysis linking curriculum and pedagogy to building mental skill, presumed causal links can be explained to determine course effectiveness.*

Step 5: Single or Multiple Case Study Designs

Researchers must decide within the personal context of their study whether a single or multiple case study design would prove most beneficial to gaining a better understanding. *This is a single case study design due to time and demand constraints associated with the present study in combination with the COVID-19 pandemic.*

Step 6: Data Sources

One of the biggest benefits of case study research is the inclusion of multiple data sources which can enhance data credibility. Different types of data sources to consider include: documentation, archival records, interviews, physical artifacts, direct observations, quantitative survey data, and participant-observation. Overall, no matter the data sources, a case study allows you to converge these data sources together to compile one major comprehensive review. *The present study collects quantitative and qualitative data through multiple sources of data like field notes, student work, surveys and interviews.*

Step 7: Data Analysis

The researcher must understand the various types of analysis which could be done within case studies. Those types of analysis could include the following: pattern matching, linking

data to propositions, explanation building, time-series analysis, logic models, and cross-case synthesis. *The present study analyzes quantitative data in accordance with change in level of mental skill as reported within a pre- and post-course survey. The present study also analyzes qualitative data as reported in surveys and interviews. This qualitative data analysis helps explain quantitative results. All data analysis is coded and analyzed to better discover themes and contradictions relative to the present study's research questions.*

Step 8: Report a Case Study

Reporting a case study can be difficult due to the complex nature of the task; however, the source recommends reporting the findings in a concise, easily understood manner: "The goal of the report is to describe the study in such a comprehensive manner as to enable the reader to feel as if they had been an active participant in the research and can determine whether or not the study findings could be applied to their own situation" (p. 555). *The final report is written and communicated in a way that aims to be easily understood by teachers, coaches, and administrators who may be interested in school sport psychology. As a result, a chronological, narrative-style approach is taken to help readers determine whether or not the findings could be applied to their own situation.*

3.7.5 Researcher Role

The role of the researcher in the present case study could be characterized as an inside researcher. The researcher will be conducting teacher-research as the designer and teacher of a *Sport and Performance Psychology* course within their own high school classroom. The teacher-research is also a member of the coaching staff in football, girls basketball, and boys track and field. While this course has been taught by teacher-researcher over the past decade at this high school, the course was completely redesigned as part of the present study. As a result, the

advantages and disadvantages of insider research as a “teacher-researcher” must be carefully examined within the methodological design of this research study.

It is clear that the role of the researcher is critical to assess when considering case study design (Stake, 1995). This is especially true when the researcher is an active participant in the case (Creswell & Creswell, 2018): "… the role of the researcher is to be aware of connections between the researcher and the participants or the research sites that may unduly influence the researcher's interpretations” (p. 184). Insider research has also been defined as research which is conducted within a social group, organization, or culture of which the researcher is also a member (Unluer, 2012; Greene, 2014).

In the educational setting, it has been found that there are unique challenges to overcome when educational researchers investigate the place where they work (Mercer, 2007). While Stake (1995) claims the return may be greater for those who study their own rooms, shops, and systems by these methods, insider research may not bring enough of the "disciplined eye of the specialist into play" (p. 46). This has become a larger and larger issue in the field of education, where more researchers are examining their own practice and popularizing insider research methodologies, which can include case studies, action research, and ethnography (Fleming, 2018). In fact, the amount of insider research has increased in recent years due to the expansion of doctorate programs, such as the Doctorate of Education (Ed.D.), which has resulted in more teachers engaging in practitioner research within their own academic institutions while they finish their doctoral coursework (Greene, 2014; Mercer, 2007). This internal evaluation approach to documenting effectiveness can lead to questions concerning the credibility of the results and honesty of the teacher practitioners (Anderson et al., 2012).

In this case, the role of the researcher as the teacher-researcher was acknowledged. The teacher-researcher is a high school English and social sciences teacher and three-sport coach in the school district. As a result, the problem of role duality was recognized as the researcher balances their insider role as the teacher and their academic role as the researcher. While the researcher is intimately familiar with the teaching of sport psychology, there was no intended conflicts of interest or researcher bias. Still, this role as an inside researcher could have shaped the researcher's actions and perceptions, especially as it concerns data collection, analysis, and interpretation. Rigorous research designs and data collection transparency attempted to mitigate any loss of subjectivity when it came to drawing any conclusions based upon preconceived ideas and the desire for positive outcomes. One area of concern was the interview process, as the student-teacher relationship can lead to a certain degree of informant bias or implicit coercion (Fleming, 2018; Mercer, 2007). However, the teacher-researcher was careful to monitor if the student was simply telling them what they wanted to hear. The teacher-researcher also made clear it was okay to be honest and state opinions that may be negative about the course.

In the end, the teacher-researcher had no intended conflicts of interest nor does the researcher intend to shape the outcomes of this study outside the normal intentions of a high school educator. Additionally, because of assessment strategies and the overall methodological approach, the outcomes of this study are largely reflected in student work and reported through student self-assessment. This helps ensure that student grades cannot be given in a retaliatory manner. Likewise, student feedback on the effectiveness of the course within building mental skill cannot be manipulated with multiple sources of triangulated data. This should enhance dependability and ensure the process of research has been logical, traceable, and documented (Fleming, 2018) and alleviate any concerns associated with insider research.

Overall, the extent to which insider research can influence outcomes is unclear at best. While there are advantages and disadvantages to incorporating insider research methodologies, there are divided opinions on how the process ultimately influences research studies (Fleming, 2018). Creswell & Creswell (2018) suggest that caution should be taken with insider research, while others have attempted to mitigate the limitations within their own inside research (Unluer, 2012; Mercer, 2007; Fleming, 2018; Greene, 2014). In total, the advantages of being an inside researcher as the teacher of this course must be amplified while the limitations mitigated to the greatest extent possible. This mitigation will be done through enhanced self-awareness concerning objectivity and bias while ensuring data triangulation through the researcher's use of multiple sources, methods, and theories (Greene, 2014).

3.7.6 Case Details

The following section will outline the context of the case as it relates to the methodology plan for this case study. The case for the present study is a high school *Sport and Performance Psychology* course taught during the 2021 spring academic semester. Similar to how one client of a sport psychologist represents a unique case, this case is made up of the teacher-researcher and students enrolled in the course. Before the start of the course, the teacher-researcher coordinates with the school guidance counselor on course description, class logistics, and enrollment. The enrollment process is the same as every year, in which all junior and senior students have the option to take this elective course or select another elective course to fill their schedule. Factors associated with the case include sport psychology curriculum and pedagogy, mental skills, and student-athlete self-actualization needs. While there is no state-mandated sport psychology curriculum, course design began pre-course by implementing curriculum and pedagogy from *Section 3.1-3.4* and continued until the final day of the course. Within this case,

helping student-athletes improve their level of mental skill in these 14 mental skills is of particular focus:

1. Goal-Setting
2. Mental Toughness
3. Visualization
4. Focus
5. Self-Talk
6. Body Language
7. Confidence
8. Managing Anxiety
9. Intensity
10. Enjoyment
11. Leadership
12. Time Management
13. Being a Good Teammate
14. Commitment to Excellence

Additionally, as mental skill is developed, it is hypothesized that various self-actualization needs may be addressed, with needs defined as the "discrepancy between a current and ideal state for psychological or educational functioning" (Weissman, 2003, p. 65). It is assumed that all student-athletes have self-actualization needs which could be addressed by improving their level of mental skill. As a result, the case details are vastly influenced by the idiosyncratic make-up of each student in combination with time, place, and setting.

3.7.6.1 Demographics

Students at a small public high school in the Midwestern United States were the general population of interest within this case study. School demographics at the time of the present study are included to help better understand the context of the school setting in 2020. First, the total enrollment of this school was 250 while the average class size was 17 students. The racial/ethnic diversity of students at this school included 92.8% White, 4.8 % Hispanic, and 2.4% Black. Regarding income status, almost one-third of students in school were designated as low income. Possible participants were initially determined by the number of students who qualified to take the course. In this case, all junior (N=62) and senior students (N=57) in the Fall 2020 academic semester had the option to enroll in this elective *Sport and Performance Psychology* course for Spring 2021. The course would fulfill an elective credit requirement per school policy; however, this specific elective course is not required to participate in sports or graduate. All elective courses offered at this school can be found informally listed in Figure 3.10:

Economics	Newspaper/Yearbook	Personal Finance
Psychology	Sociology	Welding
Accounting	Anatomy & Physiology	Astronomy
Creative Writing	Horticulture	Forensics
Introduction to Agriculture	Animal Science	Computer Concepts
Agriculture Construction/Technology	Information Processing I & II	Landscape/Floral Design
Metal Machining	Sports Psychology	Teen Fiction
Term Paper		

Figure 3.10 *Course Electives at a Small Public High School in the Midwestern United States*

While any student or student-athlete can enroll in the course, it was the expectation of the teacher-researcher that a majority of the students who chose to take the course would be student-athletes. In fact, all students who enrolled in the course were student-athletes. However, the course does not require students to be athletes as a prerequisite for enrollment at this time. Regarding the number of participants, it was correctly presumed that most enrolled students in the course would be participants. This helped eliminate sampling from a pool of participants as the participant pool was already bound by the case. Criteria for participants to be able to participate in this study were based on the criteria mentioned above alongside participant willingness to be a member in the present study. All students enrolled in the course were invited to take part in the research study on day one of the course through a parent consent and student assent form (see *Appendix B and Appendix C*); however, participation was optional and had no influence on student grades or outcomes within the course.

3.7.7 Data Sources

Three sources of data are included in the present study. These sources are described in greater detail in future sections:

1. Pre- and post-course quantitative and qualitative survey
2. Participant 1-on-1 interviews
3. Field notes and participant coursework

Participant confidentiality was assured throughout the present study as student-athletes were regularly advised that all survey answers, interview responses, and school coursework would be private, anonymous, and confidential. The following table illustrates the three main phases of the data collection process within this case study, detailing the procedures and deployment of each specific data source:

Table 3.1 *Data Collection Process: Phases 1-3*

Phase 1	Pre-course online survey (Google Forms)
Phase 2	Face-to-face (semi-structured) interviews during course
Phase 3	Post-course online survey (Google Forms)
Between Phase 1 and 3	Field notes and participant coursework throughout the course

3.7.7.1 Surveys

According to Andres (2012), "Survey research is multifaceted and versatile in that differing degrees of breadth and depth of a research topic can be explored, depending on the approach or combination of approaches taken and the degree of structure associated with each approach (closed-ended versus open-ended questions)" (p. 17). While there are large-scale surveys such as national censuses or opinion polls, there are also smaller-scale surveys which are implemented by researchers with the "goal of gathering facts about or learning more about the demographic characteristics, behaviors, and attitudes of their students, employees, patients, clients, or members" (Andres, 2012, p. 1). Surveys can be done on their own or embedded within larger research designs like case studies. Most surveys are used within research as a way of gathering self-reported data for analysis, and most importantly, for eventual application in these communities of practice liked education. Meaningful surveys can be crafted from both the quantitative and qualitative perspective to help within this endeavor. In this case, the selected survey methods placed an emphasis on the qualitative approach to help support important quantitative components. With both qualitative and quantitative measures taken, survey research will be in alignment with mixed methods approaches advocated by many mixed methods researchers inside and outside the sport psychology field (Andres, 2012, p. 11).

Because of these affordances, the survey was a data source embedded within Phase 1 and Phase 3 of this case study approach. Study instrumentation in Phase 1 and Phase 3 of the present study consisted of several documents that can be found in the *Appendix*:

- *Appendix B and Appendix C: Parent Consent and Student Assent Forms*: Parents and participants consent to participate in research study.
- *Appendix E Participant Demographics Survey*: Age, gender, race/ethnicity, school classification, sport participation.
- *Appendix F Pre-Course Online Survey*: Quantitative and qualitative survey conducted through Google Forms
- *Appendix H Post-Course Online Survey*: Quantitative and qualitative survey conducted through Google Forms

Following Institutional Review Board (IRB) approval (See *Appendix A*), all participants who had consented to participate in the study completed a quick survey on participant demographics (See *Appendix E*) before officially beginning the pre-course online survey (See *Appendix F*). In fact, both the online pre- and post-course survey were group administered to participants in the *Sport and Performance Psychology* class through Google Classroom using Google Forms. The pre-course survey was quantitative and qualitative in nature as it asked questions that required enumerated and descriptive responses.

The pre-course survey served as a needs analysis to determine the psychological needs of the student-athletes in the course. In general, the primary purpose of a needs analysis is to assess a student-athlete's psychological needs in relation to the demands being placed on them by their sport, goals, or life situation. While there is no perfect needs analysis technique, a performance profiling approach was selected (Keegan, 2016; Butler & Hardy, 1992). This performance

profiling process was proposed by Butler and Hardy (1992) as a valuable sport psychology technique used to facilitate individual development. As illustrated in Figure 3.11, the performance profile helps athletes identify and analyze important mental skills needed to optimize their personal performance.

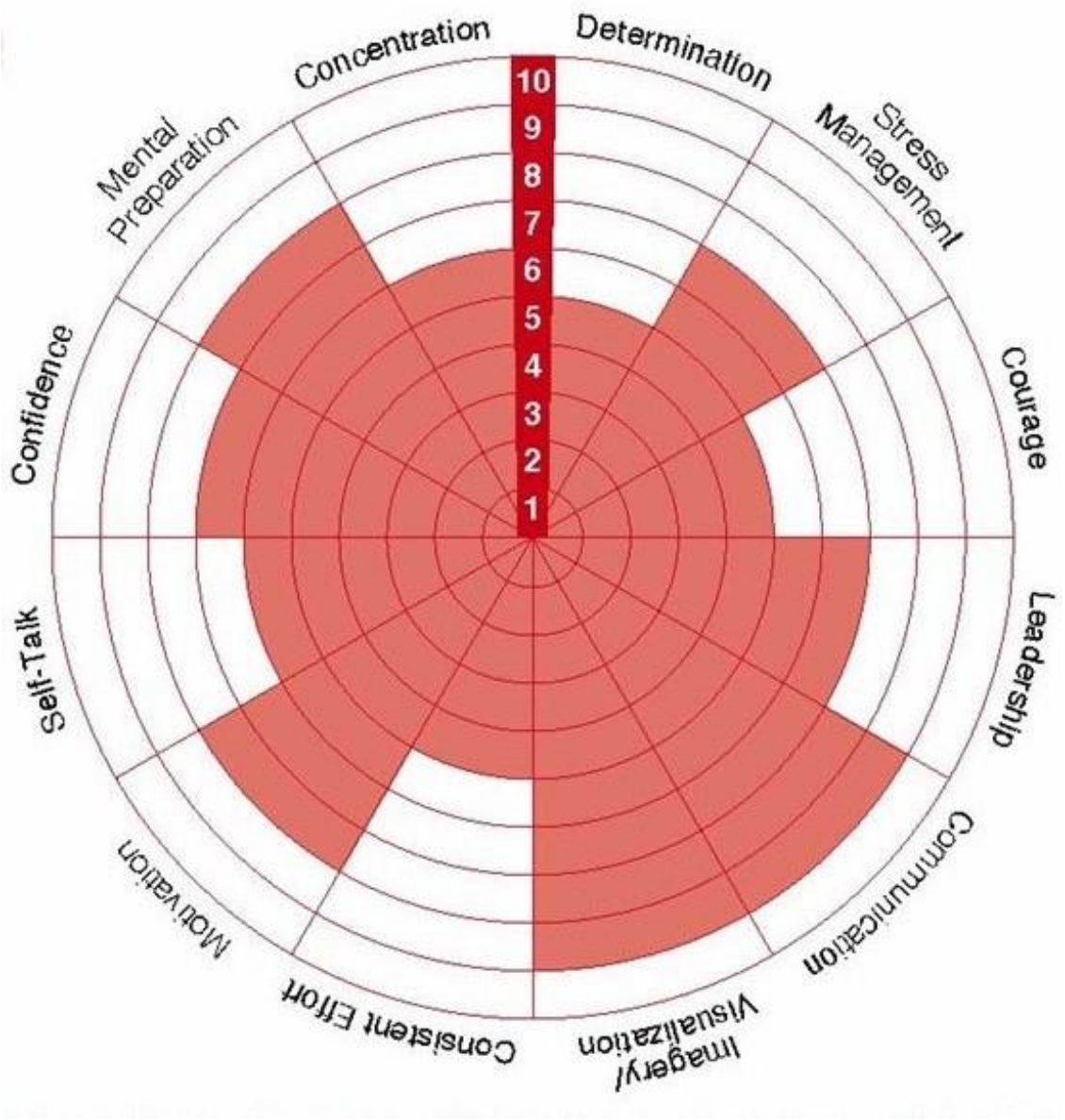


Figure 3.11 *Example of an Athlete's Performance Profile (Butler & Hardy, 1992)*

While these mental constructs can be brainstormed by the individual themselves, the present study had preselected 14 important mental skills from the sport and performance psychology literature. The development of this performance profile was meant to help student-athletes become self-aware of their strengths and potential areas of improvement when it came to mental skills associated with sport and performance. The creation of a performance profile can also motivate athletes to adhere to a mental skills training program (Keegan, 2016; Butler & Hardy, 1992). This was an important variable to consider when developing buy-in within a high school sport psychology course that strived to build mental skill within its student-athletes. Other possible benefits from having the student-athletes generate a performance profile could include the following (Keegan, 2016, p. 111):

- Basis for goal setting and what numbers to aim for
- Clearly identifies strengths and weaknesses
- Raises athlete's self-awareness
- Facilitates evaluation and ongoing monitoring of performance
- Encourages athletes to take responsibility for their performance and development
- Enhances athlete's intrinsic motivation to make any improvements identified
- Facilitates discussion, communication, and interaction throughout the process by invoking numerous 'entry points' in conversation

In this case, the information for each student-athlete's performance profile was captured through a pre-course mixed methods survey (See *Appendix F*). This survey helped depict, in numbers and in words, each individual's quantitative and qualitative view of their mindset by having them provide a self-rating out of 100 and an explanation for each of the 14 mental skills. Specifically, the quantitative self-rating was followed by a qualitative response explaining their

level of mental skill and the various self-actualization needs associated with that mental skill. After this was done, the student-athletes were then asked to assess how important each mental skill was to their performance and well-being on a scale of 1-10. This data was captured in a Google Sheet as part of each student-athlete's "Mental Game Scorecard" and then plugged into the following performance profiling formula to obtain a clearer picture of the student-athlete's needs (the student-athlete's 'desired skill' level was automatically preset to 100 within this formula):

Mental Skill Formula: [Desired Skill - Actual Skill] x [Importance of Skill] = Final Score

Leadership: [100-75] x [8] = 200

Goal-Setting: [100-87] x [5] = 65

Mental Toughness: [100-60] x [10] = 400

Once all of the final scores were tabulated for each mental skill, the "Mental Game Scorecard" became representative of each student-athlete's psychological performance profile.

This performance profiling information from the pre-course survey also helped support a stronger case conceptualization from the teacher-researcher's perspective as it helped inform course curriculum and pedagogy on both an individual and group level. While the "Mental Game Scorecard" became an important element of the course on an individual level, the combined group results helped create baseline quantifiable data that was used by the teacher-researcher to see what mental skills, on average, needed the most improvement across the class.

After the course intervention, the post-course survey asked each participant to reassess their level of mental skill in each of the 14 mental constructs (See *Appendix H*). All participants completed this post-course online survey on the final day of the *Sport and Performance Psychology* course. Each student's pre-course survey results were available for them to review in

their “Mental Game Scorecard”. Participants were reminded of their right to decline participation in the survey and that the survey results would not influence their final grade. Upon completion of the post-course survey, self-ratings and explanations were once again recorded in each student-athlete’s “Mental Game Scorecard,” where they were able to conceptualize how changes in mental skill impacted their self-actualization needs. These final self-ratings and explanations provided valuable evidence for addressing the research questions within the present study.

3.7.7.2 Interviews

While surveys are oftentimes deployed, interviewing athletes within a semi-structured interview format tends to be the most incorporated research method within sport psychology studies, generally asking questions about a participant’s experience with a technique or program (Mellalieu & Hanton, 2015). According to Peoples (2021), a semi-structured interview format would be advantageous in a case study like this because it allows for structured interview questions to be designed that are relevant to the research study, while affording the interviewer and interviewee the freedom to deviate from these questions in natural, yet productive ways that are relevant to the study. In fact, this semi-structured interview style helped the teacher-researcher conduct interviews in a more conversational manner as opposed to a formal, interrogational one.

Still, there are limitations to interviews. For example, survey research cannot magically reduce the complex array of people's attitudes and behaviors in a clear cut way. The problem still should be analyzed from multiple perspectives and perhaps interwoven within other quantitative or qualitative techniques as done in the present study. Mellalieu and Hanton (2015) claim that sometimes people cannot accurately review their lived experiences as is the general assumption. Other limitations within interviewing include the following: focusing exclusively on what the

athletes say while neglecting to consider how they say it, flooding the interview with language unbeknownst to the participant leading to confusion or bias within responses, and influencing the interviewee through the social interplay of interpersonal variables co-constructed between the interviewer and interviewee. To help mitigate these limitations, interview questions were closely aligned to language used within the *Sport and Performance Psychology* course, while each participant's responses were carefully monitored by the teacher-researcher for understanding and authenticity.

As a result, the interview was a data source embedded within Phase 2 of this case study approach. Study instrumentation in Phase 2 of the present study consisted of an interview transcript that included semi-structured questions for all three interview sessions. This document can be found in *Appendix G*:

- *Appendix G Interview Questions:* Face-to-Face (Semi-Structured) Interview Questions

As a result, the teacher-researcher conducted three face-to-face interviews with each student-athlete throughout various stages of the course to collect data on each student-athlete's level of mental skill and self-actualization needs. The "Mental Game Scorecard" was also used as a key resource within each interview. These interviews also simultaneously served as a teaching tool to offer advice within individualized mental skills techniques and strategies. These interviews were conducted at the beginning of the course (weeks 1-2), during the middle of the course (weeks 9-10), and at the end of the course (weeks 17-18). In each stage, interview questions were asked that were relevant to the present study's research questions.

The setting for these interviews was outside the classroom in the hallway where other students could not hear the conversation to protect privacy and confidentiality. If these logistics were not feasible due to COVID-19 or other unforeseen circumstances, an alternative setting was

agreed upon by both the teacher-research and participant. Because of this, these interviews occurred both inside and outside the designated time slot for when the class was scheduled to meet (10:41-11:30). Interview notes were taken by the researcher throughout the duration of the interview. This information was stored in a password-protected digital file within Google Drive on a private school-issued computer.

3.7.7.3 Field Notes and Participant Coursework

Field notes captured through researcher observation tend to be some of the best data sources in case study research (Hancock & Algozzine, 2017). As a result, field notes were taken in a Google Sheet which served as the teacher-researcher's digital diary. These field notes were taken in real-time by the teacher-researcher to better capture sport psychology-in-action. Field notes were mainly taken on informal chats after a lesson or after direct observations of student-athletes using sport psychology. Teacher-researcher reflections were also included in this digital diary to promote reflexivity after each day of teaching.

Participant coursework was also collected throughout the duration of the course. These physical and digital artifacts were the result of assignments given by the teacher-researcher. This coursework was especially helpful when illustrating student outcomes after various mental skill application activities. While pictures were taken of several of the physical artifacts, many participant assignments like the "Mental Game Scorecard" were stored as digital artifacts archived in Google Classroom.

Overall, both field notes and participant coursework were valuable data sources that collected information relevant to the research questions of the present study. These two supplementary data sources served a triangulating role when used in combination with results obtained through survey and interview research methods.

3.7.8 Implementation Timeline

The present study officially began in January 2021 and ended in May 2021. This implementation timeline describes the time periods before, during, and after the completion of the present study:

Table 3.2 *Implementation Timeline*

July-December 2020	Data source instruments created.
January 2021	Data collection started with pre-course survey/interview #1.
February-April 2021	Data collection continued with interview #2.
May 2021	Data collection completed with post-course survey/interview #3.
June-August 2021	Results analyzed and findings determined.
September-October 2021	Conclusions and recommendations discussed.

3.7.9 Data Collection and Analysis

The goal of data collection and analysis was to provide a valid and reliable interpretation of the gathered results. The final report intended to provide a coherent and meaningful write-up for readers of the present study. The teacher-researcher strived to design and implement a high school sport psychology course that was effective in building mental skill. As a result, evaluating the extent to which mental skill was built in student-athletes was a major component of the data analysis plan: "...the aim of evaluation in practice is not to generate knowledge by proving cause and effect between support and the outcome, but to provide comprehensive information to document the degree of effectiveness and facilitate improvement. The goal of evaluation in sport psychology practice is not to determine unequivocally if the intervention is positively working but to provide compelling support" (Strean, quoted in Anderson et al., 2002, p. 437).

Data collection and analysis began within the first few days of the course with data collected from the pre-course survey. Because this data reflected a needs analysis (as discussed

in *Section 3.7.7.1*), it had to be analyzed as soon as possible as the teacher-researcher used the quantitative data on mental skill to better inform how the course would be designed moving forward. Once a fuller understanding of the psychological needs of this *Sport and Performance Psychology* class had been determined, additional course curriculum was created to more specifically address their respective levels of mental skill. As a result, the teacher-researcher dedicated approximately one hour per day to designing additional curriculum on top of what was already established (See *Section 3.1-3.4*). This additional curriculum helped better address specific student-athlete needs that were found after analyzing the pre-course survey results. This same process was followed after the middle of course interview, in which slight course adjustments were made after collecting and analyzing participant feedback. While some information from the sport psychology literature review was helpful in adding course content that was tailored to this unique case, curriculum gaps were also filled with content from these additional key resources:

Table 3.3 *Additional Curriculum and Design Resources for Sport and Performance Psychology*

Resource	Title and Author (Date of Publication)
Book	*The Young Champion's Mind* by Dr. Jim Afremow (2018)
Book	*The Champion's Mind: How Great Athletes Think, Train, and Thrive* by Dr. Jim Afremow (2013)
Book	*The Way of the Seal* by Mark Divine (2018)
Book	*Staring Down the Wolf* by Mark Divine (2020)

Table 3.3 (cont.)

Book	*It Takes What It Takes* by Trevor Moawad (2020)
Book	*Closing the Gap: Applied Sport Psychology for High School* by David L. Rockwood (2011)
Book	*Above the Line* by Urban Meyer (2015)
Book	*The Twin Thieves: How Great Leaders Build Great Teams* by Steve Jones and Lucas Jadin (2021)
Journal Article	Multiple publications by Dr. Jenelle N. Gilbert (2006, 2011, 2013, 2014, 2017)
Website	https://focus3.com/the-r-factor/ by Tim and Brian Kight of Focus 3 (2021)

After the post-course survey and end of course interview, data synthesis revealed broad themes or patterns related to the effectiveness of the course within building mental skill and addressing self-actualization needs. Because multiple methods were triangulated to illustrate evidence associated with mental skill development, valid and reliable conclusions were able to be drawn. In the end, these results were depicted within a data set where various coding techniques were used to develop categories relevant to the research questions of the present study. These codes were helpful within organizing and managing the data (Merriam & Tisdell, 2016), especially the interviews and the qualitative portions of the pre- and post-course survey.

In total, an extraordinary amount of information was captured through two separate surveys and three separate interviews. Since the quantitative element of the survey was a critical component for establishing empirical evidence for change in level of mental skill, this information was essential to analyze first within the data analysis phase. Qualitative analysis was then done to help explain quantitative results.

Overall, the 14 mental skills were an ideological centerpiece to the process of qualitative coding and the development of categories and themes. Quantitative results alongside coded participant responses were managed and organized using Google Sheets. Making meaning out of all of this information involved consolidating, reducing, and interpreting what student-athletes reported and what the teacher-researcher experienced. These meanings, understandings, or insights constitute the findings of a study (Merriam & Tisdell, 2016). In case study research, these findings are oftentimes reported in a narrative manner to include extensive quotes from participants (Bloomberg & Volpe, 2019). As a result, the findings in this research study were reported as a kind of narrative to better incorporate a thick description of the chronological process associated with the design, implementation, and evaluation of an innovative *Sport and Performance Psychology* course. These results and findings were discussed in greater detail in Chapter 4.

3.7.10 IRB

An IRB application was submitted and approved by the Institutional Review Board (IRB) associated with the present study. IRB materials can be located in *Appendix A*.

CHAPTER 4: RESULTS AND FINDINGS

This chapter presents the results and findings of this mixed methods case study conducted at a small public high school in the Midwestern United States. The purpose of this case study was to design, implement, and evaluate an innovative *Sport and Performance Psychology* course at the high school level. The course's main goal was to build mental skill within a population of student-athlete participants with the intention of addressing self-actualization needs relevant to performance and well-being. Participants included 21 high school student-athletes who enrolled in *Sport and Performance Psychology* and agreed to participate in the research study. Each student-athlete completed a pre- and post-course survey and was also interviewed three separate times throughout the course for a total of 63 interviews. Data was coded and presented as thematic analysis written in a chronological and narrative manner. The results and findings of the present study provided a comprehensive view of the case by providing quantitative and qualitative data relevant to the following research questions:

Research Question 1: To what extent could a *Sport and Performance Psychology* course be designed and implemented to build mental skill within high school student-athletes?

Research Question 2: What self-actualization needs are addressed through mental skill development?

Research Question 3: What course curriculum or pedagogy is perceived by student-athletes to be effective within building mental skill?

As illustrated within the research questions, the development of mental skill within high school student-athletes was central to this research project. Because of this goal, this chapter focused on the results of how *Sport and Performance Psychology* influenced skill level within 14 different mental skills important to performance and well-being. This chapter then examines how

student-athlete self-actualization needs were addressed through mental skill development. This chapter concludes with a description of curricular and pedagogical factors that participants perceived to be effective within building mental skill. These findings are expounded upon later in this chapter.

4.1 Participant Demographics

In the present study, 24 students chose to enroll in the course at the start of the Spring 2021 academic semester. After the first day, two students who were not athletes chose to drop the course. Of the remaining 22 students, 21 of them consented to participate in the research study (See *Appendix C*). Participant demographics were then gathered for all participants (N=21) in a brief opening survey (See *Appendix E*). These characteristics included school classification, student age, gender, race/ethnicity, and sport participation status during the 2020-2021 school year. First, there were 13 juniors and 8 seniors who took the course. All participants were between 16-18-years-old, with 12 participants who were 17-years-old, 7 participants who were 16-years-old, and 2 participants who were 18-years-old. Participants had a mean age of 16.29. Regarding gender and race/ethnicity breakdown, 12 participants were boys and 9 participants were girls. Twenty participants identified as White/Caucasian while one participant identified as Black/African-American. Finally, while all 21 participants played sports and qualified as a "student-athlete," it was also important to determine what sports each student-athlete planned to participate in during the 2020-2021 school year. This is illustrated in Figure 4.1:

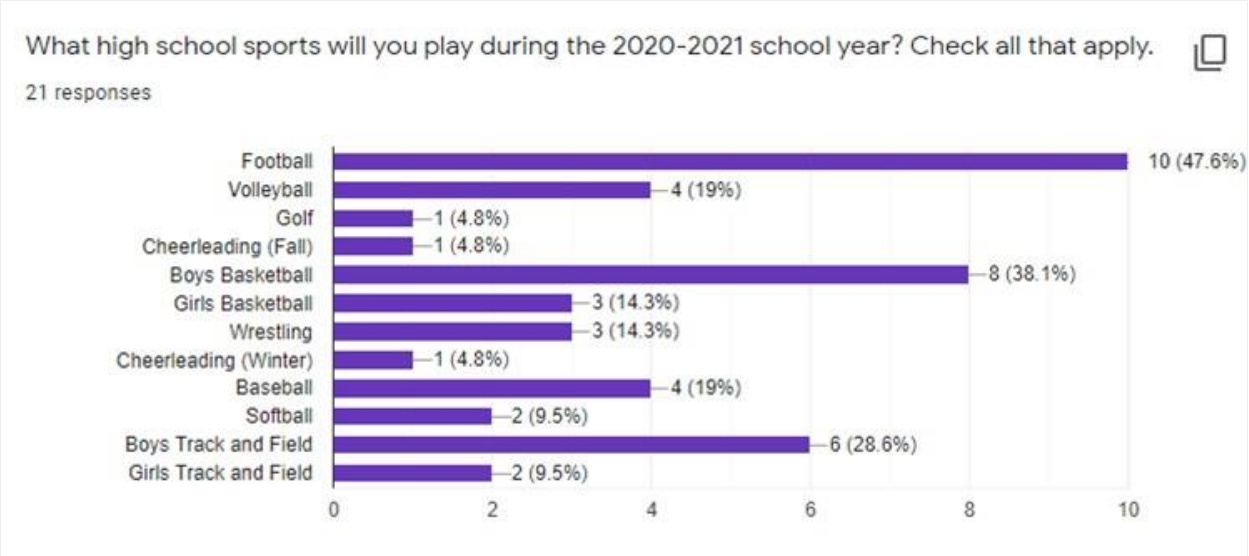


Figure 4.1 *Sport Participation During 2020-2021 School Year*

Overall, student-athletes had the option to play three sports maximum at this high school, with 62% of participants in the present study being multi-sport athletes (two or more sports). The most common sport that participants played was football, followed by boys basketball, boys track and field, volleyball, baseball, girls basketball, and wrestling. In total, 12 different high school sports were represented by participants within the class. While participant confidentiality was protected, the teacher-researcher attempted to include survey and interview information that purposefully represented all demographic characteristics to the greatest degree possible while still protecting participant identity.

4.2 Data Collection

After permission to conduct the present study was received, the data collection process began immediately within week one of the *Sport and Performance Psychology* course. The data collection process lasted a total of eighteen weeks. All data gained through field notes, digital artifacts of student work, surveys, and interviews were stored on a secure school server network and password-protected in Google Drive. Data collected through field notes were managed and

organized in a Google Sheet and contained lesson plan details, participant reactions, and teacher-researcher observations. Digital artifacts of student work were archived in Google Classroom and also password-protected. The survey and interview data collection process is described in greater detail below.

The first main step in the data collection process was a brief opening participant demographics survey. This internet survey was created in Google Forms and sent out to participants in Google Classroom (See *Appendix E*). This survey was assigned during week one of the course and was completed by students anonymously on their Google Chromebooks within about five minutes. The survey was sent to 21 participants and obtained a 100% response rate.

After the participant demographics survey was completed, a pre-course survey was also created in Google Forms and sent out to participants in Google Classroom (see *Appendix F*). This survey was also assigned during week one of the course. This internet survey collected email addresses and was completed by participants on their Google Chromebooks in about 35 minutes. This survey asked students to provide and explain a self-rating on their level of mental skill in 14 different mental constructs. The survey was sent to 21 participants and once again obtained a 100% response rate.

By the end of week one of the course, participants were required to sign-up for three total interviews that were to be conducted throughout the course. Each interview session lasted approximately two weeks and intentionally corresponded with the beginning, middle, or end of course. As a result, interview #1 was conducted during week one and week two of the course, interview #2 was conducted during week nine and week ten of the course, and interview #3 was conducted during week seventeen and week eighteen of the course. All interview participants were given a choice of when to conduct the interview within each timeframe. While the intention

was to conduct interviews only during class time, the length of interviews in combination with COVID-19 did not make this possible for all interview participants. Fortunately, all interview participants who were unable to make their interview work during class time were willing to reschedule during a time suitable to them like before school, study hall, or after lunch. Because of COVID-19, some of these interviews were conducted on Google Meet as opposed to face-to-face. In total, 63 total interviews were conducted, with all 21 participants completing three interviews each. Notes were taken throughout the interviews and coded appropriately upon completion. In total, interviews ranged from 9 to 42 minutes in length with an average length of 18 minutes.

The final step in the data collection process was a post-course survey given during week eighteen of the course. This post-course survey was created in Google Forms and sent out to participants in Google Classroom (See *Appendix H*). This internet survey once again collected email addresses and was completed by participants on their Google Chromebooks in about 30 minutes. This survey asked participants to reassess and explain their level of mental skill in 14 different mental constructs after having taken the course. The survey was sent to 21 participants and once again obtained a 100% response rate.

4.3 Quantitative and Qualitative Results

This section includes a summary of the quantitative and qualitative results of the present study. Data analysis of these results yielded several findings associated with mental skill development in high school student-athletes taking a *Sport and Performance Psychology* course. These findings are discussed alongside possible conclusions as a result of the data collected. All of this is presented in four sections. The first section describes the first main stage of teaching the sport psychology course, which includes formative course design results on the design and

implementation of a research-based *Sport and Performance Psychology* course (day-by-day). Data from Interview #1 and Interview #2 is collected and analyzed in this section. These results are interwoven to best illustrate how these interviews were used in real-time to help student-athletes build mental skill while also gathering data beneficial to course design and implementation.

- *Section 4.3.1*: **Teaching a *Sport and Performance Psychology* Course at the High School Level: A Narrative**

The remaining three sections provide more summative course design results that were relevant to the research questions associated with the present study. These sections analyze the final two stages of post-teaching data collection and analysis. Post-course survey results are compared to pre-course survey results and Interview #3 results are also analyzed.

- *Section 4.3.2*: **Evaluating Pre-Course Level of Mental Skill to Post-Course Level of Mental Skill**
- *Section 4*.3.3: **Evaluating the Impact of Mental Skill Development on Self-Actualization Needs**
- *Section 4*.3.4: **Evaluating the Curricular and Pedagogical Factors Associated with Building Mental Skill**

4.3.1: Teaching a Sport and Performance Psychology Course at the High School Level: A Narrative

This section will describe the course design experience by providing a thick description of how *Sport and Performance Psychology* was taught on a daily basis. This formative evaluation is written in an informal narrative manner and details in chronological order course design and implementation from Day #1 - Day #90. Analysis relevant to the research questions

of the present study is embedded within this discussion. Field notes and participant coursework are also naturally interwoven as supporting evidence.

Day #1: "Welcome to *Sport and Performance Psychology*"

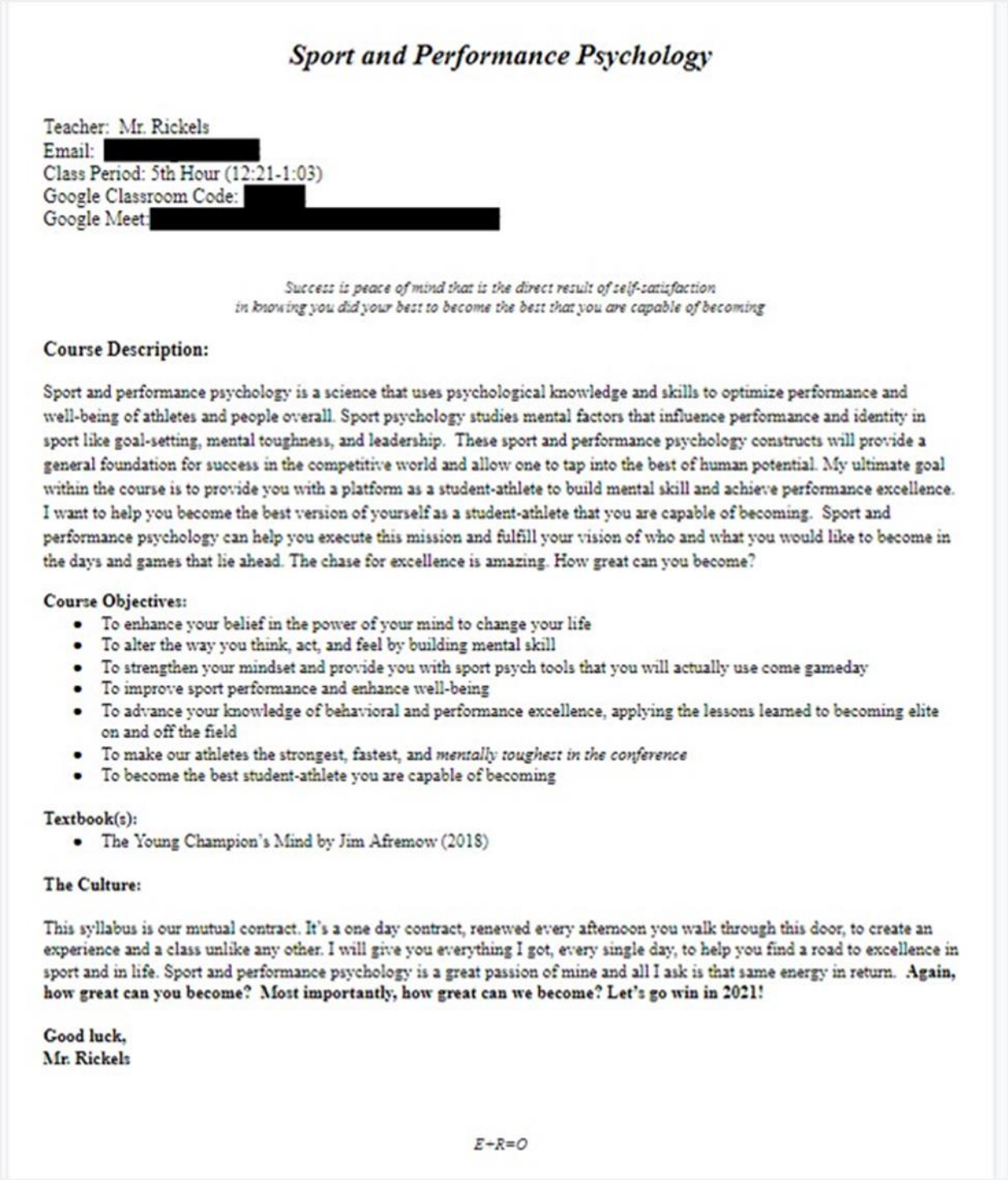
The present study officially began on January 4th, 2021. This was the first day of the spring academic semester of the 2020-2021 school year. Students were welcomed into the course and added into Google Classroom, an online platform which would assist in the implementation of the course. Next, course textbooks were distributed, "The Young Champion's Mind" by Dr. David Afremow. This book was used as a supplementary resource to help students learn about each mental skill. To end this class period, an outside member read students the official recruitment message for the present study and distributed the student assent forms and parent consent forms. *Sport and Performance Psychology* class was officially-in-session.

Day #2: Conducting a Needs Analysis

This day was focused on determining who was being taught and what their psychological needs were as high school student-athletes. This was done by assigning a demographic survey and conducting a formal needs analysis (See *Section 3.7.7.1*). By collecting this data, sport participation was documented (See *Section 4.1*), and most importantly, the mental skill level of each student-athlete as it pertained to each of the 14 mental skills being taught within the course (See *Section 4.3.2*). While the basic structure of the *Sport and Performance Psychology* course had been designed at this point (See *Section 3.1-3.4*), the results of the needs analysis were valuable within modifying this course to meet the needs of this specific group of student-athletes. These modifications are discussed within the rest of this section.

Day #3: Syllabus

Since the primary goal of the *Sport and Performance Psychology* course was to facilitate self-actualization through the building of mental skill, this mission had to be established as soon as possible after the needs analysis was conducted. This was done through the course syllabus, which is shown in Figure 4.2:



Sport and Performance Psychology

Teacher: Mr. Rickels
Email: [redacted]
Class Period: 5th Hour (12:21-1:03)
Google Classroom Code: [redacted]
Google Meet: [redacted]

Success is peace of mind that is the direct result of self-satisfaction
in knowing you did your best to become the best that you are capable of becoming

Course Description:

Sport and performance psychology is a science that uses psychological knowledge and skills to optimize performance and well-being of athletes and people overall. Sport psychology studies mental factors that influence performance and identity in sport like goal-setting, mental toughness, and leadership. These sport and performance psychology constructs will provide a general foundation for success in the competitive world and allow one to tap into the best of human potential. My ultimate goal within the course is to provide you with a platform as a student-athlete to build mental skill and achieve performance excellence. I want to help you become the best version of yourself as a student-athlete that you are capable of becoming. Sport and performance psychology can help you execute this mission and fulfill your vision of who and what you would like to become in the days and games that lie ahead. The chase for excellence is amazing. How great can you become?

Course Objectives:

- To enhance your belief in the power of your mind to change your life
- To alter the way you think, act, and feel by building mental skill
- To strengthen your mindset and provide you with sport psych tools that you will actually use come gameday
- To improve sport performance and enhance well-being
- To advance your knowledge of behavioral and performance excellence, applying the lessons learned to becoming elite on and off the field
- To make our athletes the strongest, fastest, and *mentally toughest in the conference*
- To become the best student-athlete you are capable of becoming

Textbook(s):

- The Young Champion's Mind by Jim Afremow (2018)

The Culture:

This syllabus is our mutual contract. It's a one day contract, renewed every afternoon you walk through this door, to create an experience and a class unlike any other. I will give you everything I got, every single day, to help you find a road to excellence in sport and in life. Sport and performance psychology is a great passion of mine and all I ask is that same energy in return. **Again, how great can you become? Most importantly, how great can we become? Let's go win in 2021!**

Good luck,
Mr. Rickels

E+R=O

Figure 4.2 *Syllabus for Sport and Performance Psychology*

Lecture slides were presented which reinforced the definition of sport and performance psychology as "the study and application of mental skills that influence performance and well-

being in sport and in life". It was explained that mental skills are psychological capabilities like those referenced in the pre-course survey (i.e., goal-setting, mental toughness, focus, etc.). Next, the vision for this course was conveyed as a special opportunity within their education. Sport psychology was presented as a logical next step within their development, as their school already had a reputation for an elite strength and speed program. They were also told that it is the school's goal to have the trifecta of success in all three performance domains: strength, speed, and sport psychology. The mission to achieve this vision was simple: The class was going to strive become the best group of student-athletes that it was capable of becoming over the next 18 weeks.

Figure 4.3 *Lecture Slide #8*

The class was informed there was a process to executing this mission and this process would be centered on building mental skill. They would be taught to build this mental skill through Event + Response = Outcome. The lecture was ended by sharing a YouTube video of Iowa State football coach Matt Campbell discussing "the process".

Day #4 - Day #9: Establishing a Baseline and Interview #1

The class began a nine-day process of further establishing a baseline for each student-athlete in terms of their athletic talent, mental skills, and overall values. Establishing this baseline was important to the self-actualization process as each student needed to truly understand who they were now as a student-athlete and who they wanted to be in the future.

The first discussion was on genetic potential and how much genes define athletic talent. While much was still unknown, it was concluded that 30-40% of athleticism can be influenced through mental and physical development. This was an important growth mindset perspective in which students had to understand that they could get better and who they were as an athlete (or as a math student) was not fixed by their genes. It was then demonstrated how athletic talent would be distributed on a bell curve, after which students were asked to privately plot their own place on the curve.

Next, students were challenged to see how much skill they could build on their natural talent, stating that while talent is outside of their control, mental and physical skill is in their control and could be learned and improved with instruction and practice. Because this was a sport psychology course, it was reinforced that this course would teach about how to build mental skill (as shown in Figure 4.4) on top of their current psychological capacities.

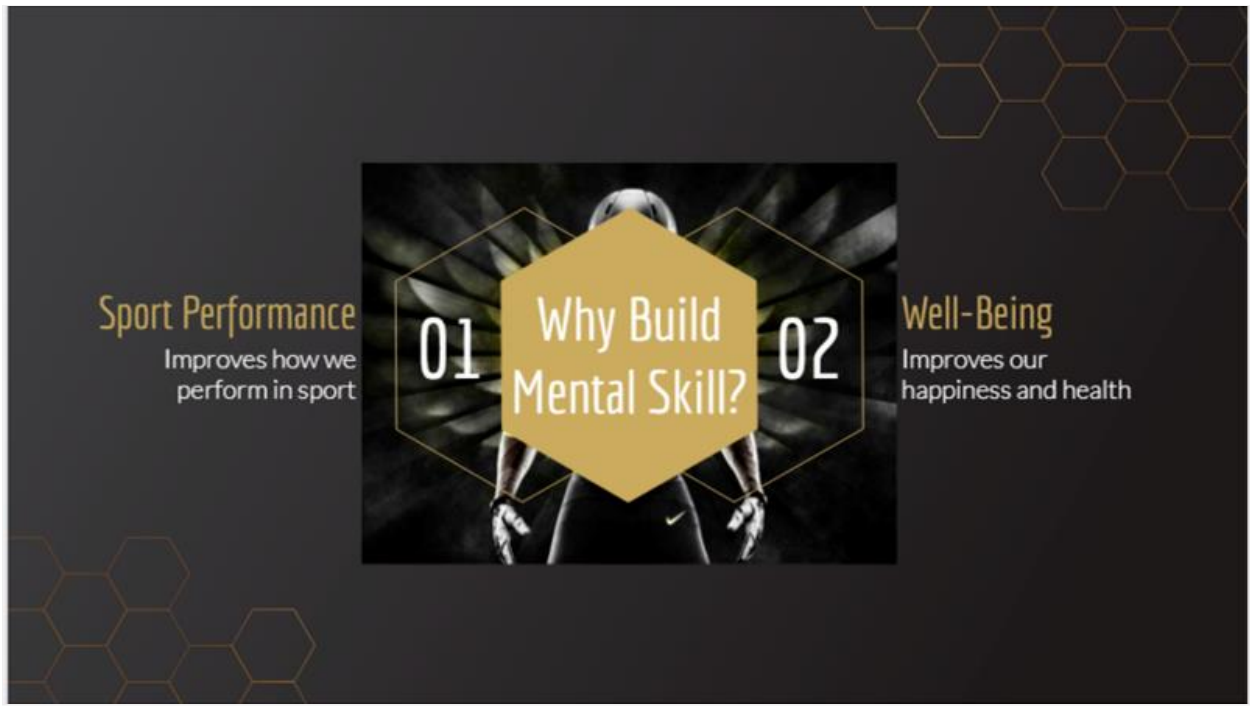
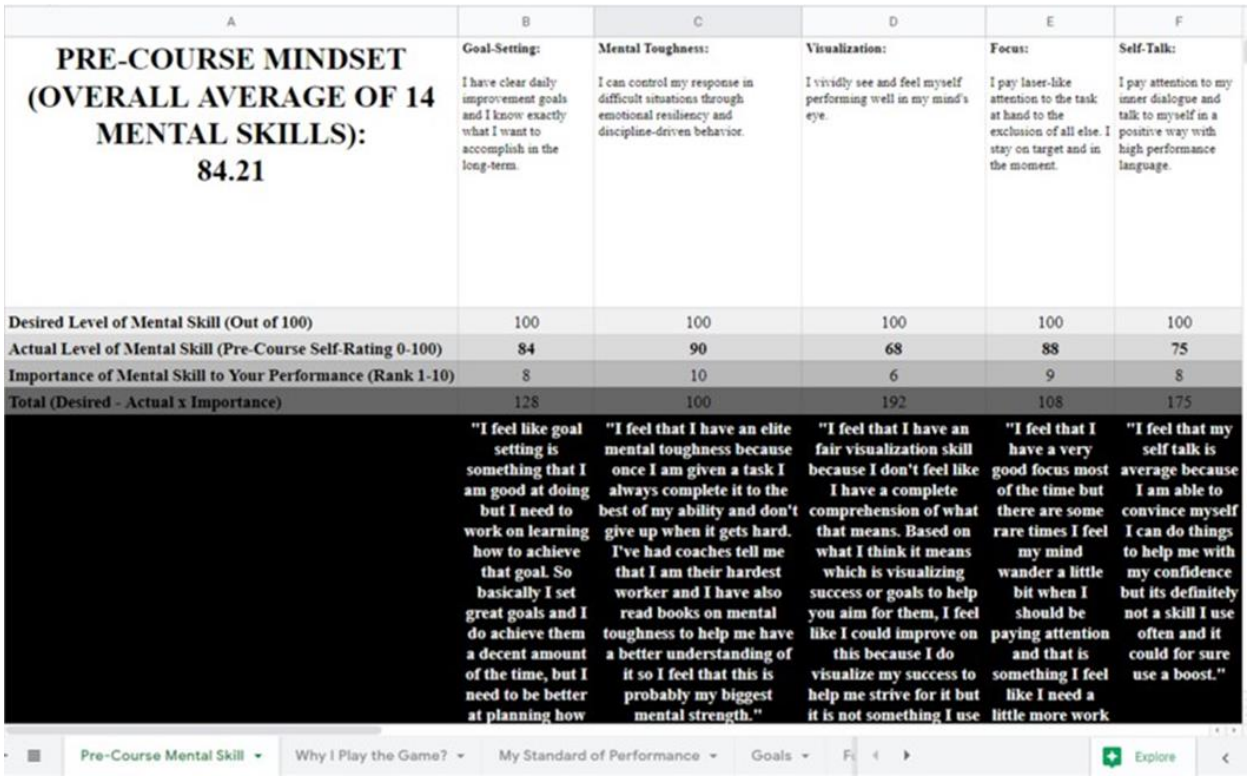


Figure 4.4 *Lecture Slide #16*

In order for each student to establish their mental skill baseline, each student individually transferred their 14 mental skill self-ratings from their Google Form (where they took the pre-course survey) to a private Google Sheet called a "Mental Game Scorecard" (as shown in Figure 4.5).



A	B	C	D	E	F
PRE-COURSE MINDSET (OVERALL AVERAGE OF 14 MENTAL SKILLS): 84.21	**Goal-Setting:** I have clear daily improvement goals and I know exactly what I want to accomplish in the long-term.	**Mental Toughness:** I can control my response in difficult situations through emotional resiliency and discipline-driven behavior.	**Visualization:** I vividly see and feel myself performing well in my mind's eye.	**Focus:** I pay laser-like attention to the task at hand to the exclusion of all else. I stay on target and in the moment.	**Self-Talk:** I pay attention to my inner dialogue and talk to myself in a positive way with high performance language.
Desired Level of Mental Skill (Out of 100)	100	100	100	100	100
Actual Level of Mental Skill (Pre-Course Self-Rating 0-100)	**84**	**90**	**68**	**88**	**75**
Importance of Mental Skill to Your Performance (Rank 1-10)	8	10	6	9	8
Total (Desired - Actual x Importance)	128	100	192	108	175
	"I feel like goal setting is something that I am good at doing but I need to work on learning how to achieve that goal. So basically I set great goals and I do achieve them a decent amount of the time, but I need to be better at planning how	**"I feel that I have an elite mental toughness because once I am given a task I always complete it to the best of my ability and don't give up when it gets hard. I've had coaches tell me that I am their hardest worker and I have also read books on mental toughness to help me have a better understanding of it so I feel that this is probably my biggest mental strength."**	**"I feel that I have an fair visualization skill because I don't feel like I have a complete comprehension of what that means. Based on what I think it means which is visualizing success or goals to help you aim for them, I feel like I could improve on this because I do visualize my success to help me strive for it but it is not something I use**	**"I feel that I have a very good focus most of the time but there are some rare times I feel my mind wander a little bit when I should be paying attention and that is something I feel like I need a little more work**	**"I feel that my self talk is average because I am able to convince myself I can do things to help me with my confidence but its definitely not a skill I use often and it could for sure use a boost."**

Pre-Course Mental Skill | Why I Play the Game? | My Standard of Performance | Goals | Explore

Figure 4.5 *Participant Coursework: Snapshot of a Pre-Course Mental Game Scorecard*

This scorecard served as their performance profile of their mental game, capturing their pre-course level of mental skill and eventually their post-course level of mental skill. In the future, this scorecard would also serve as a digital sport psychology journal where each student would complete various application-based activity assignments. These assignments were created within their own tab and organized in chronological order to reflect the order in which the mental skill was taught.

After athletic talent and mental skills were discussed, the last part of establishing a baseline for each student-athlete pertained to identifying and examining their values. This was done by doing two major application activities which encouraged them to reflect on why they played sports and the standards at which they played them. Both of these assignments were

completed in each student-athlete's "Mental Game Scorecard" and are explained in greater detail below.

The first assignment, "Why I Play the Game?" was humanistic in nature and based in Dr. Frankl's research on meaning, purpose, and survival in Nazi internment camps. This self-analysis is based within an existential link to humanism made famous by Viktor Frankl (Frankl, 1978). In this case, the assignment was focused on the subjective reality of student-athletes and the meaning they assigned to their experiences within sport. It was explained to students that discovering their why is a fundamental motivator to their performance while loss of meaning could be amongst their greatest sources of psychological dysfunction (Ronkainen and Nesti, 2015). It was also mentioned that Dr. Frankl's research on human motivation was supported by the Navy Seals, who found the candidates with the strongest why were the ones who tended to make it as a Navy Seal (Divine, 2018). Students were told to always remember their why as it would serve as their motivational foundation, giving them a reason and purpose to keep moving forward in their sport and in the course, especially during the COVID-19 pandemic. For example, this was one participant's response to why they play the game:

> *"I play the game because I know every time I step on the court, field, wrestling mat and oval that I am the best athlete and there is no reason I shouldn't dominate and leave no doubt. I play because I love the chase for respect and greatness, the grind and watching my opponents fear me when I step on the playing field. I play because I'm gonna put my name into record books whether at this high school or the collegiate level or even someday pro. I've been dismissed and told I was too small by a coach. Too small he said, I thought about that the rest of the night. I know this is my gift I was blessed with these talents for a reason and one reason only to become the greatest athlete in whichever*

sport I choose to partake in. Its gonna be a long tough road to greatness but I will be great, I have to be great and I can't waste potential because I know not even the skys the limit for me. Lastly, I play for the beautiful people who struggle everyday back home, for the incredibly strong woman who provides great care my brothers in a very tough situation, I will get them out. That is why I play the game and that is why I will become great."

After each student wrote out their response to why they played the game, the second assignment asked them to consider the standards at which they played it. This was to be completed in a project called, "Standards of Performance". In this project, they would come up with approximately 10-15 standards and include pictures that reflected those standards. It was explained to them that a standard was an expected way of doing things within the process of going to school and playing sports. They were also told that knowing their standards required a deep self-reflection of what principles they believed in and the core set of beliefs they were willing to live by within their thoughts, words, attitudes, actions, and behaviors. To help within this project, students were given a model from former San Francisco 49ers head coach Bill Walsh's, whose standard of performance was the original inspiration for this project (Walsh, 2010). Students were also given models from a football player, a cheerleader, the Navy Seals, a girls basketball team, and a boys track and field team. Students were told to tape up their completed project in their locker or choose another location where these standards could be consistently viewed. Figure 4.6 is an example of a completed "Standards of Performance" project without personal pictures to protect participant confidentiality:

Figure 4.6 *Participant Coursework: Standards of Performance*

After completing this project, a baseline was now established for each student-athlete's athletic talent, mental skills, and values.

During this beginning stage of the course, Interview #1 was also being conducted to solidify this baseline understanding of each student-athlete. The results of this interview are provided in the following sub-section before day-to-day analysis resumes with Day #10.

Interview #1

Interview questions implicitly and explicitly asked student-athletes to consider their mental skills and overall identity as a student-athlete. These semi-structured questions were critical to validating pre-course quantitative and qualitative results while also gaining a better understanding of each individual student-athlete as a person. These interview results helped better inform the design and implementation of the course and were coded into the following themes.

Mental Skills

One interview question asked participants the following question on mental skills: "If this course could help you build one mental skill to help you perform better, what would that mental skill be?" Self-Talk was identified as by six participants (28.57%), Confidence was identified by three participants (14.29%), while Managing Anxiety, Enjoyment, Goal-Setting, and Body Language were all identified by two participants each (9.52%). These results strongly correlated with the quantitative results found in *Section 4.3.2*. The only notable exception was the mental skill of Visualization, which was quantitatively reported to have a higher level of self-actualization need, yet it was only verbally mentioned by one participant (4.76%). This suggested this self-actualization need was primarily based on a lack of knowledge.

Identity

Participants were asked the following two questions on identity as a student-athlete: “What role do sports play in your life?” and “How do you see yourself as a student-athlete?”

First, when asked about the role sports played in their life, their responses were coded into one of three categories: positive outlet, social, or fun. Nine participants (42.86%) explained they played sports because they were a positive outlet or "escape" for them within their life. Five participants (23.81%) stated they played sports for social reasons, whether the friendships created or the bond it formed with a parent. Five participants (23.81%) also replied they played sports because they were fun as they were able to go out and play with passion and purpose. Two participants (9.52%) responded they played sports for other reasons. Second, when asked about how they saw themselves as a student-athlete, there were a diverse range of responses without any consistent pattern. While all participants played sports, all were very different within how they perceived who they were and who they wanted to become. While some wanted to become leaders, others saw themselves as leaders. While some perceived themselves as an above average talent, others saw themselves as an average athlete who worked hard. While some student-athletes defined themselves by the 'student', others defined themselves by the 'athlete'.

Motivation

Participants were asked the following two questions on motivation: "Why did you choose to take the course?" and "What motivates you as a student-athlete?" These questions were important because determining an athlete's motivation to take the course was an important variable within addressing their needs. First, a majority of participants (76.19%) stated they took the course to improve their mindset. While sports were consistently mentioned as the main context for improving their mental game, some participants (23.81%) wanted to improve their mindset in school and in life to get ready for college and be better as a person overall. Second, there were two common themes which emerged when participants were asked what motivated them as a student-athlete. Family was the most referenced motivating factor by participants, with

fourteen individuals (66.67%) referencing the fact that they wanted to make their family proud. Becoming great and developing one's potential was the next most commonly referenced motivating factor, with seven participants (33.33%) stating they wanted to get better to either prove people wrong or to feel the intrinsic reward gained from a sense of accomplishment.

Fear

Participants were asked the following question on fear: “What scares you as a student-athlete?” Participants were very candid within their responses to this question, which suggested a degree of trust within the interview session. Fear of failure was the most commonly referenced fear as seven participants (33.33%) mentioned they were scared to make mistakes or not fulfill their potential as a student-athlete. Six participants (28.57%) also mentioned their fear of embarrassment or judgment. Five participants mentioned they were scared to get injured (23.81%). Finally, three participants (14.29%) stated their greatest fear was missing sports and "the end". This was a common general response due to the COVID-19 pandemic.

COVID-19

Participants were asked the following question on COVID-19: "How has COVID-19 and the cancellation of sports affected your well-being as a student-athlete?" Because the course is predicated on building mental skill to improve performance and enhance well-being, it was extremely important to gain an understanding of how each student-athlete was doing in the context of the COVID-19 pandemic. Research indicated that high school student-athletes were struggling to cope without sports. With almost half of participants referencing sport as a positive outlet or "escape" for them, it would be reasonable to assume that some students would struggle without high school sports. Because of the uniqueness and importance of this variable in the present study, it was important to understand the breadth of responses.

In general, there was a common thread of understanding amongst all participants that "this [situation] sucks" and COVID-19 had been an ongoing stressor to deal with as a student-athlete. From that point, however, there seemed to be two groups that emerged with very different response patterns to the pandemic. First, there were thirteen participants (61.90%) who reported feeling negative, bored, unmotivated, frustrated, and hopeless. They fit the mold of what many teachers, coaches, and researchers were reporting of student-athlete well-being across the nation at this time. In fact, one participant stated that some seniors do not even want to play sports anymore. Then, there was a second group of eight participants (38.10%), who felt more positively. While this group may have experienced similar feelings of hardship, their well-being was seemingly a result of how they responded as five participants saw this as an "opportunity" to better themselves. As one participant stated, "The pandemic has helped me; I wasn't motivated before, but it has given me an opportunity to find myself". Another individual stated, "It sucks, but I've actually gotten better and taken advantage of the time we have had off. Hope has been important [as a junior], but I think it has been tough for seniors".

Course Effectiveness

Because some of these interviews occurred towards the end of week one and week two of the course, some of the interview participants (n=13) were asked what they liked about the course so far to help further guide course design and implementation. Five (38.46%) participants mentioned they liked the focus on mindset and the application of mental skills. Five participants (38.46%) also mentioned they liked assigning self-ratings for each mental skill within their "Mental Game Scorecard" because it helped them figure out where they stand mentally and where they need to improve. One of these participants additionally stated they liked putting the self-rating numbers on paper because it reminded them of the NFL video game *Madden*. Other

curriculum that was mentioned as effective included the course textbook, the quotes in lecture, and the diversity of content. As one participant stated, "You focus on everything, not just football. It has an inclusive feel and it's not just on how to play better."

Day #10: Envisioning Your Future Self

After the responses from the survey indicated evidence that each student had gained a greater self-awareness of who they were within the baseline stage of the course, the next step was to start working towards who they wanted to become. This process started by incorporating a visualization technique commonly used at Harvard Business School (Broughton, 2009) and the Navy Seals (Divine, 2018) in which students were asked to envision their future best self. Based on pre-course survey results and interview #1, students were curious about the mental skill of visualization. As a result of this interest, a brief visualization application activity was designed asking them to develop an internal vision of who they were at their absolute best as a student-athlete. Following are the field notes of the visualization script:

1. *Close your eyes; take some deep breaths (3x3) for a minute.*
2. *We are going to use your five senses to paint a picture in your mind of the best version of yourself as a student-athlete.*
3. *Let's start with your greatest physical strengths and talents. (body)*
4. *Let's continue by adding in some of your mental skills which are strong. (mind)*
5. *Now let's add some heart by using your why to add some color and fuel to your image in your head. (heart/soul)*
6. *Let this set everything into motion. What things are you doing when you are at your best? Imagine some of those things.*

7. *Now see yourself in the coming days/weeks/months/years thinking, feeling, and acting like a champion, in school, sport, and life. What do you want others to see? What would surprise others about this new you? Own it and breathe into that vision.*
8. *Open your eyes. Carry on with your day and let your subconscious mind do its part. You are now ready for the rest of the course and creating the life that you want.*

Day #11: Event + Response = Outcome

Before students were educated on the 1st of 14 mental skills, they were introduced to the cognitive-behavioral system of Event + Response = Outcome. This system was commonly referenced as E+R=O. It was explained that this formula would be used to help them build mental skill and become better versions of themselves as student-athletes. The basic concept behind E+R=O was taught, that while individuals cannot change events, they can change how they respond to those events, which will ultimately change the outcome. Students were informed they would build mental skill through their responses. Students were also told each mental skill would be learned through a knowledge (learn about the mental skill) and application (apply the mental skill) framework. As a result, knowledge and application would be labeled accordingly in the design of each lecture slide to enhance student learning.

Day #12 – Day #15: Goal-Setting

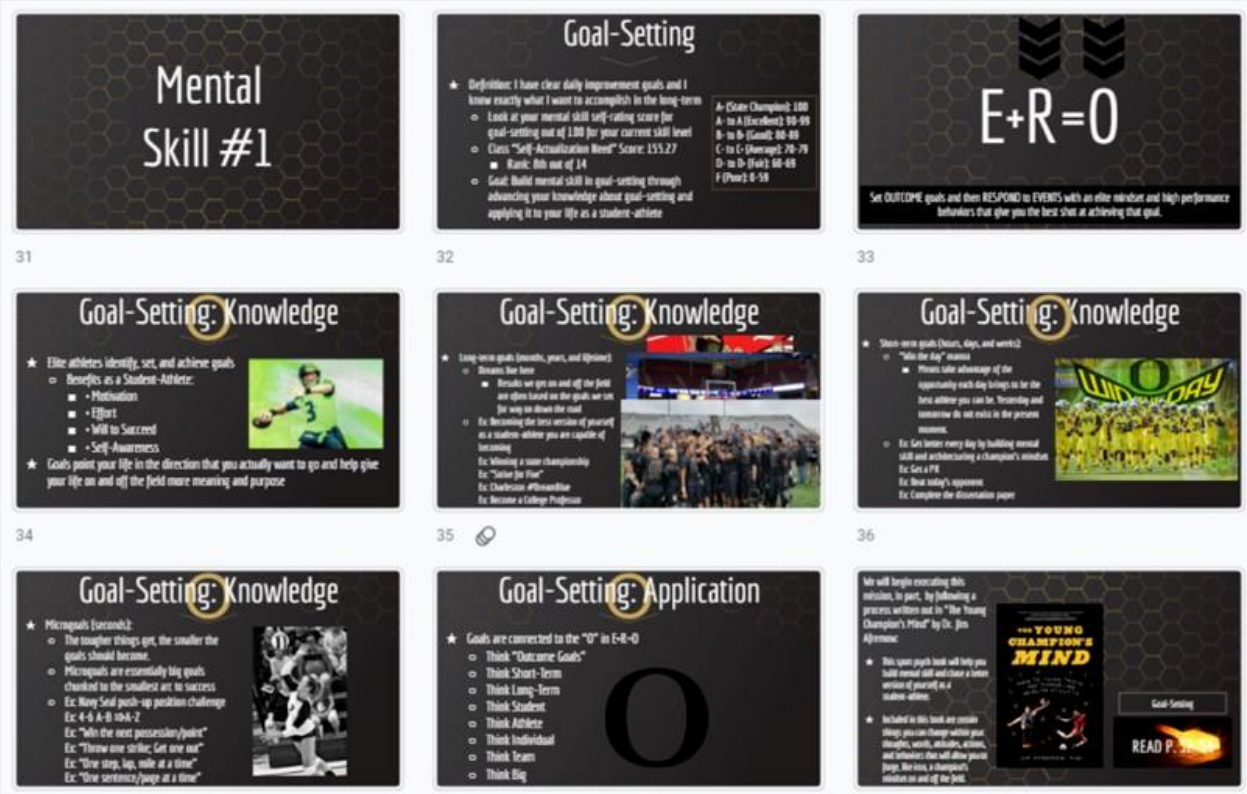


Figure 4.7 *Lecture Slides #31-39: Goal-Setting*

Knowledge:

The 1st mental skill taught was Goal-Setting. Goal-Setting was defined in the following way: "I have clear daily improvement goals and I know exactly what I want to accomplish in the long-term." At this point, the pre-course survey results served as a guide for student need in each mental skill. It was determined the mental skills would not be taught in order from highest to lowest self-actualization need because the 14 mental skills needed to be placed in a logical learning sequence. For example, because the course had just begun and the sports seasons were just resuming due to COVID-19, Goal-Setting would be a logical mental skill to teach first for two reasons. First, as Maslow argued, "Self-actualization is meaningless without reference to a currently active future" (Maslow, 2014, p. 23). Second, Goal-Setting would be the best mental

skill to connect to Event + Response = Outcome, as the term goal-setting is synonymous with outcome goals. Thus, it was explained to students that establishing long-term, short-term, and micro-goals would be critical to setting the foundation for this course. In E+R=O, their goals would help direct their response patterns, as once they set a goal, it would be up to them to respond to events in ways that would yield goal-oriented outcomes.

Application:

There was one major application activity associated with Goal-Setting. While each student-athlete had been given a course goal of becoming the best version of themselves as student-athletes, additional goals needed to be set to help solidify why they should want to become the best version of themselves. It was important to allow them to set more personalized goals to help fuel their mental skill development in goal-setting and beyond. For the goal-setting application activity, students wrote down their goals as a student-athlete in their "Mental Game Scorecard" as well as anonymously on a letter "O" (See Figure 4.8). The letter “O” was put up on the back wall as part of an E+R=O equation that was filled in by each student’s letter (See Figure 4.9).

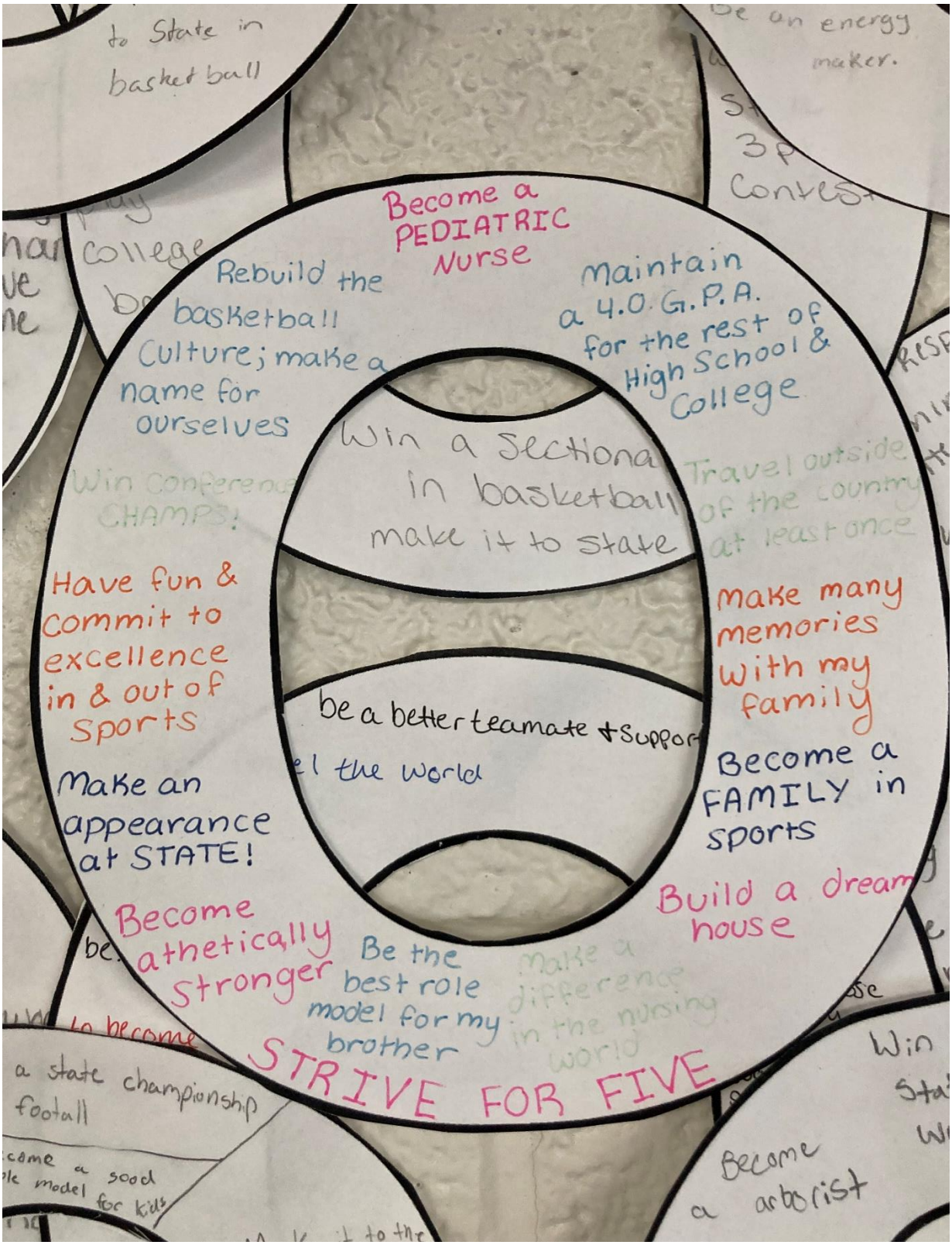


Figure 4.8 *Participant Coursework: The Letter "O" in E+R=O*

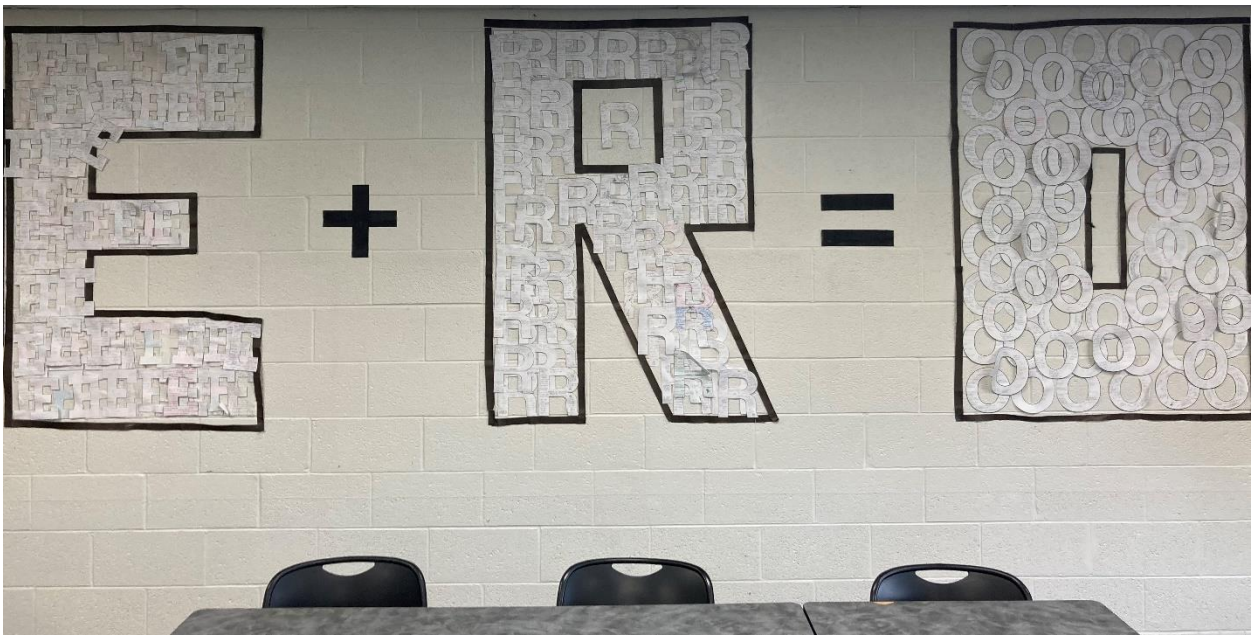


Figure 4.9 *Completed E+R=O on Back Wall of Sport and Performance Psychology Classroom*

Once they put up their goals on the back wall, it would stay there as it was a shared journey as a class to achieve these short-term and long-term goals in school, sports, and life. Common goals written on the back wall included winning a state championship in football, getting good grades in school, and earning their dream job in life. The writing of these goals on the back wall was intended to help add both a layer of support and a layer of accountability to the goal-setting process. Students were told their best chance at achieving their goals was to train their responses in E+R=O.

Day #16 – Day #17: Commitment to Excellence

Figure 4.10 *Lecture Slides #40-48: Commitment to Excellence*

Knowledge:

The 2nd mental skill taught was Commitment to Excellence. Commitment to Excellence was defined in the following way: "I commit to the process of closing the gap on my potential and becoming the best version of myself as a student-athlete that I can possibly be." Now that students had goals, it was explained they must commit to those goals with a certain standard of excellence. They were told commitment would be reflected within their E+R=O responses. Specifically, each student was challenged to commit to improving their responses within their words, attitudes, actions, and behaviors. Because Commitment to Excellence was ranked as the second-lowest self-actualization need, certain curricular adjustments were made while still recognizing its importance to sport and performance psychology. To illustrate its importance,

many quotes were used from famous people on how to achieve excellence from Elon Musk to Tom Brady. Other concepts connected to excellence were also explained, like winning each day moment-to-moment, minute-to-minute, and hour-to-hour, and how excellence is earned bit-by-bit, thought-by-thought, and behavior-by-behavior.

It was at this stage of the course that the first curriculum change occurred as students provided feedback that they would rather read the course textbook before each mental skill was introduced as opposed to after lecture. As a result, students read about Commitment to Excellence prior to lecture because it provided a conceptual foundation of knowledge about the mental skill prior to discussion. It is also important to note that at this stage of the course students were informed of the new sports schedule that was just released by the state due to COVID-19. Within this updated timeline, the postseason in football, basketball, wrestling, and volleyball had been cancelled. While these sports would still play a modified schedule, there would be no state playoffs. As a result, students were informed that some of their goals had to be updated as winning a state championship in football was now impossible. While this was an emotional blow, students were reminded of their other goals that were still in their control, which included committing to excellence in a way they never have before, having fun, making memories, and winning in the regular season.

Application:

The Commitment to Excellence application activity asked them to create a well-placed environmental cue reminding them to chase excellence as a student-athlete. This cue could be a sticky note, an E+R=O band on their wrist, or a reminder on their phone to "think gold" or "chase excellence".

Day #18 – Day #20: Enjoyment

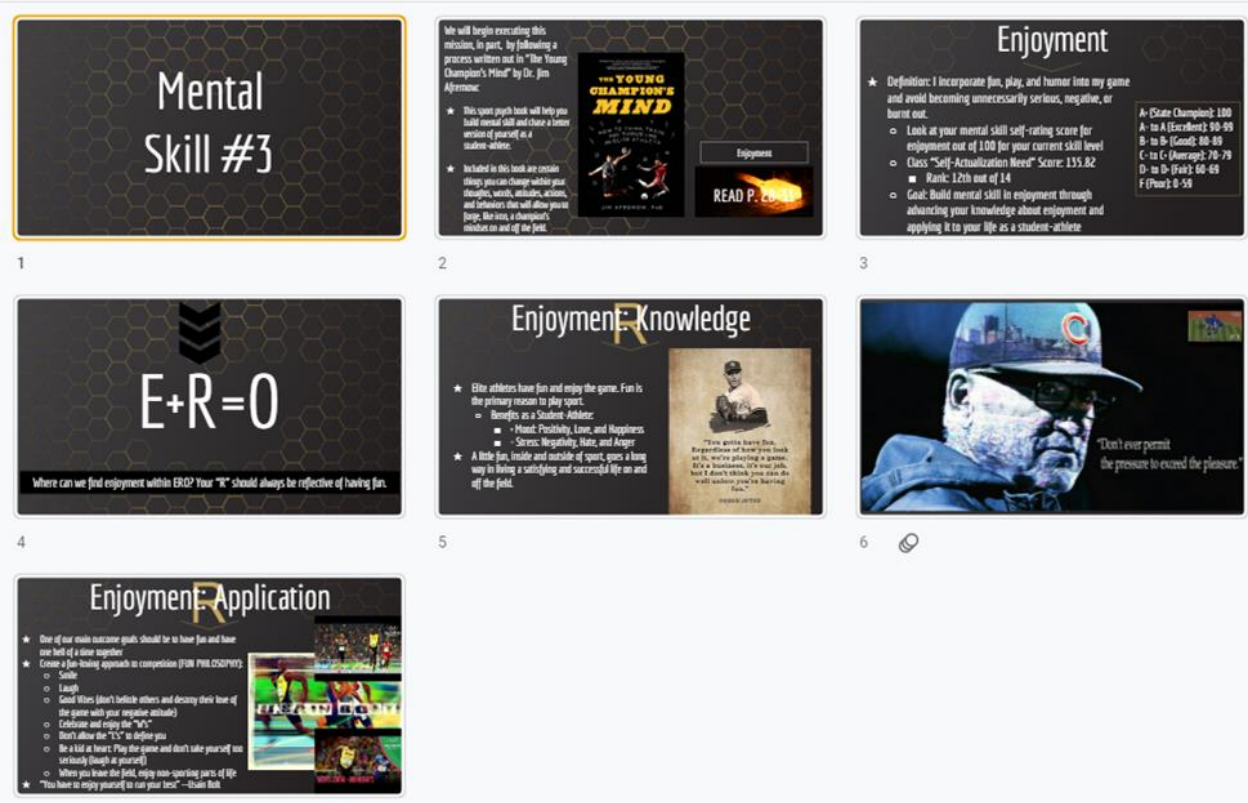


Figure 4.11 *Lecture Slides #50-56: Enjoyment*

Knowledge:

The 3rd mental skill taught was Enjoyment. Enjoyment was defined in the following way: "I incorporate fun, play, and humor into my game and avoid becoming unnecessarily serious, negative, or burnt out." Because many of their junior and senior seasons were going to end abnormally due to COVID-19, the curriculum on the mental skill of Enjoyment took on a completely different tone and meaning. Students were reminded their ability to have fun throughout these COVID-19-related challenges was going to be tested. As a result, having fun was emphasized as a goal by student-athletes. The general sentiment was captured by one participant who stated for example, "If we can't have a state series, then let's at least have fun".

While this group had self-reported a high level of mental skill in enjoyment, they were challenged to respond to this adversity and find joy in the challenging circumstances.

Application:

To help establish this perspective on Enjoyment, students were asked to come up with their "fun philosophy" for their main application activity. This application activity was to be done in their “Mental Game Scorecard”. A model example was developed using content from the knowledge slides, capturing perspectives from people like Derek Jeter, Joe Madden, and Usain Bolt. After sharing this model, each student developed their own fun philosophy to apply to their life as a student-athlete. As one participant wrote for example:

> *“My fun philosophy is modeled after Russell Wilson. What I love about him is that he never lets the critics get to him. As a QB in the NFL, you have to be willing to brush off what the media says and focus on making yourself better. That's what he does, and he always has fun with it. When you watch Russ play, you can see how much he enjoys what he is doing. He loved doing interviews and is always helping his teammates out on and off the field. He's always smiling on the sidelines and never hangs his head after his mistakes. I want to keep this same mindset as him. I want to play the game because I enjoy playing it. I want to avoid worrying about what others have to think and just continue to push myself. I also want to keep smiling so I can give off that positive attitude and body language. If you watch Russ on the sidelines, you can see that his smile and enjoyment radiates to the rest of the team. I need to enjoy the time I have playing the sports I love. Time continues to fly by and before I know it, I'll play my last down of football, or shoot my last shot, or run my last race. I need to make sure I focus on the present and enjoy the time I get to spend with my friends and coaches around me.”*

Day #21 – Day #30: Visualization

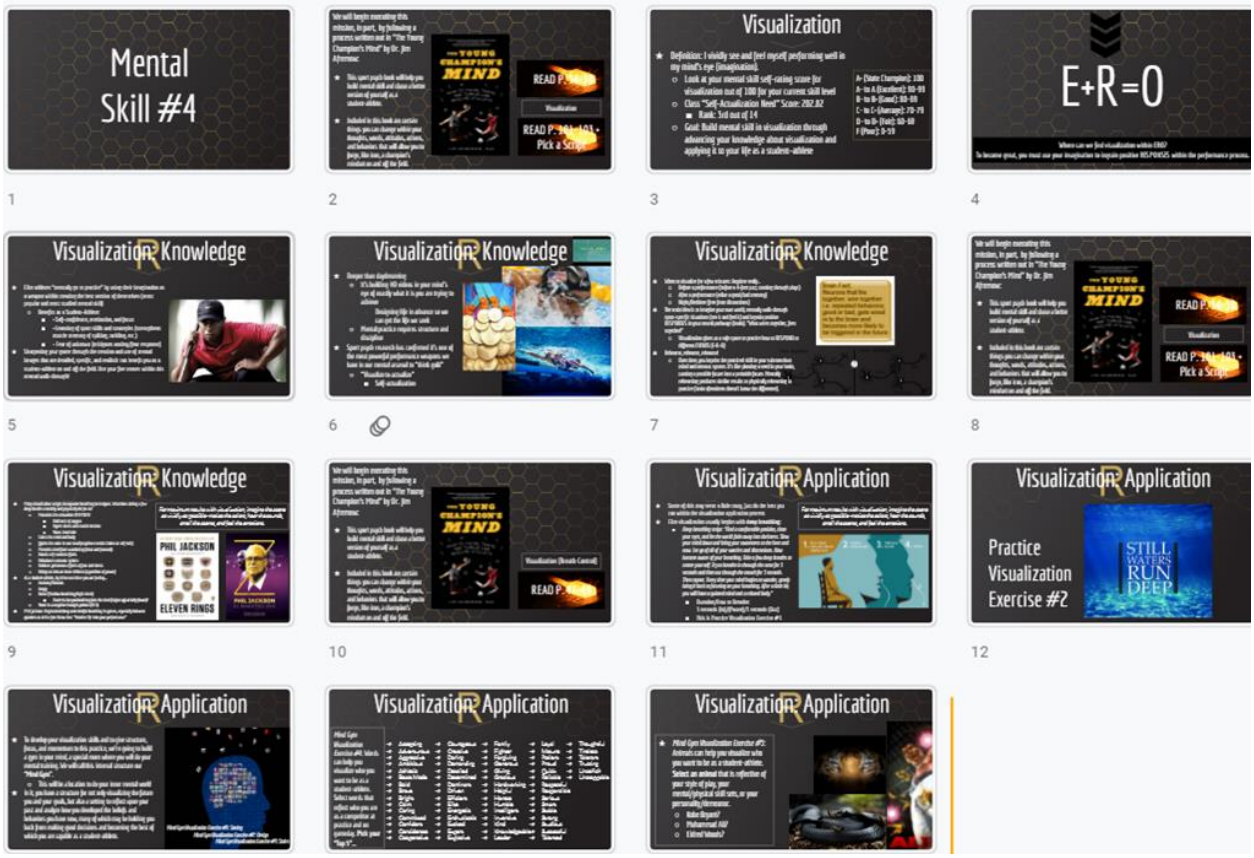


Figure 4.12 Lecture Slides #57-71: Visualization

Knowledge:

The 4th mental skill taught was Visualization. Visualization was defined in the following way: “I vividly see and feel myself performing well in my mind's eye (imagination).” Visualization was ranked as a mental skill with a higher level of self-actualization need. As a result, the definition of visualization as imagery was explained in great detail, as many participants reported they did not know what this mental skill represented. After providing more information-based knowledge on Visualization, Olympic swimmers Michael Phelps and Katie Ledecky were referenced to address this mental skill’s credibility. It was explained that these two athletes used Visualization to fuel high performance in the swimming pool, which was supported

by a YouTube video of Michael Phelps explaining how he used Visualization to prepare for competition.

Application:

There were two main application-based activities associated with Visualization. First, each student-athlete picked a visualization script to read and apply from the course textbook. The second application activity consisted of using visualization scripts to build a "mind gym," or an imaginary psychological training ground where they were able to do mental training. The mind gym idea was inspired by Divine (2018), who explained how Navy Seals used similar visualization tactics to be successful within their missions. To help students build this mind gym, several different visualization scripts were implemented. These scripts began with deep breathing techniques and ended with the physical construction of their mind gym in their "Mental Game Scorecard". For example, this was the first visualization script that was read to students where they started building the setting to their mind gym:

> *Introduction: "Today, we are going to start building a gym in your mind, a special room where you will do some of your mental training. Eventually, going to work out at this gym may become a habit as we build mental muscle and chase the best versions of who we are as student-athletes. So let's begin this visualization activity. Find a comfortable position, close your eyes, and let the world fade away into darkness. Slow your mind down and bring your awareness to the here and now. Let go of all of your worries and distractions. Now become aware of your breathing. Take a few deep breaths to center yourself: Try to breathe in through the nose for 3 seconds and then out through the mouth for 3 seconds. Then repeat. Every time your mind begins to wander, gently*

bring it back to focusing on your breathing. After a little bit, you will have a quieted mind and a relaxed body.

Now imagine yourself walking down a path in the real-world. You are not in a hurry, but you see a set of stairs off to the right in the distance. You walk to the stairs and turn to look down. There are ten steps. You slowly walk down, breathing deeply as you do. Ten, nine, eight...When you reach the bottom, you see an archway. This is the door to your training area where you will build your mind gym. Take a deep breath and step through the door…

You are now in a special training area where you will build your champion's mindset. The first thing we need to do is construct a setting for your mind gym. It may be a beach, a mountain, a valley, or a field. It may not even be a setting from this planet. My mind gym incorporates the best of all these worlds as the setting for my mind gym is a log cabin in the woods, built into the mountainside, overlooking the beach. My log cabin is close enough to the ocean to hear the waves, but far enough away to feel the peacefulness of nature. What is the setting for your mind gym? Take a minute to visualize the setting for your mind gym in your head.

Exit: Today, all we are going to do is build your setting. Now leave your mind gym and make your way back to the doorway. Look back and see what you've built. Once you are done, go through the doorway and begin climbing the steps back to your conscious self, one step at a time. Each step up brings you closer to your normal, wide-awake state. When you reach the top, follow the path back out into the active world. You will feel alert and energized as you open your eyes to end the exercise, ready to go win the day."

Figure 4.13 illustrates one participant's physical depiction of their mind gym as a result of the visualization script:

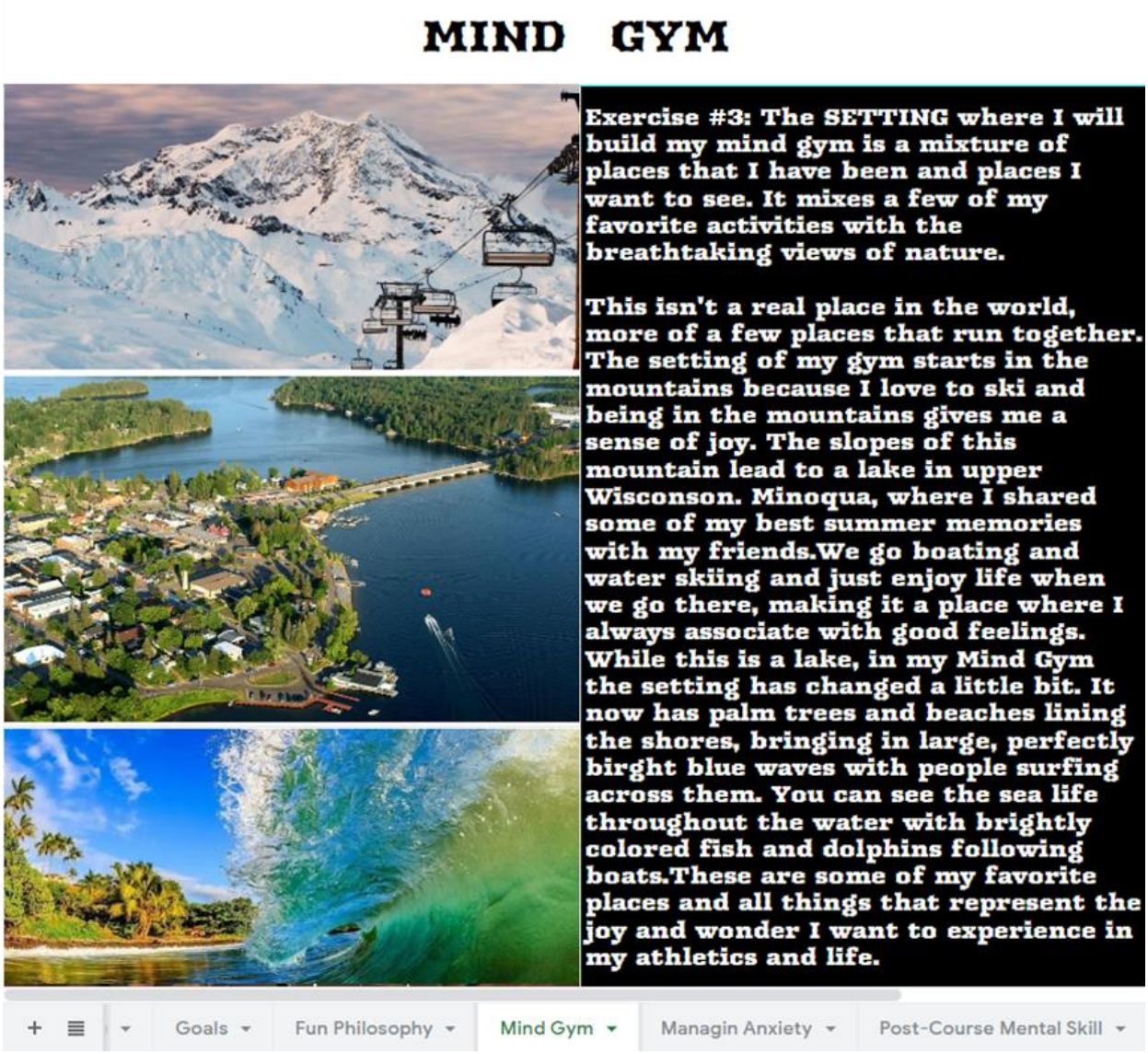


Figure 4.13 *Participant Coursework: Mind Gym*

Overall, ten teaching days were focused on building mental skill within Visualization. Students were able to share with the class how they transferred this knowledge and application to their sport. For example, three basketball players were able to provide examples of how they

used it before and after their game, alongside one football player who mentioned he was already using it to get ready for his first game a few weeks away.

Day #31 – Day #40: Focus

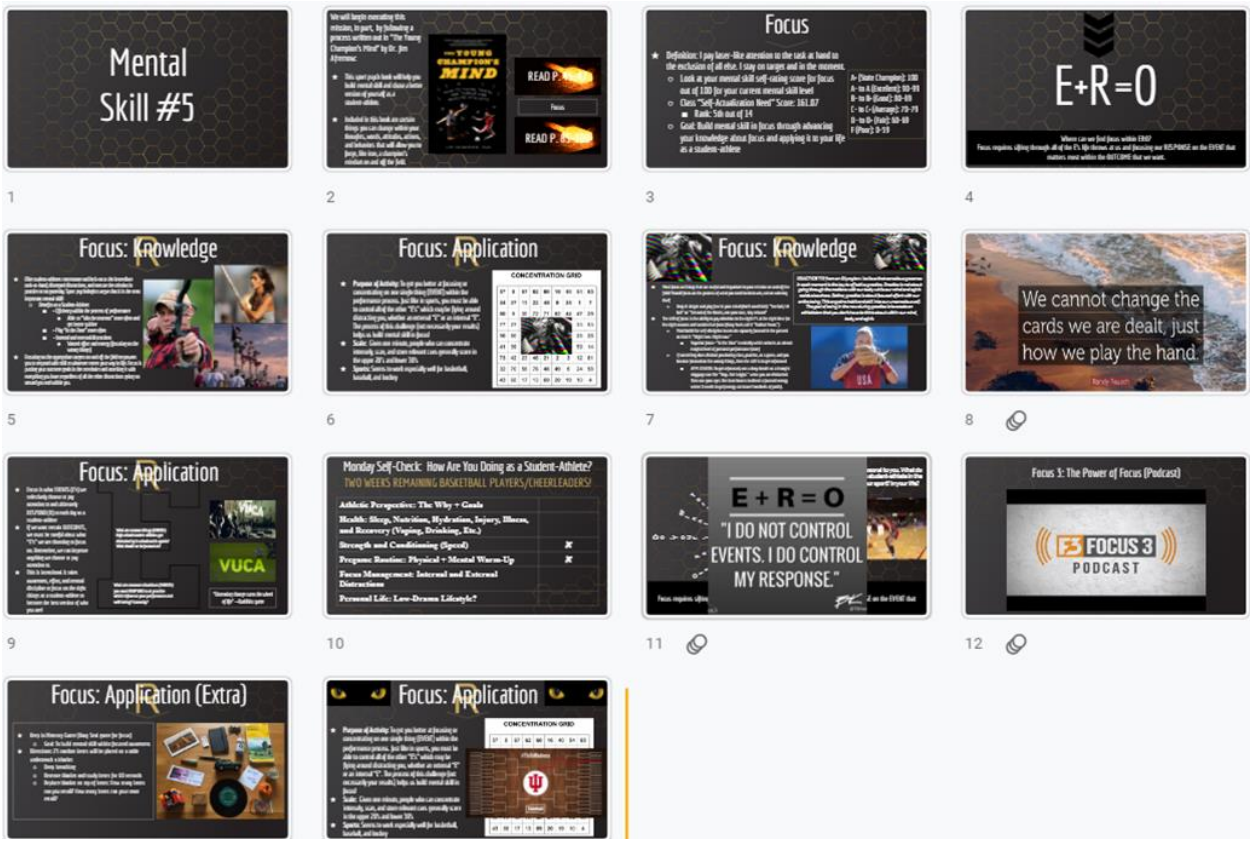


Figure 4.14 *Lecture Slides #72-85: Focus*

Knowledge:

The 5th mental skill taught was Focus. Focus was defined in the following way: “I pay laser-like attention to the task at hand to the exclusion of all else. I stay on target and in the moment.” This mental skill was connected to the letter "E" in E+R=O. While each mental skill was taught within the E+R=O framework, Goal-Setting and Focus were two mental skills which were also tied to the formula to simultaneously teach both the mental skill and the behavioral system. For example, while there were response strategies they needed to learn to build mental skill in Goal-Setting, Goal-Setting was also tied to the letter "O" in E+R=O. Similarly, the

mental skill of Focus was tied directly to the "E" in E+R=O. Because Focus involves paying attention to certain parts of performance while avoiding distractions, students analyzed and discussed important "Events" they had to respond to as student-athletes. Internal and external distractions were also examined during lecture. It was explained that building mental skill in Focus requires a disciplined concentration on performance-enhancing events while avoiding the pitfalls of internal and external distractions. Techniques and strategies were discussed to assist within building mental skill.

Application:

There were two application activities associated with building mental skill in Focus. In the first activity, students were directed to write down on the letter “E” all the events that were important for them to respond to as a student-athlete. Events were only written down if they perceived those events to be influential to their performance and well-being. This was anonymously written and put up on the back wall as part of the E+R=O equation. This is illustrated in Figure 4.15:

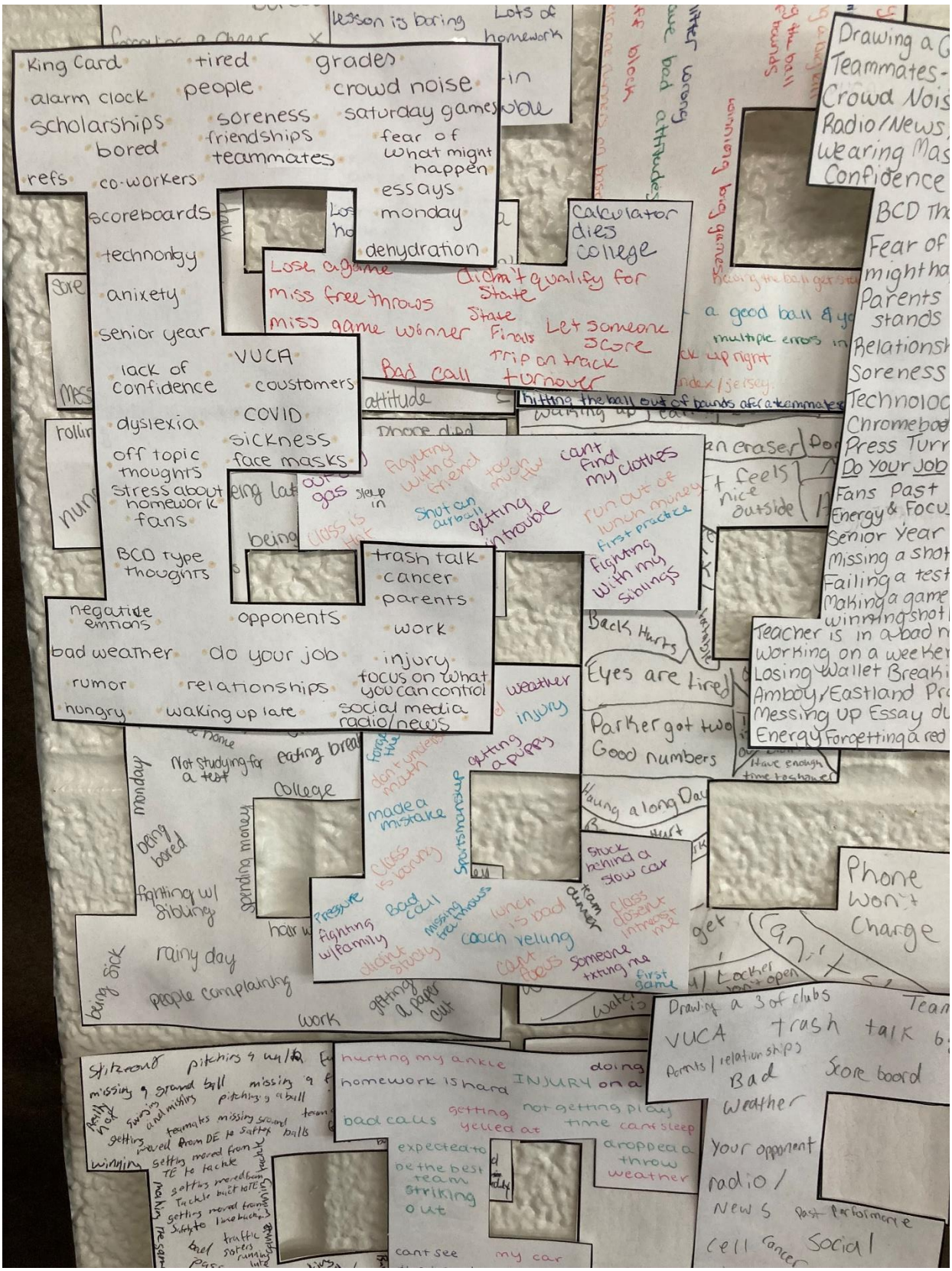


Figure 4.15*: Participant Coursework: The Letter "E" in E+R=O*

In the second application activity, students completed daily grid challenges in a competition-like setting (as illustrated in Figure 4.16). These challenges were done as an individual and with a teammate. They were informed the purpose of this activity was to get them better at focusing on one single event within the performance process. In this case, they had to find a designated number and cross out as many numbers in order within one minute. Just like in sports, they were told they had to be able control what they focused on and how they responded to various internal and external distractions within this competition. These distractions included noise, music, being stared at, and trash talk.

57	8	67	62	60	16	40	54	65
34	37	11	22	45	9	35	1	7
80	5	30	72	71	52	44	47	25
77	27	75	79	81	64	36	33	53
50	66	18	31	55	74	15	28	26
41	39	63	38	78	51	29	59	14
73	42	23	46	21	2	3	12	61
32	70	56	76	48	49	6	24	58
43	68	17	13	69	20	19	10	4

***Figure 4.16**: Example of a Focus Grid*

These focus grid challenges concluded with a tournament and added a competitive element to the curriculum to help simulate practice and games as a student-athlete.

During this time period, a well-being exercise adapted from Aoyagi and Poczwardowski (2012) was implemented into the curriculum (See Figure 4.17). For about five minutes, this well-being check asked them to reflect on how they were doing as a student-athlete by considering several important performance and well-being domains. Students were directed to place an "X" next to the domains in which things were going well in their life. If things were not going well in that domain, they were directed to leave it blank.

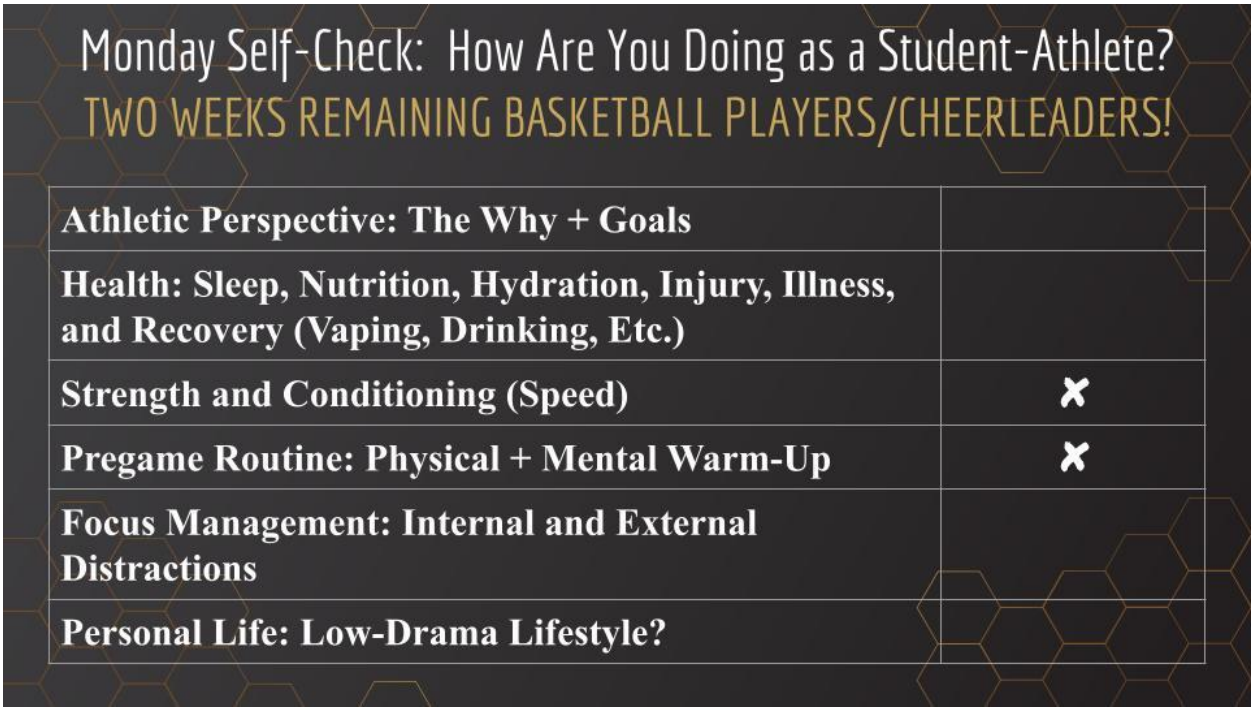


Figure 4.17 *Student-Athlete Self-Check on Well-Being*

This exercise was implemented for two main reasons. First, the purpose of the course was to build mental skill to improve sport performance and enhance well-being. This exercise helped reiterate that focus to students. Second, students were struggling to cope with the COVID-19 pandemic. As a result, this private exercise was done as a self-reflective check on their mental health.

During this middle stage of the course, interview #2 was conducted. Due to COVID-19 disruptions, the second interview had to be adapted on numerous fronts. While the interviews

were almost cancelled entirely, a majority of the students still wanted to conduct their one-on-one conference, which suggested their effectiveness and positive impact. While some interviews were conducted in-person, most interviews were conducted through Google Meet. Interview questions for this interview served two main purposes: First, the interview questions were meant to start a conversation that would be beneficial to the student-athlete's development. Second, the interview questions were intended to examine how students perceived the first half of *Sport of Performance Psychology*. As a result, several middle of the course findings emerged as a result of this interview. The results of interview #2 are provided in the following sub-section before day-to-day analysis resumes with Day #41.

Interview #2

Overall Course Effectiveness

Several interview questions asked participants to consider how the class was going for them and how effective the course was within influencing their performance and well-being. All participants reported that they perceived the course so far, very favorably. All participants reported that they appreciated what they were learning and that this had positively influenced them within improving their performance and enhancing their well-being as a student-athlete. Four of these participants mentioned that they had learned more than they thought they would, while three others referenced that the course content could be effectively applied inside and outside of sport.

When asked what they thought of the course mission of becoming the best version of themselves as student-athletes, all participants use positive words like motivating, relatable, and relevant. Six of these participants stated the mission was a constant reminder to chase the best version of themselves. For example, one participant stated that it was a reminder for him in

football games, that when he got mad, he needed to control his emotions to become the best version of himself. Five other participants stated they liked the mission because it was a common goal that all in the class could share, because everyone knew the purpose of the course was to become the best version of themselves as a student-athlete.

Overall, a majority of participants said that the course was positively shaping their thoughts, feelings, and behaviors as student-athletes. While ten of these participants described their learning journey in this course as influencing them to have a more positive perspective, seven other participants stated that it led them to be responding to things much better. Two participants referenced enhanced self-awareness while one participants detailed her increased application of visualization within sport, stating she used it before her first game to help her manage her nerves. This degree of effectiveness of the course was an important preliminary finding. The evidence from the interviews at this point in the course, indicated that the course was being positively received and regarded as effective on both the sport psychology and performance psychology front.

Student Learning

When participants were asked what the main thing they've learned was so far in the course, participants responded learning curriculum which generally fell into two major categories: Mental skills and Event + Response = Outcome.

When participants were asked specifically what mental skills they believed they were improving on the most, there was a wide variety of responses. While some participants responded with mental skills already covered in the course like Enjoyment and Focus, some other participants mentioned mental skills that were not officially covered yet in the curriculum, like Managing Anxiety, Confidence, and Time-Management. This suggested the interwoven

nature of these mental skills, as there was seemingly an educational ripple effect across all 14 mental skills.

When participants were asked if they liked the E+R=O mindset, all participants responded affirmatively. In fact, seventeen participants (80.95%) were able to describe using the behavioral system already as a student-athlete. Participant examples included responding to a missed shot in basketball to debating whether or not to study for a test. As one participant stated, "I use E+R=O in almost every situation now. I used to just act, now I think about how to respond so what I want to happen, actually happens." Several participants alluded to applying E+R=O to their attitude when they were negative, especially because of COVID-19. This was "a big E" as one participant described it. As one wrestler stated, "Every time I'm given an event, I think about how to respond, and I can either respond good or bad. I break down the E and the O and that has been helpful in thinking about my R's." Another volleyball player provided an example where she used the equation backwards as she would set a goal and then reverse engineer it from there to figure out how to achieve it: "It makes me realize how important my response is. It forces you to go beyond hope if you really want to achieve a goal. The mental skills are like puzzle pieces to the response. I even explained E+R=O to my mom and dad!"

Modifications to Design and Implementation

While major changes to course design were deemed unnecessary after this interview session concluded, it was deemed that the course was not effectively taking advantage of certain curricular components. As a result, after coding responses concerning the most effective curricular elements of the course alongside what could be done to make the course better, two modifications were consistently mentioned to enhance course effectiveness: More application-based activities and more game film.

First, twelve participants (57.14%) mentioned more application activities would help enhance the effectiveness of the course. These application activities were reported to be a break from lecture, interactive, and impactful. Participants stated that the application activities were fun to do and made the mental skill easier to understand. As several participants stated, the application activities were effective because it made them "more aware of what to do" and they "could actually feel the mental skill" within the application activity.

Second, seven participants (33%) mentioned they wanted to watch more film from the games they were playing. They felt this would help illustrate the mental skill during an actual game and "enhance credibility" of the mental skill being discussed. Similarly, participants really liked looking at pictures on the lectures slides, especially if they were of student-athletes they knew or if they were of teams from the local area.

Day #41 – Day #50: Mental Toughness

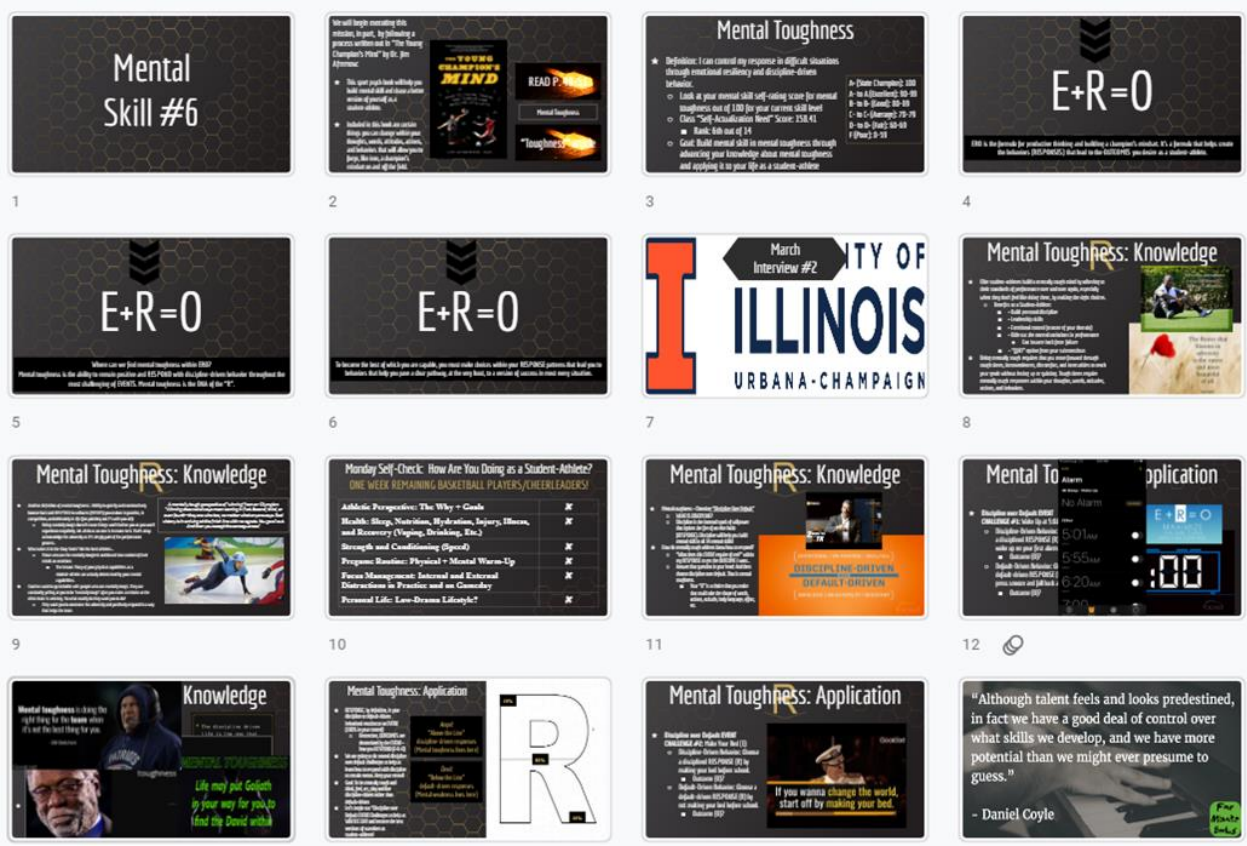


Figure 4.18 *Lecture Slides #87-102: Mental Toughness (Continued in Figure 4.16)*

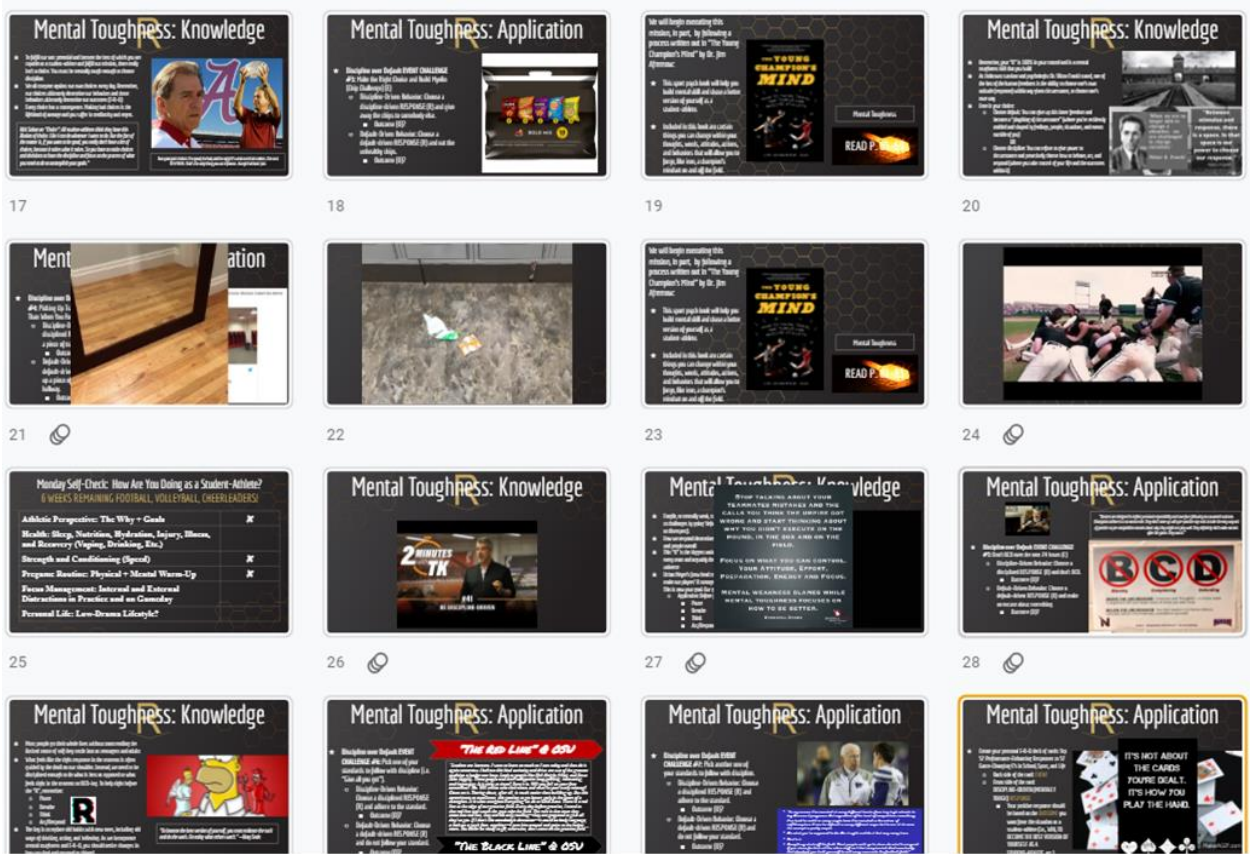


Figure 4.19 *Lecture Slides #103-118: Mental Toughness*

Knowledge:

The 6th mental skill taught was Mental Toughness. Mental Toughness was defined in the following way: "I can control my response in difficult situations through emotional resiliency and discipline-driven behavior." Mental Toughness was ranked as a moderate level of need within student-athlete self-actualization. To build mental skill in mental toughness, it required teaching students what mental toughness was, and most importantly, how to build it. While the literature reviewed suggests that while it is common to hear coaches exclaim that their athletes need to get mentally tougher, few coaching tactics seem to include exactly how to do that. This, in combination with the finding that participants wanted to add more application activities into the curriculum, presented a perfect opportunity to go into depth on strategies, tactics, and interactive activities that were relevant to building mental skill in mental toughness. Event +

Response = Outcome was again introduced as the behavioral system in which students would build skill in Mental Toughness. Perhaps more than any other mental skill, Mental Toughness was a clear conceptual fit within the "R" of E+R=O. If a student-athlete wanted to be mentally tougher, they had to be able to control their response to various events (as explored in the Focus section). Because students had already identified the events they had to deal with in school, sport, work, or life, it was now their job to learn how to control their response to get the outcomes they wanted.

During this time, interview #2 had concluded, which confirmed that students wanted to use game film more often to see these mental skills in-action. As a result, game film was used twice to better illustrate mental toughness. The teaching standard for showing game film was that it had to be a positive illustration of a mental skill. Highlights that would be embarrassing or negative to students inside or outside the class would not be shown. In this case, all examples would be positive examples of student-athletes modeling Mental Toughness within their performance. After context of the highlight in the game film was discussed, there would be a discussion of how the mental skill was possibly being implemented at that moment. Game film was accessible as a school coach; however, the easiest solution came from using the NFHS (National Federation of State High School Associations) network to access game film on-demand. While there was a small fee to become a member, this website (https://www.nfhsnetwork.com/) streamed and recorded a vast majority of sporting events across the United States. This service became especially popular due to attendance regulations during COVID-19. Game film was also provided by students who shared videos or game film that they had personal access to on their cell phone. These were personal highlights that were taken by a friend, family member, or news media.

Application:

There were three major application activities for Mental Toughness. First, students were given daily "discipline over default" challenges in which they were presented with a situation in life and they had to choose to respond with a discipline-driven response or a default-driven response. This application activity was set-up as a competition with each student keeping a win-loss record. In the second application activity, students were handed a letter "R" as was previously done with the letter "E" and "O". On this letter "R", they would write down their results to each "discipline over default" challenge while providing additional responses that were relevant to their personal performance and well-being. Both application activities are illustrated in Figure 4.20:

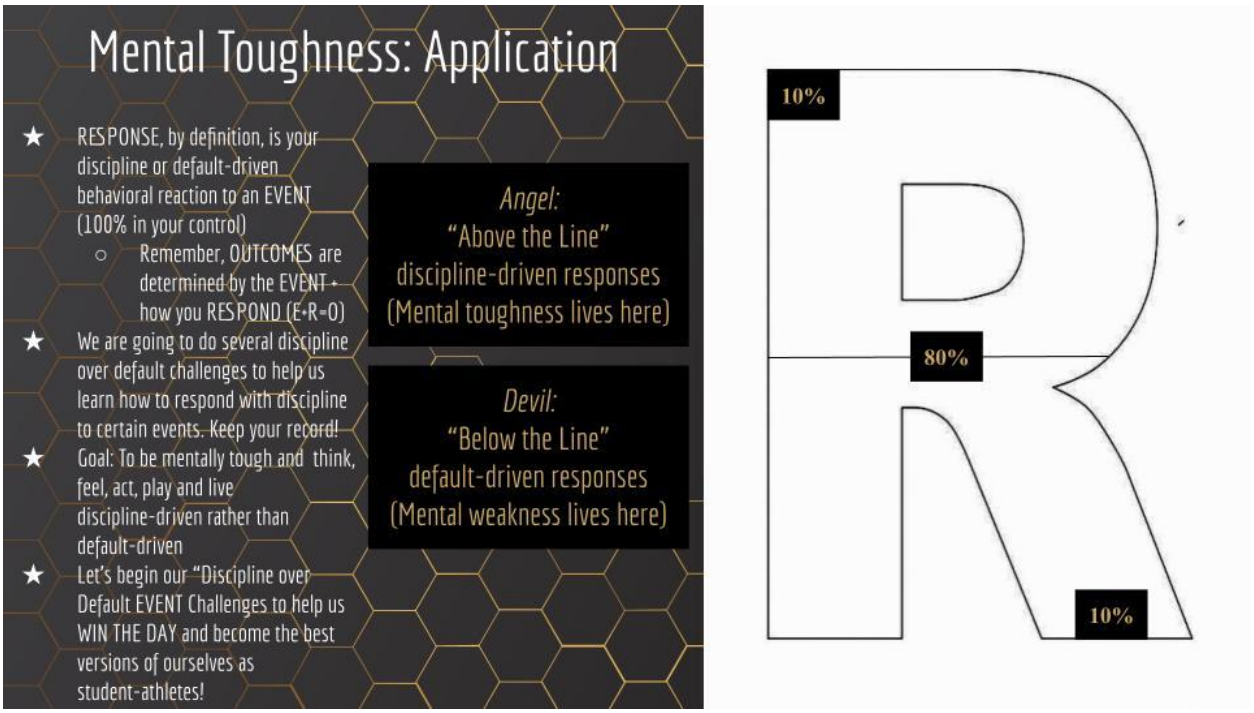


Figure 4.20 *Lecture Slide #100: Application Activity #1 and #2*

It was explained that 10% of people were consistently default-driven within their behavioral responses, 10% of people were consistently discipline-driven, and about 80% of people hovered

right around the line. They were told that default-driven responses reflected mentally weak individuals who oftentimes used BCD (blaming, complaining, or defensiveness) within how they responded to difficult situations. This concept was consistently referenced the rest of the course. Using the Event + Response = Outcome techniques from Focus 3 (2020), students were taught to take control of their response by pressing pause, taking a deep breath, thinking about how they should respond, and then physically taking action. In the end, students ended up competing in ten discipline over-default challenges. These challenges are listed in Table 4.1:

Table 4.1 *Discipline Over Default Challenges*

Day of Challenge	**"Discipline over Default" Challenge Description**
Day #1	Students were asked to set a time in which they should wake-up to win the day. A discipline-driven response would wake-up and a default-driven response would press snooze.
Day #2	Students were asked to make their bed so they could start their day with a small win. A discipline-driven response would make the bed and a default-driven response would not.
Day #3	Students were given a small bag of their favorite chips within a discussion of choices. A discipline-driven response would give the unhealthy snack to someone else and a default-driven response would eat the chips.
Day #4	Students were asked to pick up a piece of trash in the school hallways to reflect leaving a place better than when they found it. A discipline-driven response would pick up the trash and a default-driven response would walk right on by it for someone else to pick up.
Day #5	Students were asked to not "BCD" over the next 24 hours. A discipline-driven response would eliminate BCD from their response patterns while a default-driven response would blame others, complain about their circumstances, and/or defend themselves.
Day #6	Students were asked to adhere to one of their "Standards of Performance" as a student-athlete for the next 24 hours. A discipline-driven response would follow with discipline the standard and a default-driven response would not adhere to their standard.

Table 4.1 (cont.)

Day #7	Students were asked to adhere to one of their "Standards of Performance" as a student-athlete for the next 24 hours. A discipline-driven response would follow with discipline the standard and a default-driven response would not adhere to their standard.
Day #8	Students were asked to adhere to one of their "Standards of Performance" as a student-athlete for the next 24 hours. A discipline-driven response would follow with discipline the standard and a default-driven response would not adhere to their standard.
Day #9	Students were asked to adhere to one of their "Standards of Performance" as a student-athlete for the next 24 hours. A discipline-driven response would follow with discipline the standard and a default-driven response would not adhere to their standard.
Day #10	Students were asked to adhere to one of their "Standards of Performance" as a student-athlete for the next 24 hours. A discipline-driven response would follow with discipline the standard and a default-driven response would not adhere to their standard.

The best student record was 9-1. After the competition was completed, the letter “R” was added to the back wall to officially complete the E+R=O equation. Figure 4.21 provides an example of one participant's letter "R":

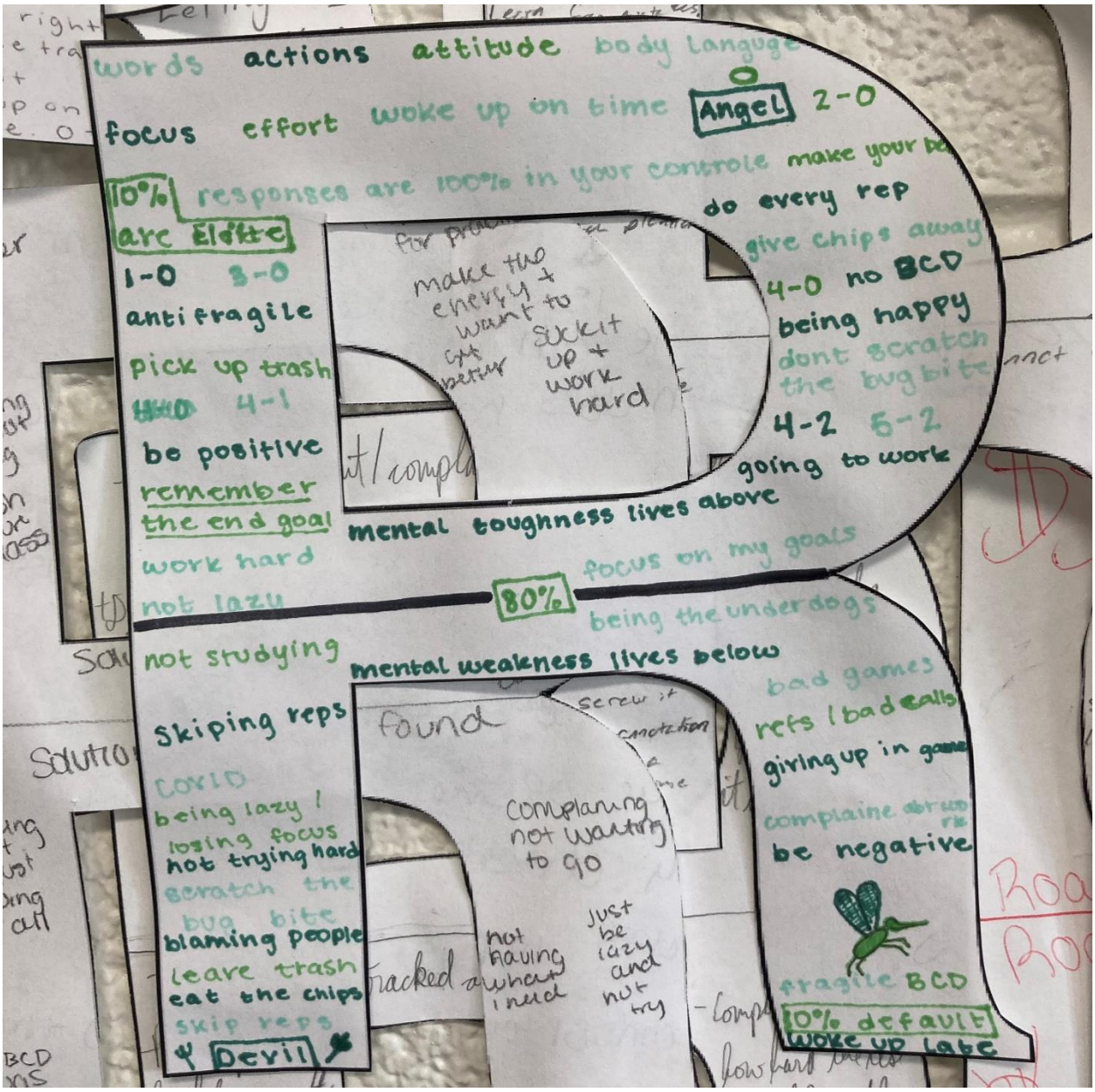


Figure 4.21 *Participant Coursework: The Letter "R" in E+R=O*

The third and final application activity for Mental Toughness had each student develop a personal E+R=O deck of cards. Using a black marker to write on the cards, they had to label the "Top 52" performance-enhancing responses to 52 game-changing "E's" in school, sport, and life. This application activity is further explained in Figure 4.22:

Figure 4.22 *Lecture Slide #118: Application Activity #3*

To ensure students came up with examples from different performance arenas of their life, hearts and diamonds were used for sports, spades for school, and clubs for life overall. Students were informed that their job was to become mentally tough enough to respond with discipline to these events in order to produce better outcomes in their lives as student-athletes.

Day #51 – Day #55: Managing Anxiety

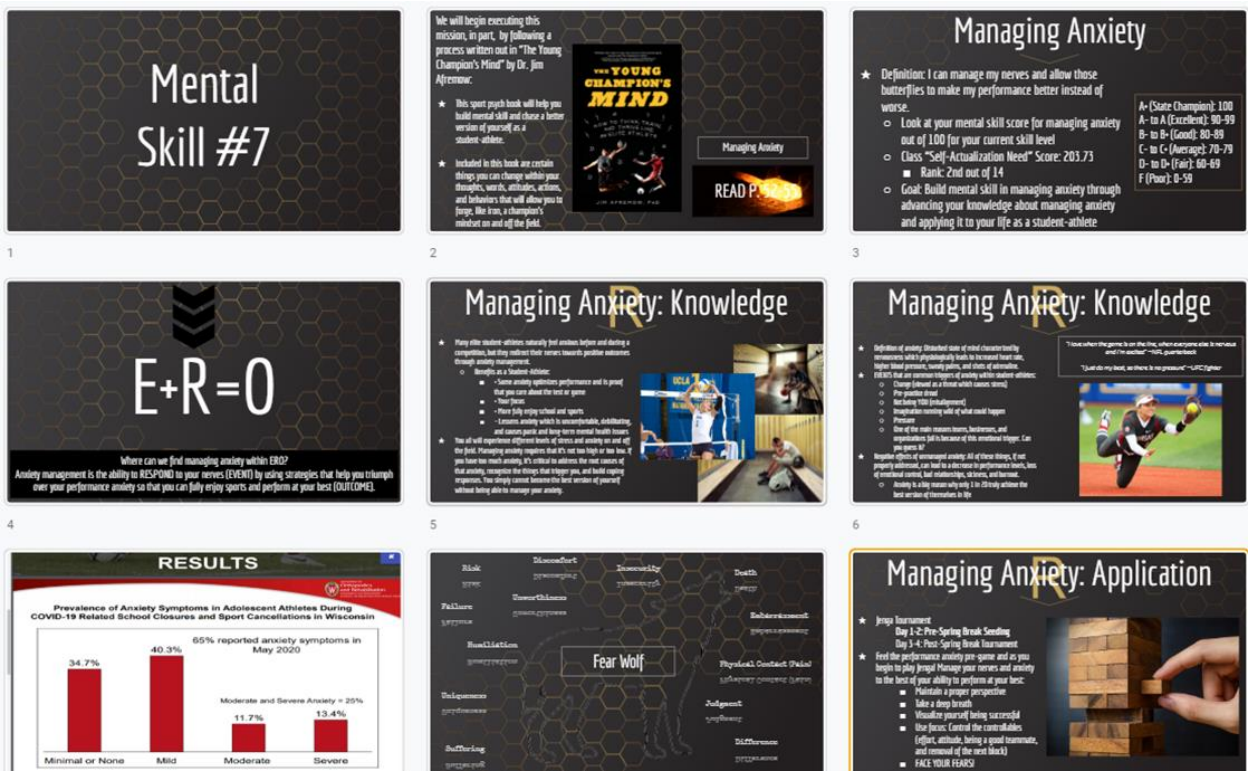


Figure 4.23 *Lecture Slides #121-130: Managing Anxiety*

Knowledge:

The 7th mental skill taught was Managing Anxiety. Managing Anxiety was defined in the following way: "I can manage my nerves and allow those butterflies to make my performance better instead of worse." As a class, Managing Anxiety was the second greatest area of self-actualization need. While anxiety in sport needed to be addressed, anxiety in school and life were areas of need at this time due to the COVID-19 pandemic. At this time, rates of anxiety and depression were increasing due to COVID-19 related school closures and sport cancellations (McGuine et al., 2020). While this course was not clinical nor did it operate from the premise of "fixing" mental illness, anxiety was known to be a major reason why approximately only one in twenty achieve the best versions of themselves in life (Divine, 2020). While it was explained that

some anxiety is normal, there were strategies and techniques introduced to help student-athletes respond to anxiety more efficiently inside and outside of sport. Deep breathing, visualization, and maintaining perspective were some of the coping responses that were discussed.

Application:

The main application strategy was inspired by Navy Seal Mark Divine in his book, *Staring Down the Wolf*. This book referenced how Navy Seals dealt with nerves and anxiety by confronting their fears. Figure 4.24 illustrates common fears that provoke anxiety in humans while Figure 4.25 exemplifies default-driven responses to mismanaged fear and anxiety:

Figure 4.24 *Lecture Slide #128*

Figure 4.25 *Lecture Slide #129*

After discussing fears that limit potential, students were asked to write down within the outline of a wolf their greatest fears as a student-athlete. Lecture attempted to model the cognitive trials and tribulations that go along with identifying, sharing, and ultimately facing one's fears, including events that commonly make student-athlete's nervous.

The second application activity consisted of a Jenga! tournament where students could compete and have a chance to manage their nerves and anxiety within a competitive game. It was reiterated that if they wanted to perform at their best, they should apply one of the following application strategies that were already discussed: maintaining a proper perspective, taking a deep breath, visualizing success, controlling the controllables, and confronting their fears.

Day #56 – Day #65: Leadership

Figure 4.26 *Lecture Slides #132-142: Leadership*

Knowledge:

The 8th mental skill taught was Leadership. Leadership was defined in the following way: "I positively lead others through my words, attitudes, actions, and behaviors. I have a successful vision for our team and stay enthusiastic about executing our mission and achieving our goals. While I can lead, I can also be led." Leadership was taught as a mental skill within the positive psychology framework. If they wanted to be better leaders who inspired positive change, they

had to build mental skill in leadership. It was explained that to lead others, they first must be able lead themselves. To learn more about leadership from a performance psychology perspective, students were provided with leadership case study examples from companies like Google and Amazon and military organizations like the U.S. Navy Seals and U.S. Army. Famous political leaders like Theodore Roosevelt and Martin Luther King, Jr. were also incorporated. To learn more about leadership from a sport psychology perspective, students were provided with knowledge from head coaches like John Wooden and Pat Summitt.

Application:

After studying these elite companies, organizations, and individuals, the main application activity was a team application project on leadership. This project asked them to study a high-performance culture and make an argument on why their example of leadership, mindset, and discipline was one of the best the world has ever seen. In the end, students selected to present on famous teams like the New England Patriots and famous military cultures like the Spartans.

Day #66 – Day #67: Intensity

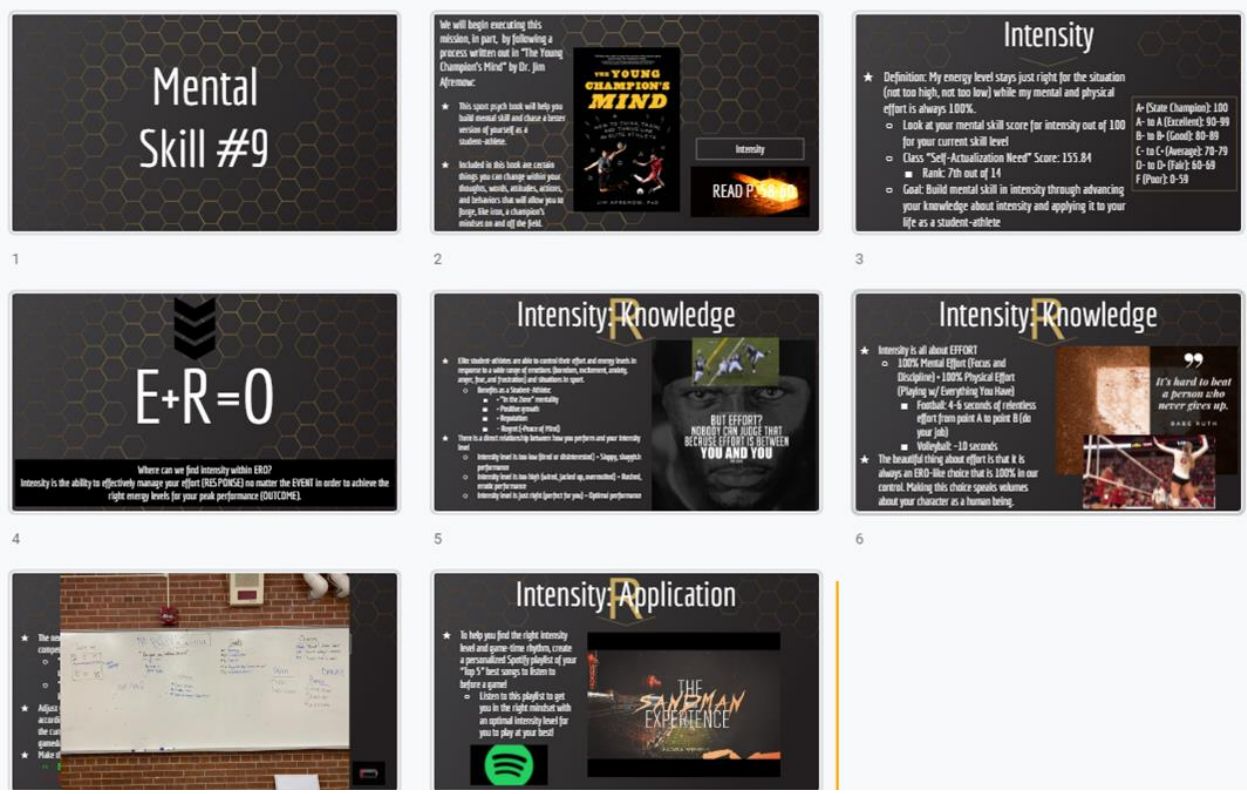


Figure 4.27 *Lecture Slides 143-150: Intensity*

Knowledge:

The 9th mental skill taught was intensity. Intensity was defined in the following way: “My energy level stays just right for the situation (not too high, not too low) while my mental and physical effort is always 100%.” Intensity within Event + Response = Outcome was defined as the ability to effectively manage one's effort no matter the event in order to achieve the right energy levels for peak performance. It was explained that Intensity was all about effort and energy. Intensity was a choice 100% in their control and a great reflection of their personal character. It was a choice to be "energy-makers" or "energy-takers” as student-athletes. For example, Intensity in football was exemplified by playing with relentless effort for 4-6 seconds, the average length of a high school football play. In volleyball, Intensity was demonstrated

through game film on several possessions after a kill. In fact, one of the volleyball girls taking the course shared a picture of their whiteboard in the locker room pre-game (See Figure 4.28), which illustrated several of our sport and performance psychology principles, including "Energy" as their #1 goal.

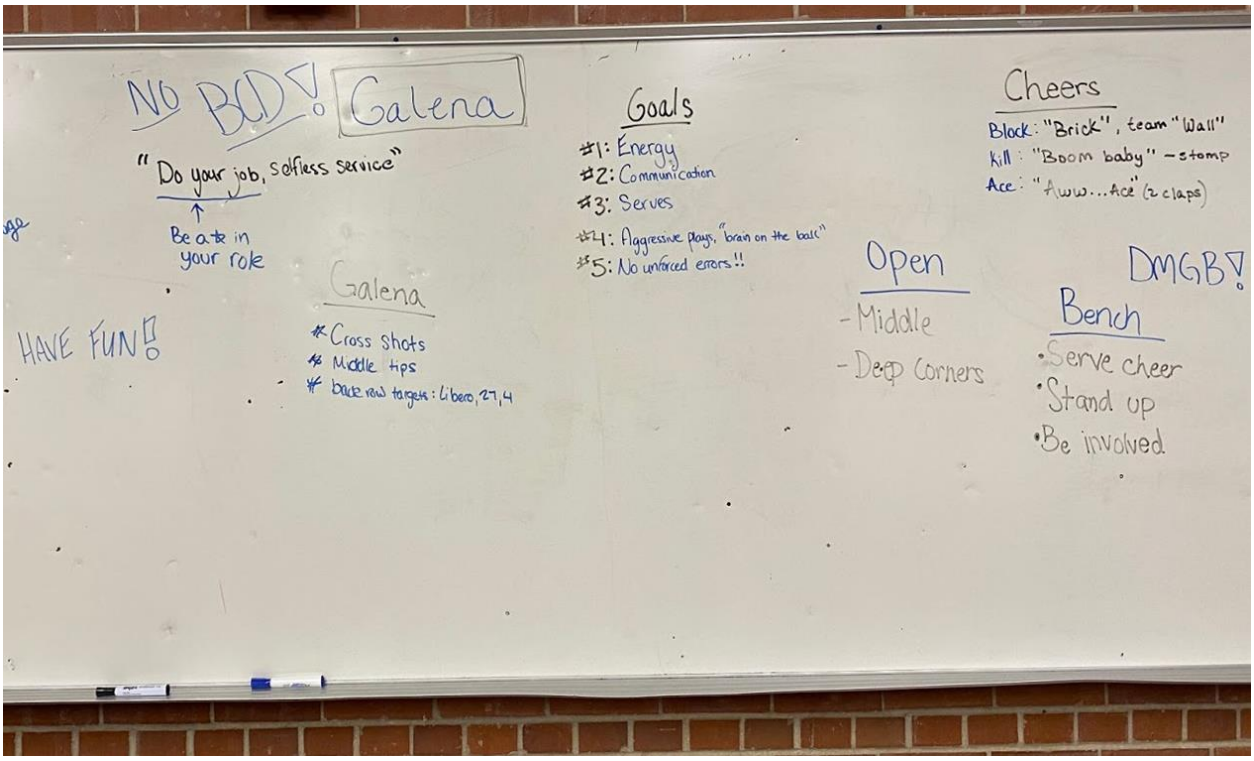


Figure 4.28 *Example of Sport and Performance Psychology's Influence in Volleyball*

Application:

The main application activity for Intensity included creating a personalized Spotify playlist in which they selected songs that would help them find the right intensity and game-time rhythm. There was a music video from Virginia Tech football playing "Enter Sandman" which was shown to demonstrate how music is incorporated in sports to get athletes into the right mindset. After this example, students listened to music and selected their top five best songs to listen to before a game to help them reach the right level of intensity. They put this playlist in the "Mind Gym" section of their "Mental Game Scorecard".

Day #68 – Day #70: Time-Management

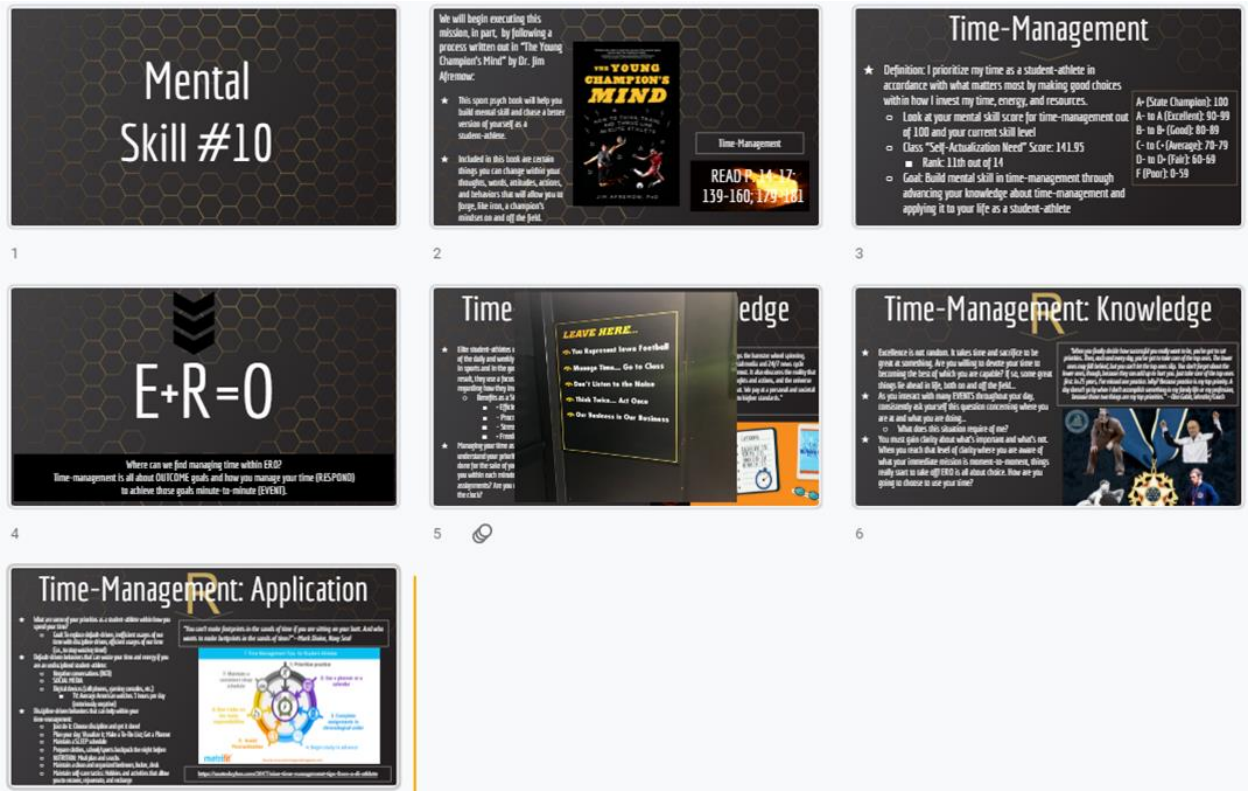


Figure 4.29 *Lecture Slides #151-157: Time-Management*

Knowledge:

The 10th mental skill that was taught was Time-Management. Time-Management was defined in the following way: "I prioritize my time as a student-athlete in accordance with what matters most by making good choices within how I invest my time, energy, and resources." While Time-Management curriculum was limited, students were able to discuss the many demands placed upon them as a student-athlete. The connection between time-management and default-driven responses like procrastination was also made. As a result, curriculum was introduced that shared effective discipline-driven strategies that have been used by students and athletes in the real-world to manage their time.

Application:

The main application activity consisted of having students order their priorities in life. Students were also asked to choose one default-driven behavior to minimize and one discipline-driven behavior to enhance. Due to time constraints, there was no formal follow-up to this application activity.

Day #71 – Day #75: Self-Talk

Figure 4.30 *Lecture Slides #158-166: Self-Talk*

Knowledge:

The 11th mental skill taught was Self-Talk. Self-Talk was defined in the following way: "I pay attention to my inner dialogue and talk to myself in a positive way with high performance language." Because Self-Talk had the highest level of self-actualization need, several definitions, examples, and quotes were provided to enhance understanding. Cognitive modeling was also used to help students learn how self-talk can manifest itself within an individual's mind.

Strategies and techniques to combat negative self-talk were also discussed, specifically building self-awareness and using thought stoppage cues.

Application:

There were two main application activities for Self-Talk. First, students had to develop a positive mantra or saying that was reflective of positive self-talk. For example, "Stop, not helpful" was discussed as a beneficial thought stoppage phrase to counter negative self-talk. There was also a second application activity which was used to help students build self-awareness of their self-talk. In this challenge, they had to wear a rubber band on their wrist, and every time they noticed it, they had to bring to their attention their thoughts and feelings at that exact moment. They would then write down these thoughts and feelings and examine them as positive or negative self-talk.

Day #76: Body Language

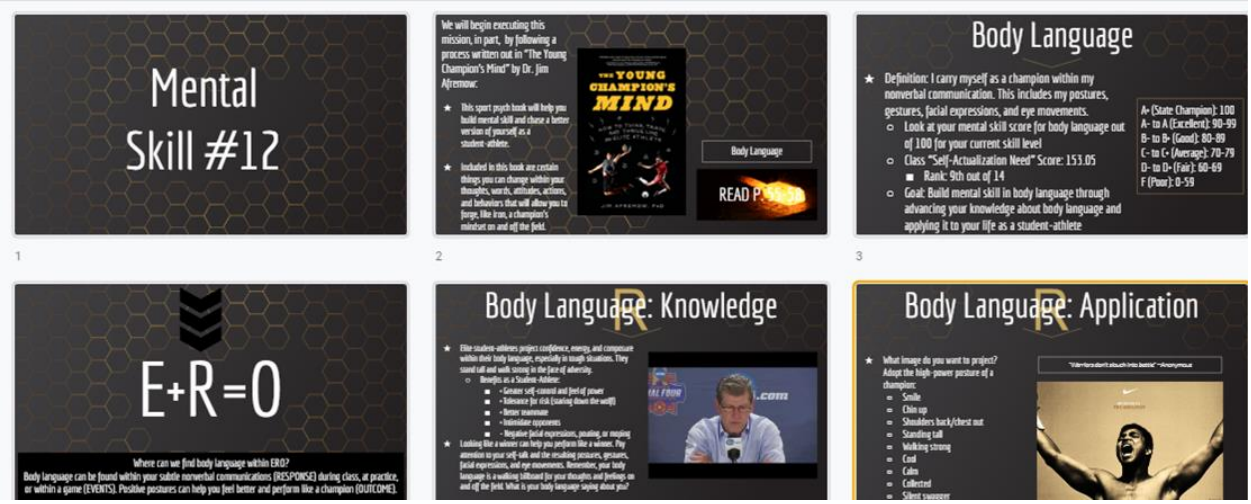


Figure 4.31 *Lecture Slides #167-171: Body Language*

Knowledge:

The 12th mental skill taught was Body Language. Body Language was defined in the following way: “I carry myself as a champion within my nonverbal communication. This

includes my postures, gestures, facial expressions, and eye movements." To connect body language to Event + Response = Outcome, it was explained to students that body language consisted of subtle nonverbal communications that were part of their overall response as a student-athlete. To enhance credibility of this mental skill, a video clip of University of Connecticut women's basketball coach Geno Auriemma was shown in which he discussed its importance within performing like a champion. Body Language was included after Self-Talk because one's postures, gestures, and facial expressions are oftentimes a billboard for one's inner dialogue.

Application:

For the main application activity, students were asked to write down the type of image they wanted to project as a student-athlete. They were challenged to adopt the posture of a champion by including some of the following things within their image: smiling, chin up, shoulders back/chest out, standing tall, walking strong, being cool, calm, and collected, and walking with a silent swagger.

Day #77 – Day #80: Confidence

Figure 4.32 *Lectures Slides #174-180: Confidence*

Knowledge:

The 13th mental skill that taught was Confidence. Confidence was defined in the following way: "I have a strong belief in my skills, preparation, and abilities. I have a can-do attitude when I need it the most." Confidence was the last mental skill with a high level of self-actualization need to be taught. Confidence was included towards the end of the course because confidence is partially a reflection of one's belief in the level of skill they have developed as a student-athlete. If they had approached the course the right way, it was explained that they should be confident in the champion's mindset they were in the process of forging through the building of mental skill. Other components of self-confidence were also discussed. This included reflecting more on their previous successes, emitting more positive self-talk and body language,

preparing more, doing more without fear of judgment, and believing more by talking to people who instill confidence.

Application:

For the main application activity, students took the VIA character strengths survey to determine their character strengths as a student-athlete. These character strengths consisted of personality traits like perseverance, honesty, and kindness. After reviewing their best character strengths identified by this positive psychology assessment, it was explained that they should take confidence in the bolts of greatness that already existed within them. They were also informed that they would flourish if they applied these unique character strengths to their life. This, in turn, would help breed confidence. As a class, their highest ranking character strength was humor. To finish this application activity, students were encouraged to pick one character strength to apply during their next 24-hours of school, sports, or life. This was followed-up by a self-reflection in order to examine their results.

Day #81 – Day #88: Being a Good Teammate

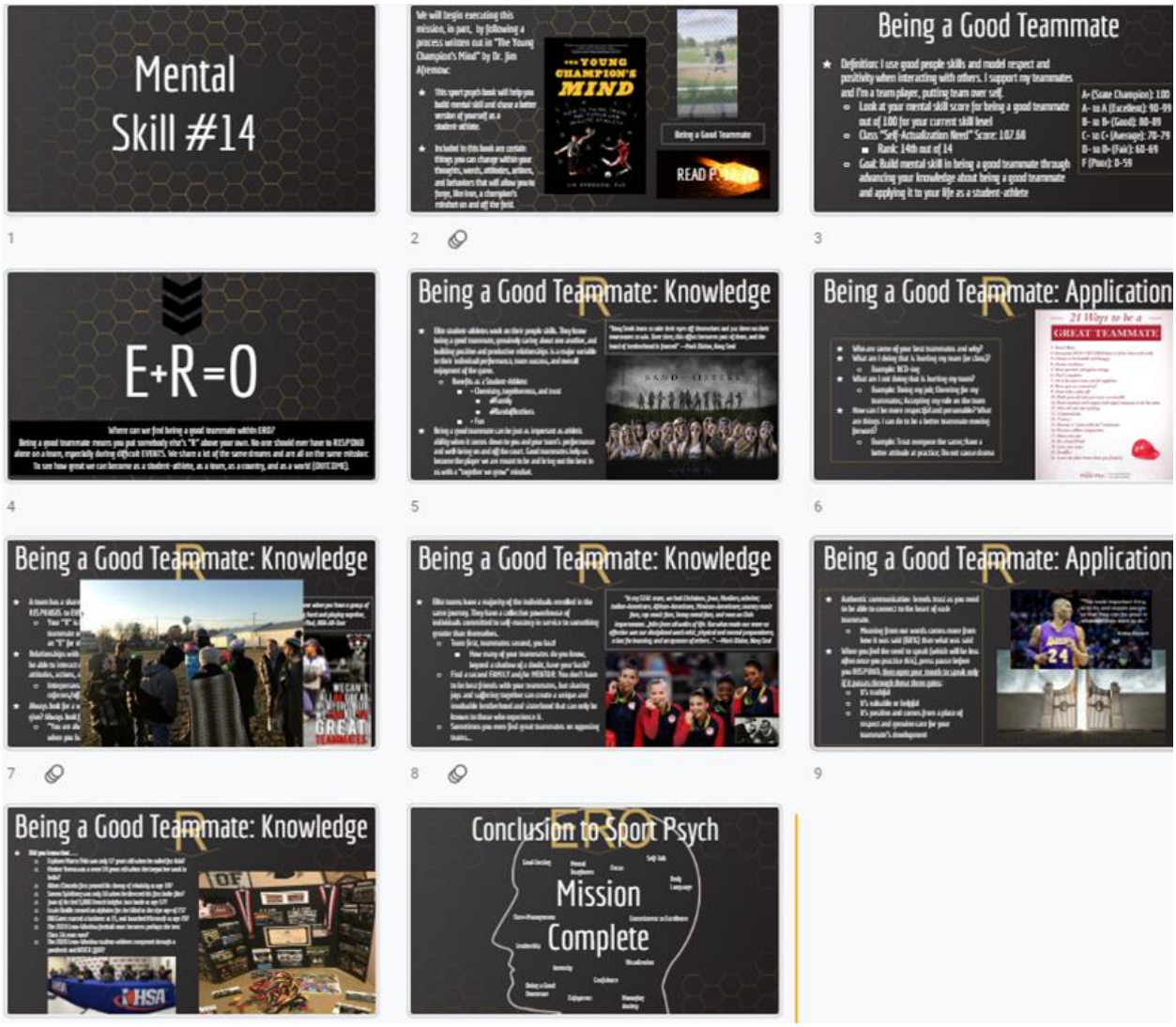


Figure 4.33 *Lecture Slides #181-191: Being a Good Teammate*

Knowledge:

The 14th and final mental skill taught was Being a Good Teammate. Being a Good Teammate was defined in the following way: "I use good people skills and model respect and positivity when interacting with others. I support my teammates and I'm a team player, putting team over self." This mental skill was last because it was the lowest ranked mental skill in regards to self-actualization need. Being a Good Teammate was explained as being synonymous with being a good classmate, employee, citizen, and person overall. Within the Event + Response

= Outcome framework, Being a Good Teammate was described as putting somebody else's "R" above their own. Being a Good Teammate also meant that nobody should ever have to respond alone on a team, especially during a difficult event. Finally, interview #3 was also conducted during this time.

Application:

The application activity for Being a Good Teammate had a long-term focus because students were nearing the end of the course. This application activity consisted of a long-term challenge to see how great they could become not only as a student-athlete, but as a team, as a country, and as a world. It was discussed that the ultimate outcome to this challenge depended on them and the quality of their responses every single day. While the course mission was complete for now, it was explained to them that the mission of chasing excellence and becoming the best version of themselves continued on beyond *Sport and Performance Psychology* like an infinite game, and every team they would be a part of, now and forever, depended upon their response. While eventually their career would end as a student-athlete, their performance and well-being in life would be never-ending as a human on this planet. It was established that all of these mental skills they learned would be a major factor in their ability to win in the game of life.

Day #89: Post-Course Quantitative and Qualitative Survey

Similar to the pre-course quantitative and qualitative survey, the post-course quantitative and qualitative survey had students provide self-ratings for each of the 14 mental skills. While taking this survey, students were able to access their pre-course self-ratings within their "Mental Game Scorecard". These post-course self-ratings reflected their perceived level of mental skill after taking the *Sport and Performance Psychology* course. The post-course survey also asked them to explain these new self-ratings.

Day #90: Mental Game Scorecard

After taking the post-course survey, each student transferred their quantitative and qualitative results to their "Mental Game Scorecard." At this time, they would also record the amount of change in mental skill. This was an important final step for each student as they completed their new performance profile after having taken the course. Figure 4.34 provides a partial snapshot of one participant's post-course "Mental Game Scorecard":

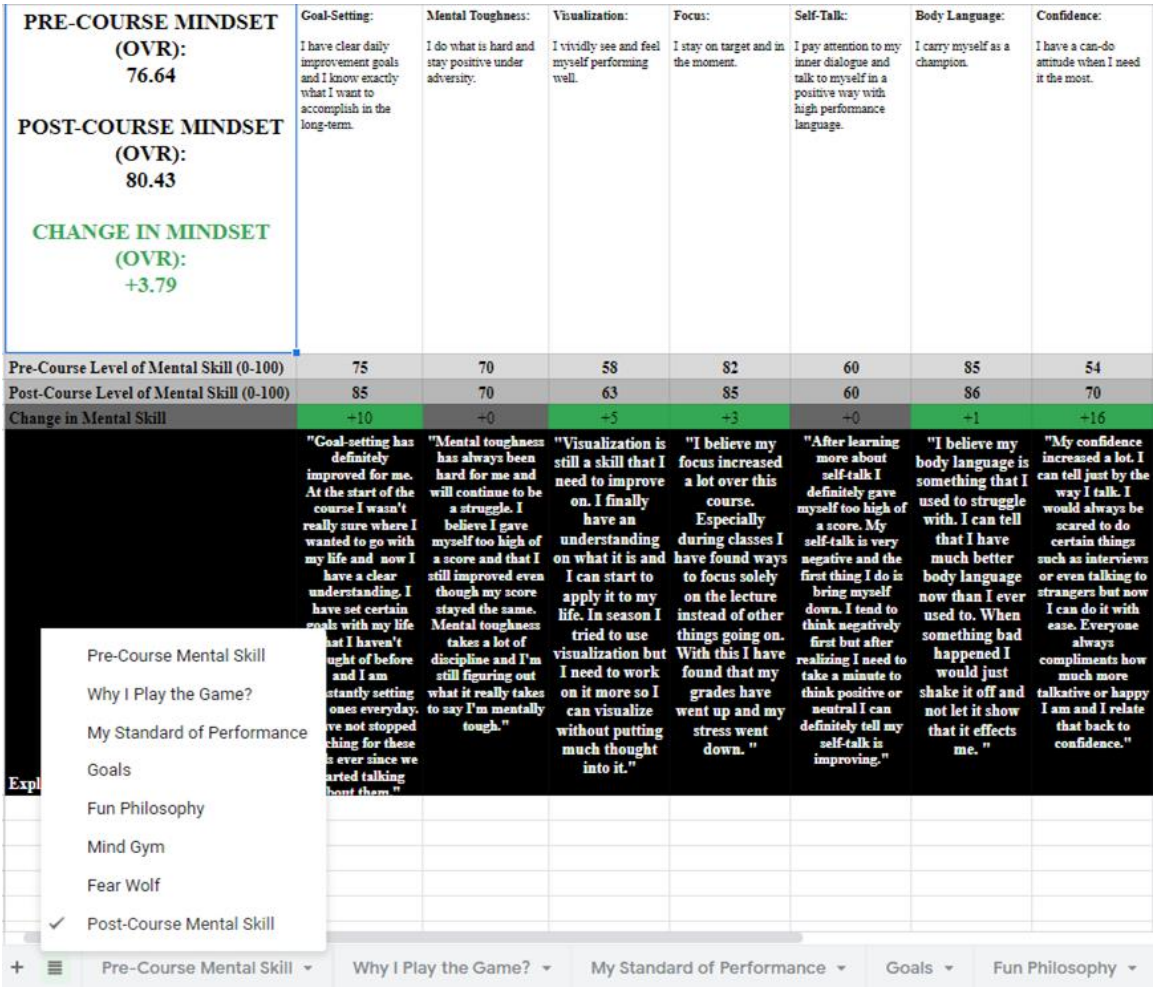


Figure 4.34 *Participant Coursework: Snapshot of a Post-Course Mental Game Scorecard*

This “Mental Game Scorecard” was a capsule of each student-athlete’s mental skills. In the end, it provided a unique glimpse into the mindset that fueled each individual’s performance and

well-being. As a result, each student was able to print or save a copy of their personal performance profile. Once this task was finished, the course was officially completed.

4.3.2: Evaluating Pre-Course Level of Mental Skill to Post-Course Level of Mental Skill

This section evaluates the extent to which student-athletes have built mental skill in the 14 mental skills taught in *Sport and Performance Psychology*. The main assessment method used to determine student-athlete growth in learning and applying these mental skills was a pre- and post-course survey. In essence, this survey method captured each student-athlete's perceived skill level in all 14 mental skills. In this case, the self-ratings from before the course began were compared to the self-ratings following the course's completion. Student-athlete self-ratings were based on the scale presented in Table 4.2:

Table 4.2 *Mental Skill Self-Ratings Scale*

Description of Skill Level	**Self-Rating**
A+ (State Champion)	100
A- to A (Excellent)	90-99
B- to B+ (Good)	80-89
C- to C+ (Average)	70-79
D- to D+ (Fair)	60-69
F (Poor)	0-59

The differences in these quantitative self-ratings helped determine the extent to which the course was effective in building mental skill. As a result, findings were determined by evaluating the level of mental skill in each of the 14 mental skills at both an individual level and class level.

4.3.2.1 Evaluating Pre-Course Level of Mental Skill

During week one of *Sport and Performance Psychology*, a baseline for each individual's current level of skill was established for each of the 14 mental skills. This baseline was determined through a pre-course survey and served as a needs analysis for each student-athlete and the class as a whole. Because design and implementation of the course was informed by these results, this baseline needs analysis was critical to understand the course experience. While each student-athlete's self-ratings were different, patterns and themes began to emerge when the data was combined into an entire class data set.

As a result, Figure 4.35 illustrates the first major result of the needs analysis by illustrating the pre-course class average for each of the 14 mental skills:

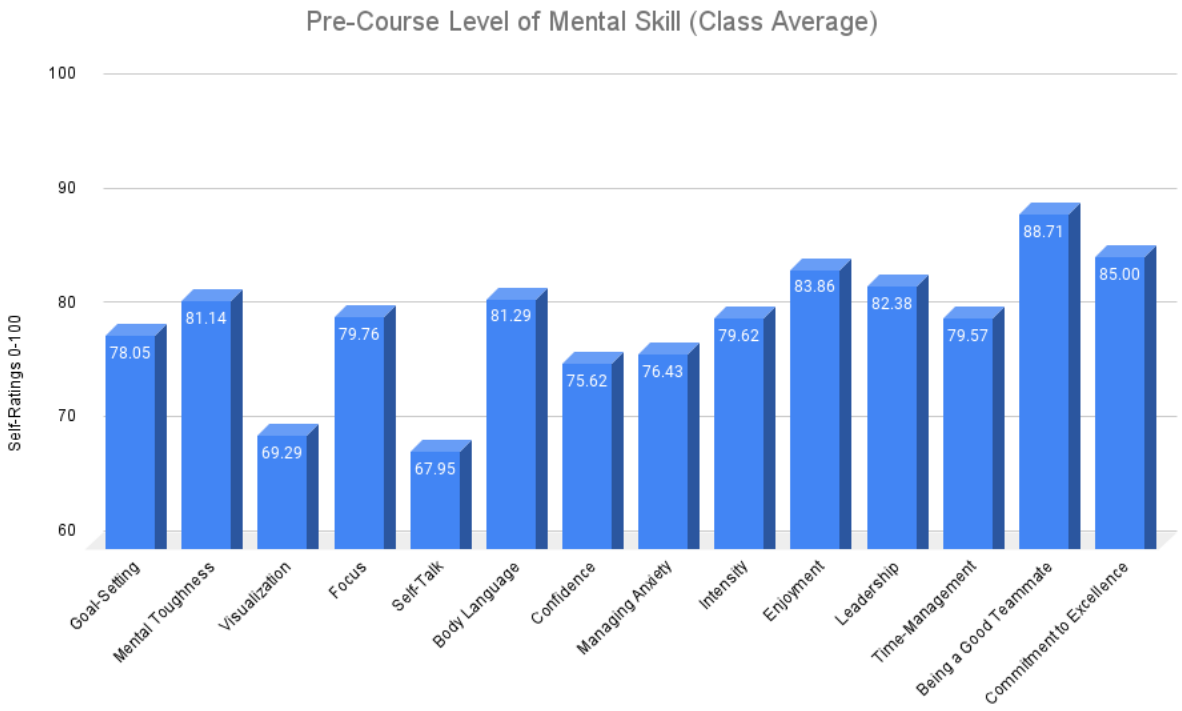


Figure 4.35 *Class Average of Participant Skill Level Per Mental Skill*

Being a Good Teammate had the highest level of mental skill at 88.71, while Self-Talk had the lowest level of mental skill at 67.95. These quantitative results were also broken down by descriptive skill level to help organize the results into proficiency categories. This is shown in Table 4.3.

Table 4.3 *Pre-Course Descriptive Skill Level Results*

Description of Skill Level	**Pre-Course Self-Rating (0-100)**	**Quantity of Mental Skills at the Skill Level**	**Name of Mental Skill(s)**
A+ (State Champion)	100	0	None
A- to A (Excellent)	90-99	0	None
B- to B+ (Good)	80-89	6	Mental Toughness, Body Language, Enjoyment, Leadership, Being a Good Teammate, and Commitment to Excellence
C- to C+ (Average)	70-79	6	Goal-Setting, Focus, Confidence, Managing Anxiety, Intensity, and Time-Management
D- to D+ (Fair)	60-69	2	Visualization and Self-Talk
F (Poor)	0-59	0	None

First, no mental skills were rated at the “Excellent” or “State Champion” level. In fact, most mental skills were identified by student-athletes as “Average” to “Good”, with six mental skills being found at each skill level. However, two mental skills were notably rated as “Fair”.

After analyzing these results, it became clear there was an opportunity to build mental skill in this group of student-athletes. As a result, the following mental skills were listed in order of skill level need based on these pre-course results (ranked in order from lowest amount of mental skill to highest amount of mental skill):

1. Self-Talk
2. Visualization
3. Confidence

4. Managing Anxiety
5. Goal-Setting
6. Time-Management
7. Intensity
8. Focus
9. Mental Toughness
10. Body Language
11. Leadership
12. Enjoyment
13. Commitment to Excellence
14. Being a Good Teammate

4.3.2.2 Evaluating Post-Course Level of Mental Skill

During the final week of *Sport and Performance Psychology*, a post-course survey was given to student-athletes to help evaluate changes in skill level. These differences were determined by comparing pre- and post-course self-ratings for each of the 14 mental skills taught in the course. The extent to which mental skill was built in these high school student-athletes was a key research question which would help determine effectiveness of course design and implementation. The primary and overriding finding within the present study was that mental skill could be built to a measurable extent within the mindset of high school student-athletes. Specifically, quantitative results revealed that mental skill can be developed within the mindset of high school student-athletes at a class level and individual level.

Class Results

At the class level, the average level of mental skill increased in all 14 mental skills (100%). This growth in all 14 mental skills is best illustrated in Figure 4.36, which is a side-by-side comparison of the class' average pre-course level of mental skill versus the class' average post-course level of mental skill:

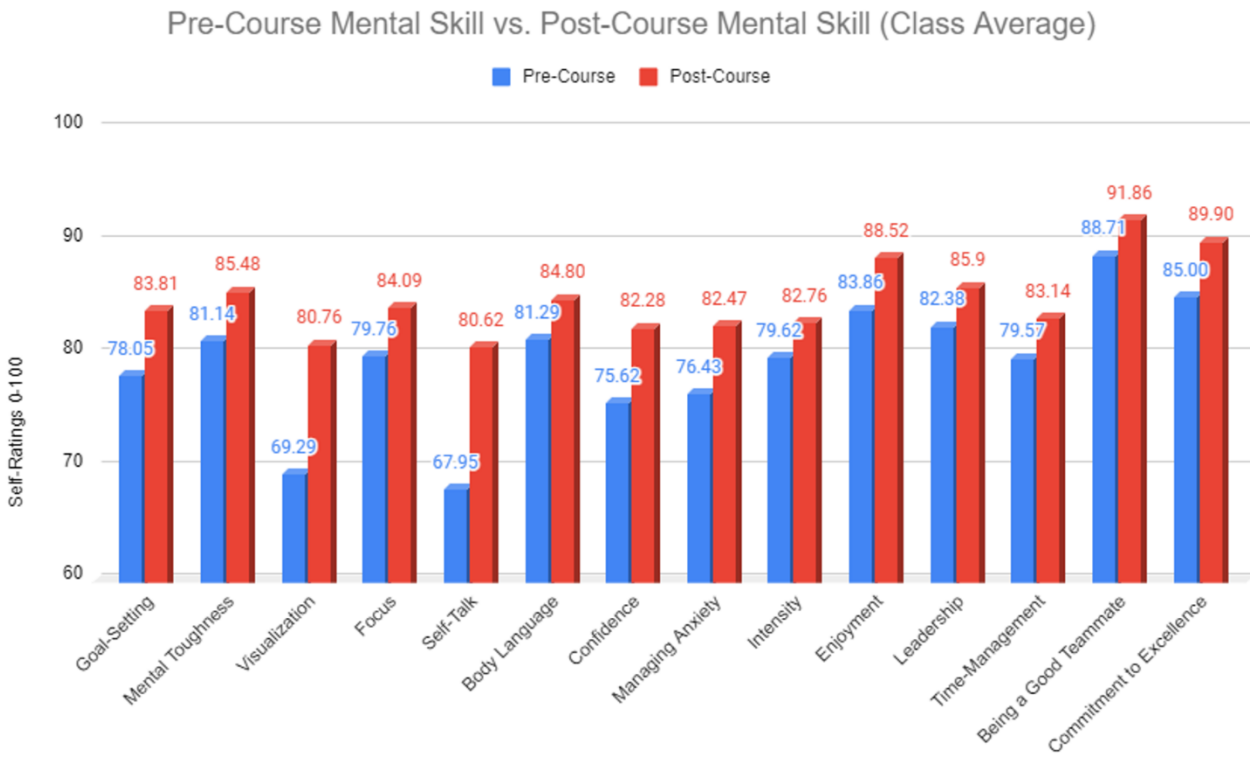


Figure 4.36 *Side-by-Side Comparison of Mental Skill Level (Before and After Sport and Performance Psychology)*

Given these post-course results, it can be deduced that this growth can be attributed to the curriculum and pedagogy that was dedicated to each mental skill in the *Sport and Performance Psychology* course. However, the amount of growth across each mental skill was not equal (as shown in Figure 4.37).

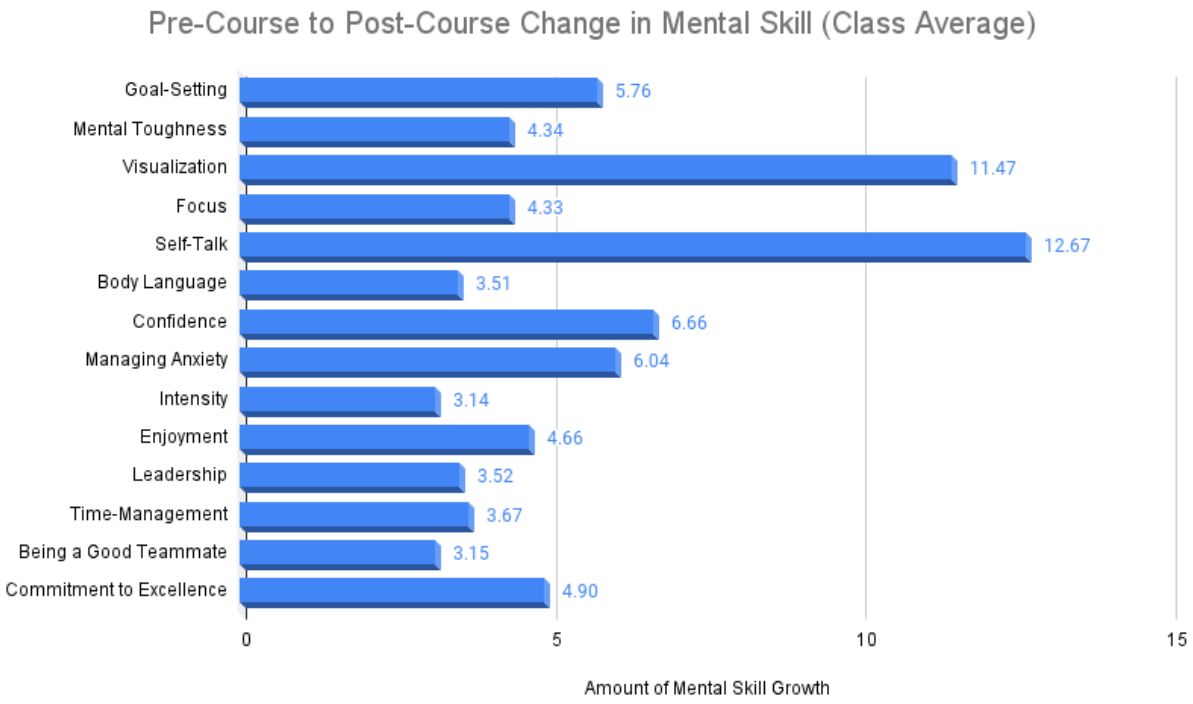


Figure 4.37 *Average Change in Student-Athlete Self-Ratings*

With an average amount of change in student-athlete self-rating per mental skill of +5.56, or half a skill level, these increases were enough for many of the mental skills to move skill levels as established within the pre-course survey results (See *Section 4.3.2.1*). This is illustrated in Table 4.4:

Table 4.4 Post-Course Descriptive Skill Level Results

Description of Skill Level	Post-Course Self-Rating (0-100)	Quantity of Mental Skills at the Skill Level	Name of Mental Skill(s)
A+ (State Champion)	100	0	None
A- to A (Excellent)	90-99	1	Being a Good Teammate
B- to B+ (Good)	80-89	13	Commitment to Excellence, Enjoyment, Leadership, Mental Toughness, Body Language, Focus, Goal-Setting, Time-Management, Intensity, Managing Anxiety, Confidence, Visualization, Self-Talk
C- to C+ (Average)	70-79	0	None
D- to D+ (Fair)	60-69	0	None
F (Poor)	0-59	0	None

In fact, 13 of 14 mental skills were now identified as “Good” with the Being a Good Teammate categorized as “Excellent”. Visualization and Self-Talk moved the most, improving two skill levels each from "Fair" to "Good". Eight mental skills moved one skill level from "Average" to "Good". Three other mental skills labeled as "Good" did not change skill levels. While all results revealed positive growth, most mental skills with the largest quantitative improvements were mental skills with the lowest amount of skill at the start of the course. For example, Self-Talk and Visualization were the two lowest mental skills with an average self-rating of 67.95 and 69.29. By the end of the course, these two mental skills improved across the class, on average, by 12.67 and 11.47. These results provide strong evidence for the effectiveness of the course in building mental skill at a class level.

Individual Results

At an individual level, student-athletes reported a positive change, on average, in 10 of their 14 mental skills (71%). This led to a measurable improvement in mindset for all 21

participants (100%), as determined by a participant's average self-rating for all 14 of their mental skills. This improvement is demonstrated in Table 4.5:

Table 4.5 *Pre-Course vs. Post-Course Mindset Change for Each Participant*

Pre-Course Participant Mindset (Out of 100) + *Skill Level Description*	**Post-Course Participant Mindset (Out of 100) + *Skill Level Description***	**Percentage Change in Participant Mindset (+/-)**
79.64 *(Average)*	83.71 *(Good)*	+4.07%
73.50 *(Average)*	77.80 *(Average)*	+4.30%
73.78 *(Average)*	82.93 *(Good)*	+9.15%
77.36 *(Average)*	82.78 *(Good)*	+5.42%
79.29 *(Average)*	87.07 *(Good)*	+7.78%
84.71 *(Good)*	91.92 *(Excellent)*	+7.21%
79.71 *(Average)*	85.00 *(Good)*	+5.29%
74.85 *(Average)*	82.00 *(Good)*	+7.15%
82.71 *(Good)*	83.86 *(Good)*	+1.15%
81.79 *(Good)*	87.22 *(Good)*	+6.14%
84.21 *(Good)*	90.07 *(Excellent)*	+5.86%
77.40 *(Average)*	80.21 *(Good)*	+2.81%
82.64 *(Good)*	84.14 *(Good)*	+1.50%
91.70 *(Excellent)*	95.40 *(Excellent)*	+3.70%
84.71 *(Good)*	88.36 *(Good)*	+3.65%
68.43 *(Fair)*	78.93 *(Average)*	+10.50%
76.28 *(Average)*	81.42 *(Good)*	+5.14%

Table 4.5 (cont.)

81.64 *(Good)*	87.57 *(Good)*	+5.93%
82.07 *(Good)*	89.35 *(Good)*	+6.28%
76.64 *(Average)*	80.43 *(Good)*	+3.79%
70.64 *(Average)*	74.14 *(Average)*	+3.50%

In total, the average participant mindset change saw an increase of +5.25%, improving from an "Average" overall mindset of 79.23 to a "Good" overall mindset of 84.48. The highest individual level of change was reported at +10.50% while the lowest individual level of changed was reported at +1.15%. The frequency of these change amounts are represented in Table 4.6:

Table 4.6 *Quantity of Change Amounts in Student-Athlete Mindset*

Growth Percentage in Student-Athlete Mindset	**Number of Student-Athletes in This Range (N=21)**
1-3%	3
3-5%	6
5-7%	7
7-9%	3
9-11%	2

These results provide strong evidence for the effectiveness of the course in building mental skill at an individual level.

4.3.3: Evaluating the Impact of Mental Skill Development on Self-Actualization Needs

This section will evaluate the extent to which building mental skill addressed various self-actualization needs of student-athletes. While mental skill level was important to analyze as demonstrated in *Section 4.3.2*, it was also important to put this skill level in context according the theoretical foundations of the present study. In the present study, building mental skill was

viewed as the main factor to facilitating self-actualization in student-athletes. This self-actualization would help student-athletes become the best version of themselves through psychological development inspired by the design and implementation of a *Sport and Performance Psychology* course. Because the self-actualization process is highly personalized, this section will emphasize qualitative data to give voice to student-athlete needs, specifically evaluating how building mental skill impacted their personal needs in sports, school, and life. Overall, the present study finds that a variety of self-actualization needs exist within the lives of high school student-athletes. Most importantly, the present study also finds these needs can be addressed to an extent through mental skill development. By building mental skill in *Sport and Performance Psychology*, all 21 student-athletes determined they were able to become a better version of themselves. These findings are expounded upon in the following two sub-sections.

4.3.3.1: Evaluating Pre-Course Self-Actualization Needs

During week one of the course, pre-course self-actualization scores were also established by gathering quantitative results from the pre-course survey and "Mental Game Scorecard". This served as another kind of baseline to help understand how student-athlete needs connected to each mental skill. Thus, to help better determine self-actualization needs at both an individual and class level, the perceived importance of each mental skill was assessed on top of level of skill. Because several mental skills had similar levels of skill, adding an 'importance' self-rating helped the teacher-researcher separate mental skills like Intensity and Focus, which had average self-rating scores of 79.62 and 79.76, respectively. To obtain these results, the following equation was used as explained previously in *Section 3.7.7.1*: (Desired Level of Skill - Actual Level of Skill) x Importance = Final Score. In essence, the higher the final score, the greater the

psychological need for that mental skill. The quantitative results for each mental skill's average final score can be found in Figure 4.38:

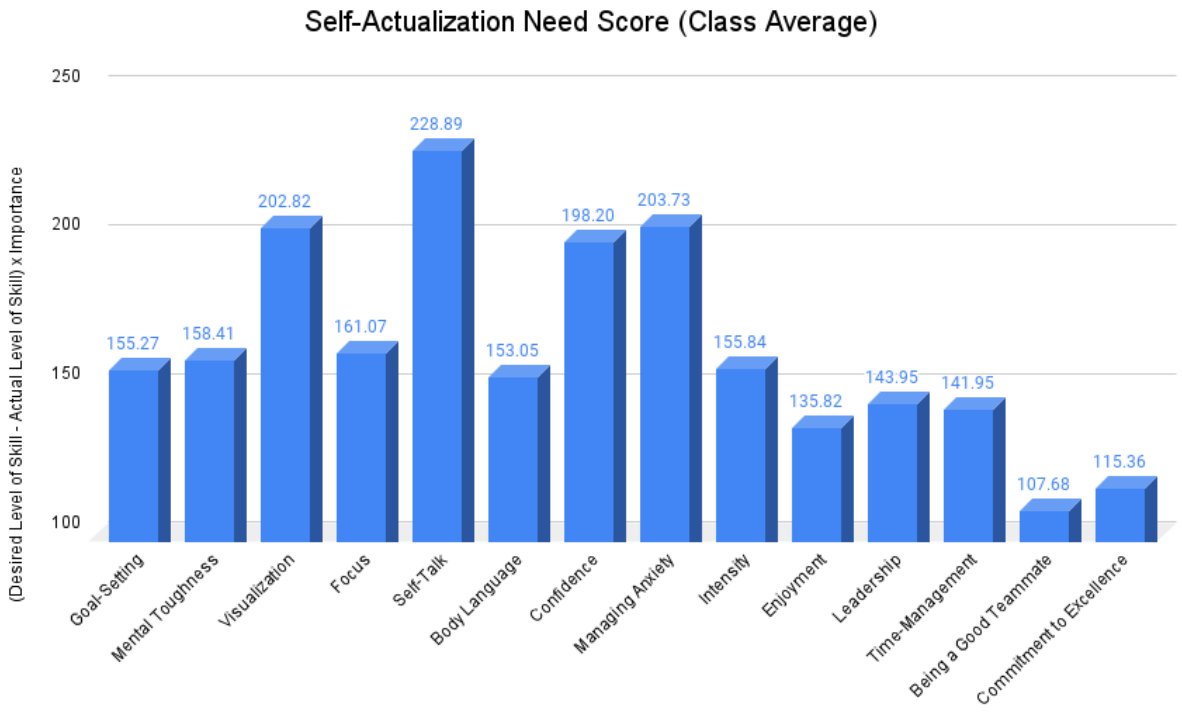


Figure 4.38 *Class Self-Actualization Need Score Per Mental Skill*

Self-Talk and Managing Anxiety had the highest degree of self-actualization need with a final score of 228.89 and 203.73, while Being a Good Teammate and Commitment to Excellence had the lowest degree of self-actualization need with a final score of 107.68 and 115.36. When level of mental skill was compared to self-actualization need, there was a general relationship as expected in 10 of 14 mental skills (i.e., the lower the level of mental skill, the higher the need). However, student-athletes identified Focus and Mental Toughness as two mental skills that were statistically significant to their self-actualization and Time-Management as a mental skill that was of lesser importance to their personal growth. These final scores were important to the

curriculum and design of the course as they were used to emphasize certain mental skills while limiting the amount of time teaching others.

As a consequence, these results were organized into Table 4.7, which illustrates the varying degrees of self-actualization need for each mental skill.

Table 4.7 *Categories of Self-Actualization Need*

Degree of Self-Actualization Need	**Pre-Course Score**	**Quantity of Mental Skills in Category**	**Name of Mental Skill**
Highest Level of Self-Actualization Need	198.20-228.89	4	Self-Talk, Managing Anxiety, Visualization, Confidence
Moderate Level of Self-Actualization Need	141.95-161.07	7	Focus, Mental Toughness, Intensity, Goal-Setting, Body Language, Leadership, Time-Management
Lowest Level of Self-Actualization Need	107.68-135.82	3	Enjoyment, Commitment to Excellence, Being a Good Teammate

Pre-course results made it clear that the highest degree of self-actualization need resided within the mental skills of Self-Talk, Managing Anxiety, Visualization, and Confidence. There also existed a moderate degree of self-actualization need within Focus, Mental Toughness, Intensity, Goal-Setting, Body Language, Leadership, and Time-Management. The lowest degree of self-actualization need included the mental skills of Enjoyment, Commitment to Excellence, and Being a Good Teammate. As a result, based on the self-actualization formula used by many sport psychologists like Keegan (2016), the following data set was seen as a self-actualization needs assessment for the entire *Sport and Performance Psychology* class, with each mental skill listed in order from the highest to the lowest self-actualization need. Student-athlete quotes are also provided to help provide an illustrative descriptive sample for the specific self-actualization needs which existed in the present study:

#1: Self-Talk

Pre-Course Self-Actualization Need Score: 228.89

Self-Talk was identified by student-athletes as the mental construct with the lowest level of mental skill and the greatest degree of self-actualization need. It was #1 in both quantitative categories and was one of two mental skills labeled as "Fair". After analyzing the qualitative responses, a general theme emerged as to why this mental skill had the greatest self-actualization need. While some student-athletes were unsure of what this mental skill represented and thus assigned themselves a lower score due to their lack of knowledge, a majority of them simply did not possess a high level of this skill. Still, some student-athletes were able to identify self-talk as a critical mental skill to their athletic development, possibly representative of why so many student-athletes identified this mental skill as of the utmost importance to their performance and well-being.

Table 4.8 *Student-Athlete Self-Actualization Need Quotes on Self-Talk*

Quote #1	**Quote #2**	**Quote #3**
"I tend to bring myself down with what I think to myself."	"I think that self-talk is putting positive thoughts in your head like before a 400m dash you would think this won't be bad or I'm going to win this. I'm not good at that at all."	"I always find myself talking to myself, during games or practices, without even realizing it. I always think to myself, what I'm doing wrong or how to fix something or even to just calm myself down. Which definitely helps me become a better athlete."

#2: Managing Anxiety

Self-Actualization Need Score: 203.73

Managing Anxiety was a mental skill well-known by all participants. It was identified by a majority as extremely important to performance and well-being. As a result, there was a critical need here that had to be addressed in the curriculum and design of the course. While some

referenced common pre-performance anxiety, there was a theme of anxiousness amongst almost half of participants. A few responses spoke very candidly about their state of anxiety.

Table 4.9 *Student-Athlete Self-Actualization Need Quotes on Managing Anxiety*

Quote #1	**Quote #2**	**Quote #3**
"This is something I struggle with. I know that everyone gets nervous or the butterflies before games but mine are insane."	"Having anxiety does make managing anxiety harder. My anxiety does get the best of me at times and especially this past year it has been rough but one of my New Year's Resolutions is to try to control my anxiety better."	"I chose a 72/100 [for my level of mental skill] because I have really bad anxiety with almost everything I do and although I'm able to manage it, some days I'm just not able to."

#3: Visualization

Self-Actualization Need Score: 202.82

Visualization was identified by student-athletes as the mental construct with the second-lowest amount of mental skill and the third-greatest self-actualization need. It was one of two mental skills labeled as "Fair". While Self-Talk was exceptionally low on mental skill due to lack of knowledge and an inability to apply positive self-talk strategies, Visualization was extremely low because a majority of participants did not know what it was. In fact, only 4 out of 21 (19%) student-athletes had a general understanding of what this mental skill represented. Of those participants, none of them really knew how to apply it.

Table 4.10 *Student-Athlete Self-Actualization Need Quotes on Visualization*

Quote #1	Quote #2	Quote #3
"Based on what I think it means which is visualizing success or goals to help you aim for them, I feel like I could improve on this because I do visualize my success to help me strive for it but it is not something I use very often and I could use some work."	"I scored so low on visualization because I am not completely aware of what it means."	"I don't really understand what visualization is. I think it's being able to picture your future success and put yourself in that situation. I'm not very good at that either because as an athlete, I tend to wait until I'm in the moment rather than preparing for the moment ahead of time."

#4: Confidence

Self-Actualization Need Score: 198.20

Confidence was the last of the four mental skills that were identified within the "Highest Level of Self-Actualization Need" category. While a few student-athletes listed confidence as one of their best mental attributes, many participants expressed the desire to become more confident as a student-athlete, with one exclaiming they completely "lost" their confidence throughout their high school years. Other respondents expressed similar sentiments, which made this mental skill important to the self-actualization process.

Table 4.11 *Student-Athlete Self-Actualization Need Quotes on Confidence*

Quote #1	Quote #2	Quote #3
"My confidence is one of my strong suits. Every time I shoot a basketball, I shoot it with the feeling that it is going to go in. Same idea with throwing a football or hitting a baseball. My confidence is built off of my preparation."	"I severely lack confidence while on the court and it very negatively effects my abilities and how I play. I am always second-guessing myself and I believe if I get more confidence it will bring my game to the next level."	"I'm not very confident because I know there are people that are better than me and that makes me feel the need to just give up."

#5: Focus

Self-Actualization Need Score: 161.07

Focus was the first of six mental skills identified as a "Moderate" level of need within student-athlete self-actualization. Many student-athletes reported focus as either something they weren't very good at or as a very context-dependent mental skill. Focus was referenced in different ways, such as focusing on the football field in key moments or focusing on long-term goals. While they recognized its importance to their academic and athletic performance, their application of this mental skill was reportedly varied at best, especially in different environments.

Table 4.12 *Student-Athlete Self-Actualization Need Quotes on Focus*

Quote #1	**Quote #2**	**Quote #3**
"I do not think that focus is a strength of mine, When I am interested in something my attention will stay focused but when something is not as interesting to me I will get distracted easily."	"My focus is always laser sharp when I'm doing something I love, like sports and lifting, but when it comes to school I sometimes find it hard to keep my mind on the goal."	"I genuinely believe I have very good focus when it comes to learning a new topic during class, learning a new play during basketball, or even just watching what's happening on the basketball court. I don't let distractions get the best of me and this is one of the bigger mental skills I have."

#6: Mental Toughness

Self-Actualization Need Score: 158.41

Mental Toughness was commonly identified as a solid mental skill which had "room for improvement". It was oftentimes referenced in connection with emotional control and responding to mistakes. While a few student-athletes noted their ability to respond to things like a holding penalty in football, the majority of respondents recognized the importance of strengthening their mental resiliency.

Table 4.13 Student-Athlete Self-Actualization Need Quotes on Mental Toughness

Quote #1	Quote #2	Quote #3
"Nothing fazes me on the field. I might get a holding penalty, and know my other 10 teammates on the field might hate me at that moment, but I know that the play is behind me and I have to move on and use the penalty as fuel."	"A lot of the time if I make a mistake I can shake it off but there are times when I can't so then I am frustrated the rest of the game."	"I feel my mental toughness can be pretty good, but with some things in life I feel I am not strong enough mentally to overcome them."

#7: Intensity

Self-Actualization Need Score: 155.84

Intensity was a mental skill that was conceptually a bit misunderstood by some student-athletes. Still, most referenced the importance of this skill in relation to effort, energy, and emotion. While a few responses recognized that their intensity fluctuated based on the situation, most responses positively referenced their level of intensity and doing things to the "absolute max".

Table 4.14 Student-Athlete Self-Actualization Need Quotes on Intensity

Quote #1	Quote #2	Quote #3
"It really depends on the situation I'm in that will determine my intensity I know it should be 100 percent all the time but it's just something I need to work on."	"I always talk to my teammates and try to get them more intense and wanting to win but when it comes to me, I don't always show the same intensity as I tell the people on my team."	"I am aware that I am elite at being intense when it comes to sports. When it is time to get to work, there is no more playing around."

#8: Goal-Setting

Self-Actualization Need Score: 155.27

An overwhelming majority of student-athletes responded as having set goals as a student-athlete. While knowledge of goal-setting was high, the need for improving this mental skill generally arose from the process of achieving those goals.

Table 4.15 *Student-Athlete Self-Actualization Need Quotes on Goal-Setting*

Quote #1	**Quote #2**	**Quote #3**
"I understand what goal-setting is and I do set goals for myself, but I don't go out of my way to make a list of goals or I don't take time to reflect on the goals I want to set for myself as an athlete."	"I feel like goal setting is something that I am good at doing but I need to work on learning how to achieve that goal. So basically I set great goals and I do achieve them a decent amount of the time, but I need to be better at planning how to put these goals into action with some sort of goal plan."	"I feel like I'm working hard, but I don't know if I'm working towards something"

#9: Body Language

Self-Actualization Need Score: 153.05

There was a general need to clarify body language and what effective body language actually represented in sport and performance psychology. Still, student-athletes understood the importance of this mental construct, especially during competition.

Table 4.16 *Student-Athlete Self-Actualization Need Quotes on Body Language*

Quote #1	**Quote #2**	**Quote #3**
"When I lose a wrestling match or make a dumb move I shake my head and get really mad."	"I feel like I'm very good at giving off good body language when things are looking up for me or my team, but when things go wrong I've been told my body language is often worse than it should be."	"Being a captain of the cheer team last year and the couple of practices we have had this year I think my body language is pretty positive. I'm always willing to do what coach wants us to do."

#10: Leadership

Self-Actualization Need Score: 143.95

Overall, 15 of 21 (71.42%) respondents identified themselves as leaders with a few others identifying themselves as individuals who would "stand back and let others lead me". This would validate the pre-course level of mental skill scores assigned during the self-rating process. However, many of these respondents also wanted to add a dimension to their leadership style, whether it was being more vocal or being better off the field.

Table 4.17 *Student-Athlete Self-Actualization Need Quotes on Leadership*

Quote #1	**Quote #2**	**Quote #3**
"I usually have a great aspect of leadership within sports and at my place of work, but sometimes I find it hard because I get nervous about making my voice heard."	"I always am trying to improve my leadership skills in cheer that I have learned over the years. Also being captain the last year and this year I have learned more about leadership and I feel like I'm able to be a leader to the underclassman."	"Something I really need to work on especially off the field which can be more important sometimes than on the field."

#11: Time-Management

Self-Actualization Need Score: 141.95

Time-Management was a well-understood concept by almost all student-athletes. While some respondents claimed to have "good" time-management skills, over half of respondents (52.38%) reported it was a skill that either needed improvement or something they wanted to work on. While some participants referenced common distractions like TV or cell phone, others mentioned the vast array of responsibilities they had to make time for as a student-athlete, like school, sports, work, friends, and family. Being able to balance all of these things without procrastinating was seemingly a common need.

Table 4.18 *Student-Athlete Self-Actualization Need Quotes on Time-Management*

Quote #1	Quote #2	Quote #3
"I'm not very good at managing time. I'm a procrastinator and I put things off until the end a lot. If we're talking managing clock in a football game though, I'm pretty good at that, but that's about it when it comes to time management for me. This is the mental skill I'm looking to develop the most because balancing sports with outside work is very important."	"I would say my time-management is pretty average. I feel that there's never enough time in the day to get done what I need to, but sometimes that happens because I procrastinate things I don't want to do."	"I've always been the person who was late or forgot something because I was rushing, something I will fix."

#12: Enjoyment

Self-Actualization Need Score: 135.82

Enjoyment was another well-understood mental skill in which student-athletes reported a high level of mental skill. Within responses, however, there was a diverse range of feelings about having fun in sport, from those who really enjoy sport to those who have lost their enjoyment in sport over the years, especially during COVID-19. However, the level of enjoyment within some of these responses was positively influenced by COVID-19, with 23.8% of them mentioning how the pandemic made them realize how much they enjoyed sports. Other factors which positively or negatively influenced their level of enjoyment included being part of a family, being victorious, too much focus on winning, and a negative mentality.

Table 4.19 *Student-Athlete Self-Actualization Need Quotes on Enjoyment*

Quote #1	Quote #2	Quote #3
"As an athlete, I love what I do and I enjoy the time I spend doing it. Sports is a big part of my life and I love sports because of the things you learn both as an athlete, and as a person."	"Almost every game I've played in my life I have fun. I joke around with my teammates. I enjoy running up and down the court. I enjoy everything I do in a game. One thing I wish I could change is to make my whole team enjoy it."	"My enjoyment declines in the sport I love and I believe my reasoning for this all comes back to my confidence and anxiety I get while playing."

#13: Commitment to Excellence

Self-Actualization Need Score: 115.36

Commitment to Excellence had the second-highest actual level of mental skill. Because this was a sport psychology course designed for student-athletes to chase excellence, it made sense that the student-athletes who chose to take the course would already have an internal drive to get better. Student-athlete responses mirrored this general commitment to excellence, with many of them wanting to learn how to get to the next step. However, due to this already high skill level, the self-actualization need scores were well-below the average of the other 12 mental skills.

Table 4.20 *Student-Athlete Self-Actualization Need Quotes on Commitment to Excellence*

Quote #1	Quote #2	Quote #3
"I do think that I am committed to my sports, but I do feel that I could be more determined to succeed and become better. I think I just go through the motions and hope for the best and I want to take that next step to become the best student athlete I can be."	"I know that I am 100% committed to winning championships every time I touch a weight, go to practice, and play in a game. Even my actions off the field lead me and my teammates to be able to win a state title."	"Plain and simple I want to be great. I hate mediocrity. I'll do whatever it takes to be great."

#14: Being a Good Teammate

Self-Actualization Need Score: 107.68

Being a Good Teammate was the highest-rated mental skill with the lowest self-actualization need. An overwhelming majority of respondents reported that they "think" or "would like to believe" they are a good teammate. However, very few student-athletes truly had a firm grasp of how they were perceived as a teammate. Nonetheless, a majority of student-athletes felt they were a good teammate, whether in team projects or team sports.

Table 4.21 *Student-Athlete Self-Actualization Need Quotes on Being a Good Teammate*

Quote #1	**Quote #2**	**Quote #3**
"I'd like to believe I am a good teammate but I will never really find out (maybe I will, I don't know) I am always scared, when I play basketball, that I don't pass very much. Although I know I do, I just get scared of my teammates believing me to be a ball hog."	"I don't believe I am a perfect teammate yet, there is always room for improvement and to get better."	"I find myself to be a pretty good teammate towards other people when we work in groups for projects."

4.3.3.2: Evaluating Post-Course Impact of Mental Skill Development on Self-Actualization

After collecting post-course survey qualitative results, student-athlete quotations were once again used to illustrate the extent to which self-actualization needs were addressed by building mental skill. These self-actualization needs were discussed in the previous section. While each mental skill showed positive quantitative growth (as discussed in *Section 4.3.2*), this data will also expound upon those results in words. Specifically, these explanations will provide the contextual degree to which improvements in mental skill level were effective within addressing the self-actualization needs of student-athletes on and off the field. Sport performance and well-being was of special interest within this self-actualization analysis. These self-

actualization findings and outcomes associated with mental skill development were discussed in detail for each of the 14 mental skills.

To better breakdown student-athlete perception of how building mental skill impacted their personal self-actualization process, each mental skill was reexamined post-course to assess participant perception of its role within helping them become the best version of themselves as a student-athlete. As a result, the following mental skills are listed in order of self-actualization need (See *Section 4.3.3.1*). To provide evidence for this section's findings, each mental skill has an associated table full of illustrative quotes which has been designed by the teacher-researcher to help the reader understand how self-actualization needs were addressed in sport, school, and life overall. Teacher-researcher findings and outcomes are also discussed within a brief introductory section for each mental skill. These findings and outcomes are conclusions which can be tied to the second research question of the present study.

#1: Self-Talk

While this mental skill was misunderstood by some pre-course, there were major improvements within the understanding of Self-Talk. This enhanced understanding seemed to spark a greater level of self-awareness of how they talked to themselves within their mindset. Overall, this led participants to extraordinary self-actualization improvements in sport as well as life, with 19 of 21 (90%) student-athletes referencing their growth in Self-Talk as helpful to their sport performance and well-being.

Table 4.22 *Student-Athlete Self-Actualization Quotes on Self-Talk*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"After learning about it and understanding ways to make your self talk better I've completely changed on and off the field. My confidence has gone up as well because of this skill. During the game last night, I got down in the count watching the first two strikes go by. I was in a deep hole and usually I would begin panicking and telling myself that I was going to strike out, but this time was different. I stepped out of the box, taking a deep breath and telling myself that I was going to hit the ball. After fouling off few more balls I hit a line drive to right-center and got a double." "I have definitely improved in my self-talk mental skill. I try to not get in my head as much. I stay focused and worry about whats going on in the game." "I saw significant improvement with my self talk because playing golf requires a lot of self talk related talent and sometimes it can be hard to control that after numerous bad things happen, but I have learned how to control it so that I don't myself down as much as what I used to."	"This was the biggest improvement I've made all year. Realizing that what I was saying internally was not helping and getting rid of those negative comments has improved my mood and overall life." "After learning more about self-talk I definitely gave myself too high of a score [pre-course]. My self-talk is very negative and the first thing I do is bring myself down. I tend to think negatively first but after realizing I need to take a minute to think positive or neutral I can definitely tell my self-talk is improving." "My self talk had a huge jump because I became a more positive thinker instead of a negative thinker."

#2: Managing Anxiety

After reviewing all descriptive responses for each mental skill, Managing Anxiety seems to be perceived as most impactful to the self-actualization process inside and outside of sport. Many student-athletes reported positive outcomes in sport, especially when dealing with pre-competitive anxiety. Anxiety management curriculum was ineffective for 5 of 21 (24%) respondents, who reported either no change or a decline in mental skill. Of the top four mental skills with the highest self-actualization need, this mental skill had the lowest quantitative improvement with the weakest qualitative support. While still strong improvement, this was the most difficult psychological trait to address student-athlete need within. While addressing anxiety in sport seemed to be effective, it was more difficult to help individuals with more chronic anxiety in school and life.

Table 4.23 *Student-Athlete Self-Actualization Quotes on Managing Anxiety*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"We have taken these steps onto the volleyball side of sports when were are in the locker room before playing, I found visualizing myself doing good things and reliving my best plays/memories of past seasons helps manage my pregame anxiety better." "Learning about preparation and visualizing my performance makes my nervousness almost disappear and that allows me to play the sports that I love and enjoy them much more." "I think I have drastically improved at managing anxiety. This has always been a problem for me especially in baseball as I walk to the plate. Now when I get in the box I feel calm and ready to swing the bat." "Before taking this class I would get nervous right before a wrestling match and now taking the class I know it's fine to have butterflies. I found a way to make those butterflies help me perform at my best."	"My managing anxiety skills has definitely improved. I've worked on not being so worked up all of the time when life gets busy. Especially in the restaurant when things sometimes get out of hand." "My anxiety management is better as I notice it more in specific areas, especially when presenting I am able to control myself in my head and use my anxiety to increase my performance." "I have improved upon my baseline skill of managing anxiety. This has always been a big roadblock in my life and it was nice to learn how to manage it in different ways and apply it to sports and in my life." "I would like to say that I have improved on this skill, but I did not. Anxiety is something I have always struggled with...I enjoyed learning about this mental skill, it was interesting hearing information about this mental skill. Some days I feel like I can manage my anxiety good, but other days it still gets the best of me. I am going to continue to try to improve on this mental skill for sure."

#3: Visualization

Student-athletes were able to gain knowledge in this mental skill perhaps more than any other. For a lack of conceptual understanding pre-course, this mental skill was applied to a surprisingly strong degree by 11 of 21 (52%) participants. An overwhelming majority of individuals who used it reported that it was effective within addressing their specific self-actualization need. The mind gym was a consistent curricular theme within this application process.

Table 4.24 *Student-Athlete Self-Actualization Quotes on Visualization*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"Visualization is a skill I have definitely improved on. We spent a lot of time using our mind gym which helped me improve on visualization. I used it in the past cheerleading season so much when right before a stunt went up I pictured myself nailing the stunt and doing everything the right way unlike thinking I wasn't capable of doing it." "After learning to use things like the mind gym, it helps me do extra prep for games when i'm not even at the field or in the gym. This really helped me out in football where I wasn't really ever getting in game reps, but had to be ready all the time to play a position I've never played before in case my teammate got hurt.' "My visualization skill went up. I didn't quite understand what visualization was until you first explained it. I now fully understand the strength that visualization can ultimately give you while doing anything. I used visualization before running a 40-yard dash for the first time and I also told a friend about it. We both went through it and shortly after we both shattered our 40 times."	"I've seen improvement in this mental skill ever since we began to build our mind gym. I use that place a ton to reflect upon my day and the event I have encountered during that day." "I´m able to use visualization when I need to get away and find a quiet place, or when I want to take mental reps. This helps me get ready for practice, games, and even school." "Visualization has been a huge part of the life since this mental skill. With learning how to use my mind gym and going there almost everyday, I can feel that I am less stressed and know how to organize my thoughts in games and life. I have even passed my knowledge of this mental skill to friends from different schools who could use this skill as well."

#4: Confidence

By better managing their cognitions, student-athletes reported a vast increase in confidence. Overcoming fear of judgment within what other people were thinking was also a major theme in gaining confidence as a student-athlete. Overall, a majority of student-athletes reported that they now had the mental skill to respond to stressful or challenging situations that caused them to once lose confidence, like taking the last shot in a basketball game.

Table 4.25 *Student-Athlete Self-Actualization Quotes on Confidence*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"I believe my confidence throughout all my sports this year improved greatly. I remembered at the beginning of the year I wasn't the one to "take the last shot" just because I was a rookie to varsity sports. But now I want it more than ever." "My confidence definitely went up in sports. I realized that I needed to stop thinking back on how I felt and feeling sorry for myself and just play and it made a huge difference giving me more confidence." "Without believing in ourselves. We cannot be successful at what were doing. And I learned that in this class and it has ultimately led me to be successful in high stressful moments, on the field, on the court, and on the diamond."	"My confidence increased a lot. I can tell just by the way I talk. I would always be scared to do certain things such as interviews or even talking to strangers but now I can do it with ease. Everyone always compliments how much more talkative or happy I am and I relate that back to confidence." "I've developed a much greater confidence in myself over the course of this semester. Improving my self talk has helped me continuously tell myself that I'm up for whatever challenge I face." "To me, learning about this skill was the most beneficial out of all 14 skills. My confidence was very low at the start of the course. Learning and hearing about how to increase confidence and respond to certain situations is what brought this skill up the most. Another main thing is that with my confidence skill increasing, so did many other skills, explaining why this had the most impact." "I still feel like sometimes I don't have a lot of confidence but that's when I focus to much on what people are thinking."

#5: Focus

Focus was a mental skill more consistently applied to performance domains outside of sport like school. Regarding mental skill development, 8 of 21 (38%) participants reported no change or a decline in mental skill. This was due to a combination of an overestimation of pre-course skill, the difficulty of applying this skill. For example, some student-athletes reported learning about focus, but still struggling to manage all of the distractions. Providing better application techniques to help mitigate these distractions could be a curriculum modification in future course design.

Table 4.26 *Student-Athlete Self-Actualization Quotes on Focus*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"Focus is something I used to need to work on especially at practice when coaches are going over formations and plays because I am not very good at remembering them. Since taking this course, even if my thoughts do start to drift to somewhere else, I now catch myself doing it and know to refocus which has helped me quite a lot." "I have stayed focused through the seasons and know how to hold myself to my standards and stay true to my goals." "Throughout this course I feel that I've stayed about the same level of focus as the beginning of the course. I've learned about the importance of focus and how it can truly affect your performance and is something I need to improve on in the future to be elite."	"I can honestly say that listening and reading about how focus can help, helped me become a much better version of myself." "I believe my focus increased a lot over this course. Especially during classes I have found ways to focus solely on the lecture instead of other things going on. With this I have found that my grades have went up and my stress went down." "I don't think my skill level changed much in this category. I still struggle with focusing sometimes, especially in school, but I did learn some helpful ways to attempt to refocus when my mind is off track." "Right now my focus isn't the best because I'm worrying about so many things but I do think the application part of this helped me on what to focus on first."

#6: Mental Toughness

Student-athletes commonly reported being able to better persevere through tough times. This was especially true dealing with COVID-19-related issues. This perseverance seemed to be a result of more positive response patterns within their mindset as established by E+R=O. Because mental toughness is commonly identified by coaches as an area of need, this was a major self-actualization finding.

Table 4.27 *Student-Athlete Self-Actualization Quotes on Mental Toughness*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"I have definitely become more mentally tough. I used to care what others thought when playing sports and try not to mess up but now I just try my hardest and If I fail I fail and that's okay." "When I got put with a group that wasn't my normal stunt group I didn't complain and just used it as experience of working with other people on my team. Outside of cheer, I have been mentally tough this past year when the world was at a huge low. It sucks some days but I always found something to be grateful for and remain positive." "This skill went up a decent amount because when I used to lose I would be mad and hate the sport but now I work harder to beat the kids who beat me. I work hard at both of the wrestling practices I go to even though I am dead and keep a great mindset so I can accomplish my biggest goal." "I think that my mental toughness is very high...I am always putting in extra work outside of the weightroom and never skipping reps because I want to be the best that I can be for myself and the team."	"This skill has improved especially during this crazy year. Being mentally tough allows you to deal even with the hardest situations and this is very important because of the crazy world we live in." "I do feel I have become mentally tougher in my life after learning more about this skill and being able to apply it to my life." "My mental toughness has skyrocketed I am able to talk to myself mentally in positive ways more than I ever had, whether it is in any aspect of my life." "I feel that my mental toughness has changed during this time period, as I have noticed that when I am in a tough situation I am now handling it better than I was a year ago. When I'm dealing with a tough situation with a group of people, I try to improve it for the betterment of the group."

#7: Intensity

A majority of student-athletes referenced this need in association with their sport performance. Regarding mental skill development, 8 of 21 (38%) participants reported no change or a decline in mental skill. Quantitatively, this mental skill showed the least amount of growth across the class, ranking 14th out of 14. While not explicitly mentioned in responses, curriculum effectiveness must be analyzed, starting with the selection and conceptual definition of this mental skill.

Table 4.28 *Student-Athlete Self-Actualization Quotes on Intensity*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"For this mental skill I feel like I've brought more of the energy especially in practice." "This one reminded me of the football game where in the final minutes I made a good catch to give us a first down that ended up being crucial. And all throughout that entire time my intensity didn't change." "I have learned that different levels of this intensity help in different sports which is why I think it has improved because I think I'm really starting to nail down which intensities work for me in each sport." "This skill got worse because sometimes I still get a little over excited and then I perform at my worst. It is very hard to control how I am feeling and the amount of energy I have."	"My intensity level is sometimes hard to raise when the need arises and I don't think it has improved at all." "I feel that I am not more intensity than I was before because I still get very excited about things but it is a happy medium for me. Because I need a lot of alone time so not get stressed or overwhelmed with everything going on."

#8: Goal-Setting

It was reported by all participating students that the Event + Response = Outcome system was extremely influential in helping build mental skill in Goal-Setting. A majority of participants reported positive feelings about their goal-setting abilities in all facets of life, with 20 out of 21 (95%) participants detailing an improvement in skill level, most of any mental skill. These goals were stated to be motivational and gave student-athletes more meaning, purpose, and direction within their life. It was also said to be a critical step within initiating the self-actualization process, which validates its placement as the first mental skill taught in the curriculum.

Table 4.29 *Student-Athlete Self-Actualization Quotes on Goal-Setting*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"Goal-setting had a small drop due to the fact I didn't end up setting as many goals for my senior season of football [due to COVID-19], I just wanted to play." "Believe I improved a bit in the goal-setting realm of setting minor goals to get throughout a task. For example, in baseball it could be "Win this pitch", instead of "You need a hit here." Before I could only think in terms of the latter, which was where I was going wrong."	"Goal-setting has definitely improved for me. At the start of the course I wasn't really sure where I wanted to go with my life and now I have a clear understanding. I have set certain goals with my life that I haven't thought of before and I am constantly setting new ones everyday. I have not stopped reaching for these goals ever since we started talking about them." "I feel that this year more than ever my goals mean more. After learning more about goal setting and writing some of our goals on our letter O I know how to set more future goals for myself." "My goal setting skills have gotten better within deciding what tasks need to be done each day in order to achieve my outcomes. I also have a better understanding on how to set micro goals to reach bigger goals." "My goal-setting has very such improved over this course. I enjoy understanding and seeing what I need to do to get the outcome I want. I often make check-lists of things I need to do throughout my day and they make me feel amazing seeing all the things I've accomplished that day."

#9: Body Language

A majority of student-athletes reported that they better understood what positive body language looked like and how it impacted those around them. While mental skill was built within knowledge, building skill through application was not as apparent within participant responses, limiting self-actualization.

Table 4.30 *Student-Athlete Self-Actualization Quotes on Body Language*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"My body language before the class definitely wasn't a 91, especially after hearing exactly what body language is, but after learning more about it and applying it into my game I have really noticed a major shift. It helps with confidence and also improves the teams performance in tough situations. Learning about this skill was one of the most beneficial." "I grew a lot in this skill over the course. Body language is definitely something I struggle with, especially in basketball and I really tried to improve this throughout the season. I feel I was quite successful in having control of my body when I got angry or frustrated." "I feel as if my body language in sports is good and has improved because I'm always trying to stay positive no matter what." "I haven't improved much but I started noticing that when I mess up I don't slouch anymore and I don't role my eyes."	"I still think I need to improve more on body language. I do catch myself and the way I present myself as not very confident, and I would still like to try to improve on this skill." "After learning about this mental skill I definitely paid more attention to the way I walk and the way I carry myself in rooms, which has improved."

#10: Leadership

While quantitative data suggested limited growth in leadership skills when compared with other mental skills, a majority of student-athletes described feeling the positive impacts of becoming a better leader, especially in sport. Self-actualization was most associated with finding one's voice as a leader, with several participants embracing a more positive leadership style. Student-athlete leadership roles were also reported to have been implicitly or explicitly assigned by teachers and coaches, especially in regard to setting a high standard at school and on sports teams. The importance of this role to performance was noted due to COVID-19-related issues. As a result, many student-athletes reported that they came away with not only a better understanding of positive leadership, but also the skills needed to lead in challenging times, especially when called upon by others.

Table 4.31 *Student-Athlete Self-Actualization Quotes on Leadership*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"Learning about leadership was very helpful for volleyball...as I wasn't scared to use my voice and try to lead, before I just stayed to myself." "I think my leadership skills have improved since taking this class. I talk to everyone on the team and always making sure they know what there are doing and how there are contributing to the team. I also found it was very annoying when people on the team were negative so when I found them being negative, I would be even more positive and try to make them positive." "I've always been fascinated by leadership and the fact that I can help someone else become a better version of themselves. This year I suffered a concussion after football and I had to sit out a few of the first baseball games. During those games I had plenty of reason to not help my teammates and just sit back and watch, but I decided to help every single one of my teammates by giving them tips and pointer, and even by picking them up after an error."	"I find myself stepping up more and more lately to become an even stronger leader when the need arises." "Every organization needs leaders. Not just one person, but multiple people leading each other." "I think I have always been a good leader, but I don't always know that I have been a positive leader all the time. This class has allowed me to reframe my leadership skills in a more positive manner." "While I have always thought of myself as just a leader by example, I think that this year, being older and more experienced, I have started to come to my own as someone who helps out the younger guys and leads them in the right direction which has felt really good to do."

#11: Time-Management

Time-Management was consistently described by student-athletes as a balancing act of school, sports, and sometimes work. However, self-actualization needs associated with this mental skill were addressed with varying degrees of success. The most common theme reported in connection with Time-Management was well-being related to homework and grades in school. These self-actualization needs were seemingly more at-stake than sport performance. For some student-athletes, Time-Management had improved vastly through enhanced organization and knowing their priorities. For others, lack of mental skill continued to lead to procrastination. Similarly, having too much to do elicited stress and negative well-being. No matter the skill level, student-athletes commonly referenced "room for improvement" to better address their needs inside and outside of school.

Table 4.32 *Student-Athlete Self-Actualization Quotes on Time-Management*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"My time-management skills have definitely improved. Especially from this year dealing with work, school, and practice." "My time management is not the best or not the best it could be. I am pushing off so much of my schoolwork right now so I can focus on softball."	"This school year I've noticed how much I take on as a student, athlete, and daughter. I'm involved with many activities at school while taking all of the classes I need with keeping up my grades and still being able to play the sports I love. I've gotten better at managing time and using it responsibly by using my daily planner to know what I have to get done and when. I like to visually see my schedule of what my day will look like and how I will use all 24 hours the most efficient way." "My skill in time management is still completely average and I struggle to get stuff done." "I still don't manage my time right because I sometimes choose default over discipline and play video games instead of doing homework." "I sometimes just don't have enough time to get certain things done with all of the baseball going on and my two jobs that I have. I still find time most days but I do every once in a while find myself overloaded with many different things."

#12: Enjoyment

The amount of mental skill growth in Enjoyment vastly outpaced its pre-course self-actualization need. This finding was supported by student-athlete responses which credited a newfound perspective gained from the course as fuel for its growth. This perspective was influenced by several prominent themes, including finding meaning and purpose in sport outside of just winning. In fact, several student-athletes reported that sports were not "life or death" and this realization helped them better enjoy the moment and not see sport as a "job" or "chore". Also, establishing a "fun philosophy" seemed to be a key piece of curriculum which aided in establishing this more positive perspective. Finally, some student-athletes reported that having sports put on pause also enhanced their level of gratitude within playing sport. Still, 6 out of 21 (29%) participants reported no change or a decline in mental skill. This was seemingly due to a

combination of reported factors, from already having a high amount of mental skill to COVID-19-related issues.

Table 4.33 *Student-Athlete Self-Actualization Quotes on Enjoyment*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"I have gained some skill on figuring out why I enjoy the game. Sports used to feel like a chore to do and I was never excited. I always had pre-practice dread, but this season I could tell a difference. I was excited to go out and play because I had a reason and people to play for. Thus I gained skills more than just mentally and had my best year yet." "I learned that you can find more enjoyment in the game if you bring the energy to your team." "I've realized that its not all about winning or getting the medals its all about figuring out who you are and being with the guys you've grown up with." "I take sports pretty serious but now I know it's not life or death. I have now realized this because next year I am going to be a senior and as a freshman and sophomore I was more worried about winning and not spending time enjoying the moment."	"I've learned that this mental skill is very important within sport but also our lives. I have gained a better understanding of it by seeing that all it sometimes is a little fake smile for it to become real and change the way you play or act." "I've never struggled with enjoying myself during sports and just life in general but this course has helped me look at everything through an even more laid back, fun loving vision."

#13: Commitment to Excellence

A majority of student-athletes described a more advanced understanding of the process of what it takes to be great on and off the field, with 18 of 21 (86%) reporting an increase in mental skill. While this mental skill's self-actualization need was ranked 13th pre-course, it was ranked 6th in amount of growth, which was the greatest positive difference of any mental skill. The main motivational theme within a student-athlete's commitment to excellence was generally tied to the course mission of becoming the best version of oneself as a student-athlete. This mental skill it was said helped fulfill a great self-actualization need, as it helped produce results and achieve goals, oftentimes setting up the process of building mental skill in other mental skills.

Table 4.34 *Student-Athlete Self-Actualization Quotes on Commitment to Excellence*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"I think that throughout this course, I have been committed to trying to embrace all of these different skills and apply them to myself and allow myself to be the best of which I am capable, of which I think I really improved on these throughout my time in here, helping me get to that goal of excellence in my field." "My commitment to excellence will never be a question when someone looks at me. I want to be the best that I can possibly be for not just myself, but more for my team so that we can succeed as a whole." "Over the last year I felt like I did the best job I could've in becoming the best I could become, resulting in my best year of sports." "I learned to take failures as a step to becoming the best student athlete I'm capable of becoming." "In past years I never really noticed my improvements and what I need to do to improve myself in sports. Now I have a better understanding and am willing to commit to the rest of my sport season as a junior and really step it up as a senior by using the time in the summer to get better while others may not. It will be my last shot and I'm willing to give it my all."	"Commitment to Excellence is something I have improved even more so on. I am always looking for a way to get better and achieve more in life. Like graduating with all A's, being on NHS, Servant Leadership, and Student Council. I had to work to get on those organizations and now that I am on them I still am chasing to be a better version of myself in different ways." "My commitment to excellence has definitely improved because now I know more how to apply it things to my life to get to an elite level. Like in No BCD I know now that following it can put you and the people around you in a better mood all in all creating a better environment." "I haven't been trying to be excellent I'm just trying to get by right now. I know I need to start working hard again." "After talking about this mental skill its clear that you should always strive to be the best you can be and living life to the fullest." "This course has helped me develop a better mindset in my will to become great in everything I do."

#14: Being a Good Teammate

Student-athlete perspectives on self-actualization were almost exclusively referencing sport performance. The 'team above self' concept was a common theme within facilitating self-actualization. Regarding mental skill development, 7 of 21 (33%) participants reported no change or a decline in mental skill. Upon analysis, this was attributed to a high baseline level of skill. This was amplified by no formal application activities within the course curriculum as Being a Good Teammate was the last mental skill taught before the end of the course.

Table 4.35 *Student-Athlete Self-Actualization Quotes on Being a Good Teammate*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"Learning the importance of putting team before self has helped me play more selfless and know that my team success is always above mine, and also thinking about my teammates and picking out what makes them great to me, and taking what they do to make myself become a better teammate too." "I really want to be remembered as a good teammate, so I tried really hard at putting the team over self throughout the season. This was certainly an improved skill." "This season I felt like I was a more positive teammate that did whatever it took to be a better team overall" "One thing I can always pride myself in is being a good teammate. I am always there to pick someone up when they are down, or when they are struggling, and I am always there to congratulate them on their successes."	"I would say I am an overall great teammate because I am dependable and willing to do extra work. I am also patient with others and work well in a group setting."

Overall, student-athletes consistently provided positive feedback on how the course was able to address a variety of their self-actualization needs through the building of mental skill. All 21 participants reported the course helped them in sport, school, work, and their personal lives (as illustrated in Table 4.36). This is irrefutable evidence that by addressing the needs in a variety of performance domains inside and outside of sport, the content of the course buttressed its identity as a sport *and* performance psychology course.

Table 4.36 *Student-Athlete Quotes on Self-Actualization Overall*

To what extent were the self-actualization needs of high school student-athletes addressed through the building of mental skill?	
Quotes on Sports	**Quotes on School and Life**
"The amount of knowledge I built from the start of this class till now was remarkable, not only did I perform better on the field and in the weight room, my grades also shot up as a result of these mental tools in which I built through this course. This class opened me up to want to chase a better version of myself more than ever and with all the mental weapons I am equipped with now as a result of this course." "I thought that this class benefited me within volleyball in become more of a positive leader and within not giving up. All in all I was very proud of myself and I would take this class again if I could." "This course really made me feel like I have become a better version of myself on and off the court, it has made me a better teammate overall and has changed my view on sports in a good way." "This class has helped become the best version of myself by far, I can definitely say that I am a better student athlete and a better person because of this course. Its helped me keep more of a positive mindset out on the track." "I have noticed many different positive changes to the way I think...tak[ing] more control of my brain within my athletic performance." "My evidence to me becoming the best version as a student-athlete is how I live my everyday life. How I act in the classroom, to how I act of the field or court...I´ve grown in all 14 mental skills, whether it was by a lot or a little, I got better from this class. I´m more confident when I play, I have extremely high and realistic goals set for myself, and I have the mental toughness now to achieve all the things I want to achieve."	"My mind is working hard now after taking this class...[I'm] waking up and actually being happy to come to school. This is the place that is the most difficult for me but just by taking this class it excites me to wake up and push myself to get good grades, smile, and just plain out be happy." "I think I have really been able to apply this complete mindset to academics and athletics, but to my personal life as well. This class was happening at the perfect time for me, as I was going through some tough times in my personal life. I really think this class gave me something to look forward to, and truly lifted my spirits each and every day. The drive of becoming a better student athlete took my mind off of my struggles, and I was able to focus on what I could control. I think that is a huge takeaway from this course. You will learn to control the controllables, no more or no less. So, when I say this course has helped me much more in life than you could ever imagine, I mean it." "Starting this class I wasn't much of a leader, but now everyday my goal is to be a positive leader for someone in the world." "I was never motivated to read and now I'm always trying to read and learn new things whenever the opportunity arises. You have completely altered the way I live and act in a positive way that I believe has truly set me up for success in my military career and/or college." "This course has done so much for me just making me a better human being and I would recommend it to anybody in school, not only athletes, because this stuff really is life changing."

4.3.4: Evaluating the Curricular and Pedagogical Factors Associated with Building Mental Skill

This section will address the third and final research question of the present study. Because all 21 student-athletes expressed the view that it would be helpful for all high school student-athletes to have a *Sport and Performance Psychology* course offered at their school, it

can be deduced that there were certain curricular and pedagogical factors which led to this positive assessment of the course. Thus, this section will evaluate parts of the course which were perceived by student-athletes to be effective in building mental skill. By analyzing field notes and interview data, it was found that student-athletes consistently cited the following factors as effective within course design and implementation:

- *Section 4.3.4.1*: **Event + Response = Outcome**
- *Section 4*.3.4.2: **Application-Based Activities**
- *Section 4.3.4.3:* **A Humanistic Teaching Philosophy**

4.3.4.1: Event + Response = Outcome

The primary finding that mental skill can be developed by *Sport and Performance Psychology* courses was directly underpinned by the emphasis on the cognitive-behavioral system of Event + Response = Outcome. This mindset was overwhelmingly recognized by participants as "very helpful" and "a good framework to base every mental skill within." One of the student-athletes described it this way:

> "Of course the underlying framework of the course was the equation, E+R=O. ERO can help anyone in any situation at any second of any day. It is literally the equation of life. You can never control the E, but you can sure as hell control the R, and how you respond with discipline or default, can shape or mold the O depending on how you respond to the E. It literally applies to every situation in life which is what I love so much about it."

According to student-athletes, the effectiveness of E+R=O is its multidimensional nature within knowledge and application. One participant referenced it as "three little letters that are simple, yet complex behind the curtains." This simplicity within remembering E+R=O was reflected in

most student-athlete comments and validated by the magnitude of its usage across a variety of performance domains:

"It's helpful in sports...as I'm always thinking about the outcome I want."

"I love it, as they incorporate these concepts into the military too."

"It's meaningful because it can be used in every part of your life. It just helps me break down every situation."

"It's really cool because it helps me respond to different things in life."

Other curriculum associated with E+R=O was also popular, like "No BCD" and "Discipline over Default". This finding was demonstrated by the following two student-athletes:

"The equation E+ R=O to me has affected me the most. It makes me think about the bad and the good outcomes and what could happen if I choose default."

"I have improved within No BCD as well I catch myself in my head before I let it come out [of] my mouth."

These two concepts helped cement the effectiveness of E+R=O as a mindset that helped student-athletes see the world differently. As one participant explained, "It changed the way I think about things...to a more positive point of view."

While the number of student-athletes who continued to use E+R=O long-term cannot be known, several student-athletes were vehement that they would never forget this equation as it had been "engrained" in their head. As one participant replied, "I'm going to use it for the rest of my life as it has had such a huge impact on the way I do things." This impact was driven home by one participant's biggest takeaway that seemed to articulate the simple beauty of E+R=O: "In the end, you can shape what happens in your life within you respond."

4.3.4.2 Application-Based Activities

While mental skill could be developed through simply gaining knowledge about each mental skill, the application-based activities were consistently cited as an effective way to build mental skill. In fact, student-athlete engagement and participation was observed to be at its highest during curriculum that was application-based. This was supported by student-athlete feedback. As one participant stated, "I liked how you would introduce the mental skill for the day, and then you would dive into the application and how we can truly apply that certain skill to our lives." Another participant saw the larger picture when it came to application, "I loved having this course during our sporting season so then we could apply it while in the season."

Application activities that were mentioned most in interviews included the following activities (ranked in order of popularity). These application-based activities were reported to be "fun" and a chance to "feel and practice" the mental skill within a "fun, yet serious" environment:

1. "Discipline over Default" challenges for Mental Toughness
2. Mind gym for Visualization
3. Jenga! for Managing Anxiety
4. Concentration grids for Focus
5. Energy-Maker or Energy-Taker? for Intensity

These application activities were challenging, interactive, and competitive, characteristics that weren't always incorporated within every application activity. This was seemingly to the detriment of building mental skill as it may have lessened student-athlete engagement. As a result, higher quality application activities tended to produce stronger results. The most visceral response came from one student-athlete, whose response for Intensity and Mental Toughness

reflected two of the best real-world glimpses into the mind of a student in *Sport and Performance Psychology*:

> "One thing that has really stuck with me was being an energy maker or taker. Everyone is an energy maker when it's easy and we're winning, but when it is tough is when it really takes heart. I remember in our conference championship in football this year, we were down bad with 4 minutes left...Right then I got really mad and down about the game as it wasn't looking good. Then my mind kept ringing at me as this is where we need energy makers, there's still time. So I started trying to get the sideline going and yell for the guys on the field not to give up. I don't really think that it was my screaming or what it was, but the next play turned out to be the blocked punt return [which started the improbable comeback victory]. I couldn't believe it. Then all the sudden everyone was an energy maker because it was easy. But after that, I realized that sports psych would be ringing in the back of my head all the time with those types of situations…Just the other day I walked past some trash in the hall and didn't pick it up. Then, when I was about a row of lockers past it, the nagging in my head became so strong I whipped a U-turn and grabbed it on my way to class."

4.3.4.3 A Humanistic Teaching Philosophy

First, the humanistic teaching style of the course was deemed extremely effective by 19 of 21 (90%) participants, with two respondents stating it was mostly effective due to confusion that arose from “jumping around between mental skills”. Student-athletes claimed overwhelmingly that they appreciated how the course was taught, which was through a humanistic teaching philosophy. In fact, the course mission of becoming the best of which one

was capable as a student-athlete became commonplace language within coursework and participant responses as illustrated in the following quotes:

> "I think it [the teaching philosophy] was extremely effective because within most classes we sit in a seat and listen to a teacher drill a lesson into our heads that we memorize to pass the class. In this class, however, we learn mental tools that can actually help us actualize our potential and get us closer to becoming the best person we can be by looking at examples of [others] or at our own selves on the playing field. I think the teaching style in that way helped us grow mentally and in the end left us with some very valuable tools to make the leap to become the best versions of ourselves."
>
> "I loved the teaching style throughout this course. It is similar to the way the U.S. military teaches their soldiers to become great as well. Lecture then application. The most efficient style of teaching is a style in which information is actually retained and learned, not just memorized, and that's what you did. You lectured on how this skill could improve life itself, and then told us to go apply it, forcing us to literally become better as a school."

Next, the structure of the course was also commended by many student-athletes, as they felt the curriculum was well-organized with the creation of "Knowledge" and "Application" lecture slides for all 14 mental skills:

> "The teaching style of this course was well thought out by taking one mental skill at a time, stating the importance of that skill based on the class votes, then explaining what the mental skill truly meant, and last showing how to improve on that skill. The lectures included many videos, quotes, and fun challenges to help us improve upon.

Within the structure of the course, the book, *The Young Champion's Mind* by Dr. Jim Afremow was also commonly recognized as an asset, with participants rating the book, on average, to be an 8.53/10 on a 1-10 scale from least effective to most effective.

Modeling was also deemed effective within the teaching philosophy of this course, as one student-athlete stated that they "found it extremely helpful when I got to hear about personal experiences" from the teacher. Additionally, using other famous teams and athletes as positive models proved to be influential with student-athletes in establishing course credibility. While student-athletes stated that they trusted the teacher, it was good to have confirmation that "you knew what you were talking about":

> "I really liked some of the examples of other people's quotes and of other teams doing the impossible when teaching each skill. And some of these top athletes and teams vouch for this stuff. I think that really gives the things we are learning credibility and helps the class want to know more."

The grading philosophy of the course was also a key pedagogical element claimed by student-athletes to be effective. In general, student grades were determined by two factors:

1. Teacher's assessment of the level of effort they put forth within building mental skill and chasing the best version of themselves as a student-athlete
2. Student's self-assessment of their effort and progress within building mental skill and becoming the best version of themselves as a student-athlete

In total, five total grades were given throughout the semester not including a required semester exam. The largest grade was out of 200 points and was a running score based on their continued work within their "Mental Game Scorecard." To a great extent, however, the course was gradeless with grades rarely ever mentioned or emphasized. This overall grading system was

reported as effective by all student-athletes when they were asked to share their thoughts on this unique assessment philosophy. In fact, most participants reported a positive shift in focus from grades to personal development:

> "I feel like we were worried about making ourselves better instead of a stupid grade."
>
> "I like being assessed on doing our best and improving ourselves; I didn't think about getting good grades in this class, I just thought about changing me."
>
> "I loved it, as I didn't have to worry about normal homework; our homework was the application on the field."

4.4 Chapter Summary

This chapter presented the results and findings of the present study. The present study aimed to answer the following research questions:

Research Question 1: To what extent could a *Sport and Performance Psychology* course be designed and implemented to build mental skill within high school student-athletes?

Research Question 2: What self-actualization needs are addressed through mental skill development?

Research Question 3: What course curriculum or pedagogy is perceived by student-athletes to be effective within building mental skill?

To answer these questions, an innovative *Sport and Performance Psychology* course was designed and implemented to build mental skill in 21 high school student-athletes. By teaching about 14 different mental skills important to sport psychology like goal-setting, mental toughness, and leadership, it was hypothesized that mental skill could be developed in participants. By building mental skill, it was also hypothesized that the unique self-actualization needs of these participants could be addressed. To test these hypotheses, data on this course was

collected at a small public high school in the Midwestern United States. Participants included 21 high school student-athletes. Research methods were comprised of surveys, interviews, field notes, and participant coursework. All data was gathered, transcribed, and coded using Google Forms, Google Sheets, and Google Classroom. The conclusions from the present study followed the research questions, and therefore addressed three main areas: (a) the extent to which a sport psychology course can be designed and implemented to build mental skill within high school student-athletes; (b) self-actualization needs which are addressed through mental skill development; and (c) student perception of curriculum and pedagogy which was effective within building mental skill. As a result of this evaluation, this *Sport and Performance Psychology* course may be the first such type of high school class documented on a national level.

After a thorough examination of the quantitative and qualitative data, the present study revealed substantial evidence that an effective sport psychology course could be designed and implemented at the high school level to build mental skill in high school student-athletes. This was proven through the teaching of a semester-long sport psychology course called *Sport and Performance Psychology*. This course spanned 90 total academic days and consisted of a mental skills-based curriculum which focused on building mental skill in 14 different mental skills. This day-to-day process was documented and formatively evaluated in an ongoing manner (See *Section 4.3.1*).

Quantitative and qualitative pre-course results revealed that student-athletes had varying skill levels (See Figure 4.35) and self-actualization needs (See *Section 4.3.3.1* and Figure 4.38) in relation to each of the 14 mental skills. Specifically, the needs analysis revealed the lowest levels of pre-course mental skill were in a) Self-Talk: 67.95, b) Visualization: 69.29, c) Confidence: 75.62, and d) Managing Anxiety: 76.43. Similarly, these four mental skills also had

the highest pre-course level of self-actualization need when importance to performance and well-being was factored into the equation: a) Self-Talk: 228.89, b) Managing Anxiety: 203.73, c) Visualization: 202.82, and d) Confidence: 198.20. There were seven other mental skills which emerged at an "Average" or "Good" skill level with a moderate level of self-actualization need. These mental skills included Focus, Mental Toughness, Intensity, Goal-Setting, Body Language, Leadership, and Time-Management. Finally, the three mental skills with the highest levels of mental skill and the lowest levels of self-actualization need were Enjoyment, Commitment to Excellence, and Being a Good Teammate.

Quantitative post-course results answered **Research Question 1** and demonstrated that a sport psychology course could be designed and implemented to build mental skill in high school student-athletes. Student feedback demonstrated that mental skill could be developed at a class level and individual level. All 21 student-athletes reported positive growth in their mindset due to an increase in, on average, 10 of their 14 mental skills. The average change in each mental skill was +5.56, or half a skill level. At a class level, the class mindset improved an average of +5.25%, going from an "Average" pre-course self-rating of 79.23 to a "Good" post-course self-rating of 84.48. Additionally, all 14 mental skills improved from their respective pre-course average to post-course average. Self-Talk was the mental skill which improved the most across the class at +12.67, followed by Visualization at +11.47, Confidence at +6.66, Managing Anxiety at +6.04, and Goal-Setting at +5.76.

Qualitative post-course results definitively answered **Research Question 2** by illustrating how student-athlete needs were addressed through mental skill development. Findings emerging from student-athlete feedback confirmed that various self-actualization needs in sport, school, and life can be addressed through building of mental skill. In fact, 21 of 21 student-athletes

stated that they felt like they became a better version of themselves as a result of taking the course. While positive change in level of skill itself was evidence for self-actualization, student-athletes were also able to explain how building mental skill in a certain mental construct helped them address certain needs. Their responses and illustrative quotes verified how improving skill level can enhance a student-athlete's ability to meet the demands of their life. By addressing some of these self-actualization needs, many student-athletes claimed improved sport performance and enhanced well-being. This was especially evident in Self-Talk, Managing Anxiety, Visualization, Confidence, Goal-Setting, Commitment to Excellence, and Enjoyment.

Qualitative results gained through interviews at three separate stages of the course also helped answer **Research Question 3** as results revealed three main curricular and pedagogical factors which were considered effective by student-athletes in building mental skill and facilitating self-actualization: Event + Response = Outcome, application-based activities, and a humanistic teaching philosophy. Additionally, 21 of 21 student-athletes (100%) posited that it would be helpful for all high school student-athletes to have a sport psychology course like this one offered at their school. This is testimony of the course's effectiveness in its innovative curriculum and pedagogy.

CHAPTER 5: CONCLUSION

The present study explored the design, implementation, and evaluation of an innovative sport psychology course at the high school level. This exploration included a full description of the course's purpose, goals, strategies, techniques, and methods. It adds to the existing literature on school sport psychology by analyzing how mental skill can be developed in high school student-athletes through sport and performance psychology curriculum and pedagogy. The present study provided a unique perspective of sport psychology being taught in a high school classroom. It also reveals results and findings on the mental skills and self-actualization needs of student-athletes.

The present study presents the perception of student-athletes in a specific, innovatory high school sport psychology course. While the literature reviewed mainly considered sport psychology programming in the high school context, there has been minimal literature evaluating the design and implementation of a high school sport psychology course. Additionally, past studies have not emphasized the process of mental skill development specifically within the context of the present study's theoretical and methodological framework.

The present study demonstrated that high school student-athletes can develop mental skill in a sport psychology course. The extent of this development is approximately ½ a skill level. Furthermore, the building of mental skill can help student-athletes address various self-actualization needs in sport and school. The degree to which these needs are addressed is variable. Finally, the present study identified course design elements like Event + Response = Outcome, application-based activities, and a humanistic teaching philosophy as contributing factors to mental skill development.

In alignment with the results and findings of the present study, this final chapter will further address its conclusions. The first section of the chapter will detail the study's limitations. Next, there will be a section discussing the practical implications for the field alongside recommendations for future research and application. This discussion will conclude with final remarks.

5.1 Study Limitations

Because the present study was the first of its kind, there are several challenges and limitations to consider. While these limitations did not change the validity of the results and findings, they must be noted as a variable in the present case study. Most importantly, they may lead to opportunities for future research. As a result, the following is a list of five notable study limitations:

1. **COVID-19 Pandemic:** The present study was conducted during the COVID-19 pandemic. This factor must be recognized as a possible limitation due to the study's focus on learning mental skills and the mindset of high school student-athletes. During this time, there was an unprecedented national and local response to this health crisis. This response impacted every realm of life, including how students were educated in schools and whether or not they were able to play sports. In this case, the school returned to full-time face-to-face learning in August 2020 with the option to learn remotely. While no students in *Sport and Performance Psychology* selected this option during January 2021, several were quarantined for two weeks throughout the course due to COVID-19-related regulations. During these two weeks, they would attend the course as a remote online learner through Google Meet. Finally, it must be recognized that all student-athletes had their sporting seasons impacted due to the COVID-19 pandemic. Instead of playing

certain sports in the fall season as normal, all sports were moved to the spring season when pandemic restrictions began to be lifted. This caused every sport to play a shortened season and a modified schedule between the timeframe of January 2021 to May 2021. While the exact impact of learning during the COVID-19 pandemic cannot be determined, it should be considered as the most profound limiting factor within the present study.

2. **Inside Researcher:** The researcher is the teacher within the present case study. Thus, this position as teacher-research qualifies as insider research. The teacher in the present study is a major variable within the design, implementation, and evaluation of this sport psychology course. While this proved to be a facilitating factor within conducting the present study, student-athletes may have reported biased self-ratings or partial quotes because of this position as both teacher and researcher. Similarly, the teacher-researcher in this case was a three-sport coach who had already coached over half of the students in the course. While this helped build trust and rapport, this exact set-up as teacher-researcher and coach is difficult to replicate and a limiting factor to result reliability.
3. **A Single Case:** The present case study reveals the outcomes of a specific case at a small public high school in the Midwestern United States. The results and findings reflected one *Sport and Performance Psychology* course with 21 student-athletes bounded by time, place, and context. These student-athletes had unique needs with a teacher with a unique sport psychology background. The present study was not designed to be broadly generalizable or convey a "cookie-cutter" approach; instead, it was an in-depth glimpse into a single case which may be helpful for others to consider within the design and implementation of a high school sport psychology course. Finally, a multiple case study

with a larger participant set would help mitigate this limitation and increase the validity of the research.

4. **Process of Design and Implementation:** The present study was a challenge to conduct due to its three-phase process of designing, implementing, and evaluating a brand new high school sport psychology course. These phases oftentimes intertwined and overlapped in a complex manner. As the teacher-researcher, this process was challenging, as over 400 hours were spent designing lecture slides, conducting interviews, teaching the actual course, and evaluating results. It was especially difficult for the teacher-researcher to manage designing curriculum every day, specifically the application-based activities. Additionally, the length of time it took to teach this curriculum was longer than planned, causing the teacher-researcher to rush through the last few weeks of the course to ensure that all 14 mental skills were taught. While everything was done to ensure curriculum and pedagogy were constantly being adapted, modified, and improved to be more effective, time constraints were a limiting factor in the present study.
5. **Process of Evaluation:** The abstract nature of mental skills is a challenge to measure in sport psychology research. This is especially true when attempting to analyze the effectiveness of an intervention like a sport psychology course. The present study was set-up to measure pre-course and post-course levels of mental skill to help determine course effectiveness within building mental skill. To help operationalize these psychological skill levels in a physical way, a performance profiling technique was used where student-athletes provided self-ratings based upon their own perception of how much mental skill they thought they had in that construct. Because these mental skills relied upon the opinions of student-athletes, it was perhaps difficult to obtain an objective

pre-course and post-course measurement of all 14 mental skills. This subjectivity may have skewed the quantitative results for some student-athletes. Additionally, because this was a pilot study and there was no control group, it is hard to evaluate the significance of the quantitative changes in skill level. Finally, it is critical to note the influence of other factors within mental skill development. *Sport and Performance Psychology* is one academic course that is limited in its scope and outreach. There are other influential variables to mental skill development that must be recognized as this process does not exist in a vacuum. For example, student-athletes are also playing sports as they take the course. These performances and personal experiences can bias short-term and long-term perceptions of certain mental skills, which ultimately may have influenced post-course self-ratings. Other influential factors which may have impacted perception of mental skill level include parents, community, and sociocultural factors like the COVID-19 pandemic.

5.2 Study Implications and Recommendations

This dissertation provides information in designing and implementing a specific, innovatory sport psychology course at the high school level. As a result, this section aims to provide a holistic description of the practical implications behind the results and findings associated with designing and implementing a high school sport psychology course. These implications will help reveal the significance of this present study while also presenting ideas and perspectives that may be worthy of consideration. There are many interested stakeholders in the mental and physical development of high school student-athletes, from parents, teachers, and coaches to school administrators, athletic directors, and sport psychology consultants. This research meaningfully engages with the school sport psychology literature and suggests several

directions for future research. The following implications and recommendations are relative to the scope, purpose, and conclusions of the present study. As a result, the following sub-sections provide practical, real-world suggestions for educators and scholarly, academic recommendations for researchers.

5.2.1 Implications and Recommendations for Education

Because this was a single case study at a small public high school in the Midwestern United States, it is necessary for educators to understand the parameters of this case and determine for oneself how some of these recommendations may be relevant to their particular situation. From an educational perspective, sport psychology has not yet been established as a mainstream course within the public school system; however, many believe it is only a matter of time before sport psychology programming is a normal part of the curriculum (Maher, 2005; Gilbert, 2013; Gilbert et al, 2017). The present study contributes to the existing school sport psychology literature of Weissman (2003), Maher (2005), Lamberth (2007), and Gilbert (2006, 2011, 2014, 2017) and presents compelling evidence for sport psychology programming to take the shape of an educational sport psychology course designed and implemented to build mental skill in student-athletes. The findings and results from the present study have the greatest implications for those parties associated with the educational field, such as high school student-athletes, teachers, coaches, and school personnel.

Student-Athletes

Student-athletes are the stakeholder who will primarily benefit from a high school sport psychology course. By learning about the mental aspects of sport, a course like the one in the present study can give student-athletes the opportunity to strengthen their mindset on and off the field. It also provides them with a philosophy and a system to become the best version of

themselves as student-athletes. By using this roadmap to build mental skill, student-athletes can be more motivated and better equipped to address self-actualization needs in school, sport, and life. This can allow individuals to improve their performance, enhance their well-being, and more positively contribute to their school district, athletic teams, and local community.

Teachers

There are several implications for sport psychology teachers and for those who may be interested in teaching sport psychology at the high school level. First, the present study confirmed it is practical, useful, and defensible to bring a sport psychology course into the high school setting. While the literature reviewed indicates that it is helpful to have a sport psychology background, this study demonstrated it is not required to be a licensed sport psychologist to bring educational sport psychology into the classroom. However, it is recommended that sport psychology teachers have an adequate background in psychology, sport psychology, performance science, and coaching. It is also highly recommended that sport psychology teachers serve as a coach in the school district. As a result, while sport psychology teachers do not need to be licensed sport psychologists, prospective teachers should be familiar with the sport and performance psychology literature and take pride in becoming an expert in the field.

The present study also provides an effective curricular and pedagogical template to consider when teaching a sport psychology course. First, sport psychology at the high school level should not be taught with a clinical focus; instead, sport psychology at the high school level should be implemented with an educational focus. In order to maximize the effectiveness of this positive approach, teachers should consider incorporating humanistic theory of learning and cognitive-behavioral theory within their philosophy. While Maslow (1943) provides a needs-

based motivational foundation for student-athletes to become the best of which they are capable, cognitive-behavioral theory provides a powerful system in Event + Response = Outcome to guide those developmental changes. Specifically, a mental skills-based approach using a performance profiling technique is shown to be an effective way to teach sport psychology. By also incorporating elements of performance psychology, this should ensure the sport psychology course can be applied to meet student-athlete needs in all performance domains inside and outside of sport. This curricular and pedagogical framework can be modified to fit the contextual needs of each teaching situation, including the student-athlete clientele and other sociocultural factors pertinent to those educational circumstances. Collaborating with other stakeholders like coaches, parents, and other school administrators may also be helpful within the process of designing an effective sport psychology course. This framework can help teachers instruct in a more meaningful manner due to a clearer conceptualization of the course's purpose, goals, and methods/techniques.

Coaches

Coaches are focused on developing student-athletes and winning. Currently, most sport psychology in the high school context seems to be limited to a practice setting with coaches, where they may informally teach their athletes about mental skills like focus and leadership between the X's and O's. While many coaches are doing their best to address the mental part of the game, the reality is there are time constraints when trying to teach physical, technical, and mental skills (Maher, 2005). The present study demonstrates that a sport psychology course could be an efficient way to build mental skill that would not take up additional practice time. Coaches may become the greatest advocate for bringing a sport psychology course into the high school setting because of its development focus. Coaches can also implement the various

performance-enhancing strategies and techniques designed within the present study. Coaches who are also teachers should consider the feasibility of themselves as the teacher of this sport psychology course.

School Personnel

The present study has implications for school personnel like school administrators, athletic directors, and guidance counselors. While many school districts strive to help each student achieve their potential, a sport psychology course provides an innovative and progressive way to help schools meet this standard. School administrators and athletic directors could be on the cutting-edge of sport science by ensuring their student-athletes are given access to tools which help unlock their full potential. This can result in a greater satisfaction in knowing that everything is being done to address the needs of all high school student-athletes in their school district or athletic department. This is also true for school guidance counselors, who can benefit from understanding how mental skills can be applied to meet various self-actualization needs. For example, guidance counselors could apply components of the present study in mental health practice and substance abuse prevention. While athletic directs are another viable option for finding a teacher to teach sport psychology, school personnel are likely influential decision-makers when it comes to bringing a sport psychology course into the school.

This dissertation makes a strong recommendation for all school personnel to consider implementing a sport psychology course in their school district. While schools have brought in sport psychology consultants to work with their student-athletes, the effectiveness of this approach can be limited by factors like time, resources, and outreach. Implementing a sport psychology course could provide a more practical way to include impactful sport psychology services and programming in education. This should be of interest to schools who are seeking to

enhance the performance and well-being of their student-athletes in order to win more games while improving mental health. Because mental health continues to be a prominent issue for adolescents, this research provides a basic template for positively addressing the psychological needs of a large segment of this population: high school student-athletes. While it has been proven that sport psychology is valuable at the professional and collegiate level, the present study provides additional support for its inclusion at the secondary level. As a result, this research should be used as a literary advocate for designing high school sport psychology courses which can help the educate the millions of high school student-athletes who play a sport like football, golf, volleyball, basketball, wrestling, baseball, softball, track and field, soccer, lacrosse, bowling, cheerleading, etc. The present study provides a practical, real-world example of an effective sport psychology course for all educators to consider when making this happen.

5.2.2 Recommendations for Future Research

The present study has implications for the literature related to sport psychology and education. First, there are very few published accounts of how sport psychology could be integrated into the high school setting for student-athletes. The results and findings of the present study make a contribution to a niche of literature which began over two decades ago, when Lyons (1998) advocated for a written sport psychology curriculum for coaches to teach during an after-school program. This was the first major step in school sport psychology. While sport psychology programming has been successful in developing mental skills in high school student-athletes, the present study is one of the first research studies to demonstrate mental skill development in a sport psychology course at the high school level.

The present study also makes a contribution to the research community by advancing knowledge related to sport psychology theory, research, and practice. While there is no “cookie-

cutter" approach to developing a sport psychology course, Vealey (2007) argued for the development of a system like Event + Response = Outcome to help student-athletes respond to major life events like the COVID-19 pandemic. The discovery of E+R=O is perhaps the most notable finding associated with sport psychology theory, research, and practice, as it could be installed as a mindset for student-athletes to use in every performance realm of their life. Next, the physical application-based activities associated with learning each mental skill were really highly regarded as part of the curriculum. This finding supports other literature exclaiming the positive reaction to physical, interactive learning activities where students are tasked with applying the newly learned mental skill (Gilbert, 2013). Finally, the humanistic teaching approach was a positive curricular and pedagogical framework through which to teach the course. Student-athletes connected to the idea of self-actualization and bought-in to the pursuit of becoming the best version of themselves. While educators and sport psychology consultants use a variety of theories to inform their approach, the humanistic approach was effective when working with individuals in high school.

In the future, this dissertation should be viewed as a literary start to a growing volume of research dedicated to school sport psychology. While the practical, real-world application of this research should always take precedence, the scholarly, academic branch of school sport psychology must continue to set a firm foundation in the literature. The present study struggled to gain traction due to a limited base of literature on sport psychology in education. This was especially true at the high school level. As a result, more significant research is needed to diversify the literature on the design and implementation of sport psychology at the high school level. Before the present study, minimal scholarly research had been conducted on a high school

sport psychology course. As such, more research studies must be conducted to support or contradict the findings and results contained within the present case study.

5.2.2.1: Suggested Areas of Research Focus

1. **Larger Number of Research Sites and Sample Size:** The limitations mentioned in the present study provide an opportunity for future research. Some of these limitations included one research site with a small population and sample size of student-athletes. As a result, more research study sites are needed to obtain a clearer picture of student-athlete learning needs. Similarly, a control group of student-athletes who are not taking the sport psychology could be helpful to compare and contrast mental skill development. Most importantly, conducting the present study at a research site outside the COVID-19 pandemic may yield different results and findings.
2. **More School Practitioner Research on the Learning Needs of Student-Athletes:** The present study is a case study conducted by a teacher-researcher. While most research in school sport psychology has been conducted by sport psychologists, more school practitioner research must be done by high school teachers and coaches to better understand educational sport psychology in the high school context. Single or multiple case studies using a mixed methods approach may be mutually beneficial to the school district and school sport psychology literature.
3. **Exploring Humanistic Theory as a Pedagogy for Student-Athletes:** The present study used a humanistic theory of learning to motivate student-athletes to build mental skill. As a result, the positive motivational foundation of self-actualization could be a powerful concept to study when applied to teaching philosophy and the purpose of education.

4. **Exploring the Power of 'Event + Response = Outcome' as a Cognitive-Behavioral System:** The present study found Event + Response = Outcome to be an extremely effective cognitive-behavioral system through which to build mental skill. Specifically, this mindset was very influential within shaping student-athlete thoughts and behaviors. Founded by Tim and Brian Kight, this precise system has rarely been mentioned in the literature until now. Influenced by Stoic philosophy, there are major research opportunities which exist to better examine the power of this formula when incorporated in sport psychology or education.
5. **Investigating the Role of Each Mental Skill in the Development of High School Student-Athletes:** While the present study analyzed 14 different mental skills important to sport and performance psychology, there is an opportunity to further research the specific role each mental skill plays within the self-actualization process. This could help solidify the most impactful mental skills to teach as part of a sport psychology curriculum. In the present study, the mental skills of Self-Talk, Visualization, Managing Anxiety, and Confidence represented the great self-actualization needs. While this is only one case study, more research could be done on mental skills that are consistently identified by student-athletes as their greatest learning needs.
6. **Investigating the Effectiveness of Various Application-Based Activities:** The present study found it necessary to research more application-based activities to include within the course curriculum. As a result, there is an opportunity to research the most effective application-based activities to help student-athletes learn each mental skill.

5.3 Final Remarks

Both physical skills *and* mental skills must be developed in order for high school student-athletes to become the best version of themselves. For many school districts, educating student-athletes about the mental side of the game is a practical next step to developing the "total athlete". While athletic physical education classes continue to be developed to help advance the physical prowess of high school student-athletes, a sport psychology course could be transformational for individual mental skill development in school and sport. Just imagine a school with strength, speed, and *sport psychology*: Does it have more student-athletes who fulfill their potential? Does it achieve academic and athletic excellence? While there has been minimal attention in the literature about the use of sport psychology in the high school setting, the present case study provides a glimpse into one of the first high schools in the nation to have an innovative sport psychology course as part of its school curriculum.

The results of the present study provide strong evidence that a sport psychology course could be successfully designed and implemented at the secondary level. While quantitative results establish that a sport psychology course can help student-athletes develop mental skill in 14 different mental skills essential to sport and performance psychology, qualitative results illustrate positive student-athlete feedback on the usage of these mental skills to address various self-actualization needs in school, sport, and life. The cognitive-behavioral system of Event + Response = Outcome was identified by student-athletes as a key variable within their mental skill development.

Thus, it can be concluded that a high school sport psychology course can help student-athletes build mental skill and address their self-actualization needs in various performance domains. By teaching student-athletes how to have a better mindset on and off the field, all

individuals have an educational opportunity to improve their performance, enhance their well-being, and become the best of which they are capable. As a result, the design, implementation, and evaluation of an innovative *Sport and Performance Psychology* course may be of assistance to others who are interested in bringing sport psychology into the classroom.

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APPENDIX A: IRB LETTER

ILLINOIS

OFFICE OF THE VICE CHANCELLOR
FOR RESEARCH & INNOVATION

Office for the Protection of Research Subjects
805 W. Pennsylvania Ave., MC-095
Urbana, IL 61801-4822

Notice of Exempt Determination

January 4, 2021

Principal Investigator	Mary Kalantzis
CC	Austin Rickels
Protocol Title	*Class in Session?: A Case Study Investigation of the X's and O's Behind Teaching a Sport Psychology Course at the High School Level*
Protocol Number	21517
Funding Source	Unfunded
Review Category	Exempt 1
Determination Date	January 4, 2021
Closure Date	January 3, 2026

This letter authorizes the use of human subjects in the above protocol. The University of Illinois at Urbana-Champaign Office for the Protection of Research Subjects (OPRS) has reviewed your application and determined the criteria for exemption have been met.

The Principal Investigator of this study is responsible for:

- Conducting research in a manner consistent with the requirements of the University and federal regulations found at 45 CFR 46.
- Requesting approval from the IRB prior to implementing major modifications.
- Notifying OPRS of any problems involving human subjects, including unanticipated events, participant complaints, or protocol deviations.
- Notifying OPRS of the completion of the study.

Changes to an **exempt** protocol are only required if substantive modifications are requested and/or the changes requested may affect the exempt status.

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
IORG0000014 • FWA #00008584
217.333.2670 • irb@illinois.edu • oprs.research.illinois.edu

APPENDIX B: RECRUITMENT MESSAGE AND PARENT CONSENT FORM

Recruitment Message

Dear Parent:

We are requesting your child's assistance with a study conducted by a teacher researcher at the University of Illinois on the effectiveness of sport psychology curriculum and design. This study will focus on your child's perceptions of a *Sport Psychology* course they have selected to take at Lena-Winslow High School. Participation from your child as a student would require nothing outside of the normal curriculum of the course. You would simply be consenting to having these items (surveys, interviews, grades, classwork) used for research purposes by the teacher researcher. The study will take place during the second semester at Lena-Winslow High School from January 2021-May 2021. The research team has pledged to keep your child's data confidential with only de-identified results published in a dissertation. Participation in this study is completely voluntary and will not impact the student's grades or relationship with the teacher or school. The teacher researcher will not be made aware of who chose to participate and who did not until after the course is over and grades have been posted. You may withdraw from participation at any time. If you have any questions, please contact the teacher researcher with the information provided:

Austin Rickels
University of Illinois at Champaign-Urbana
1310 S. Sixth St., Champaign IL 61820-6925
815-718-4248
rickels3@illinois.edu

Parent Consent Form

University of Illinois at Urbana-Champaign
College of Education
1310 S. Sixth St., Champaign IL 61820-6925
(217) 333-0960
info@education.illinois.edu

Invitation to Participate:
Dear Parent: My name is Austin Rickels and I am a teacher at Lena-Winslow High School. I am conducting a research study as a doctoral student at the University of Illinois at Champaign-Urbana. Your child has recently enrolled in my *Sport Psychology* course for the Spring 2021 academic semester. The purpose of this form is to provide you with information that will help you decide if you will give consent for your child to participate in this research.

Key Information About This Research Study:
The following includes a title of the dissertation and a short summary of this study to help you decide whether you want your child to be a part of this study:

Title: Class in Session?: A Case Study Investigation of the X's and O's Behind Teaching a *Sport Psychology* Course at the High School Level

The purpose of this study is to examine the effectiveness of this *Sport Psychology* course at helping students build mental skill and ultimately a better mindset in sport. Your child will be asked to complete two surveys and be a part of three interviews throughout the duration of the course. I expect that your child will be in this research study from January 4th, 2021, to May 21st, 2021. There are no foreseeable risks from taking part in this study. The main benefit to your child is an enhanced quality of education in the *Sport Psychology* course.

Study Purpose:
The purpose of this study is to better understand how to design an effective *Sport Psychology* course at the high school level.

Number of Participants:

If you agree to participate, your child will be one of approximately twenty participants in the study who are enrolled in the *Sport Psychology* course at Lena-Winslow High School.

Study Procedures:
The researcher is collecting data to help understand how an effective *Sport Psychology* class could be designed to meet the self-actualization needs of high school student-athletes. If you agree to participate in this research, you are agreeing to allow the researcher to use your survey and interview responses, as well as your classwork and grades, as part of his research project. Regardless of whether or not students choose to participate in the study, all students in the class will participate in three separate 15-minute interviews throughout the duration of the course. These face-to-face interviews will take place at Lena-Winslow High School and follow all COVID-19 safety protocols. The results of these surveys and interviews will be used as part of a doctoral dissertation being completed by Austin Rickels. Other student items like classwork and grades will also be used within the research. All study results can be obtained upon request.

Risks and Inconveniences:
There are minimal risks and inconveniences to participating in this study. Your child may be uncomfortable answering certain survey or interview questions. Likewise, the time the child spends participating in the study might be considered an inconvenience.

Safeguards:
To minimize these risks and inconveniences, the following measures will be taken: The child can skip any questions that he or she feels uncomfortable answering while taking the survey or during the interview. The child also may skip any activity as part of the research. The surveys and interviews will be scheduled at a time that is convenient to the child and in a location that ensures privacy.

Confidentiality:
Your child's responses will be kept confidential. Faculty, students, and staff who may see your child's information will maintain confidentiality to the extent of laws and university policies. Personal identifiers will not be published or presented. Your child's de-identified information could be used for future research without additional informed consent. The results of this study may be used in reports, presentations, or academic publications, but your child's name will not be used. The data will be stored on a password protected computer and digitally erased upon completion of the dissertation.

Voluntary Participation:
Your child's participation in this study is voluntary. Your child may decline participation at any time. You may also withdraw your child from the study at any time; there will be no penalty and it will not affect your grade.

Benefits of Taking Part in the Study:
The main benefit of your child participating in this study includes making this *Sport Psychology* course as effective as it can be for your child. Likewise, future Lena-Winslow student-athletes will benefit from your child's assistance in the study through the positive development of the *Sport Psychology* course. This study will also help contribute to the broader field of educational research in sport psychology at the secondary level.

Contact Information:
If you have questions about the study, please email me at rickels3@illinois.edu. Any other questions you have concerning the research process or your child's participation in the study, before or after your consent, can also be answered by Dr. Mary Kalantzis at marykalantzis@illinois.edu. If you have any questions about your child's rights as a participant in this research or if you feel your child has been placed at risk, you can contact the IRB office at irb@illinois.edu.

Parent's Consent:
By signing below, you are giving consent for your child to participate in the above study. Please check the option below that applies to you before signing:

☐ I give permission for my child to be included in this study.
☐ I do not give permission for my child to be included in this study.

Your Child's Name

Parent's Name

Parent's Signature Date

Researcher's Signature Date

APPENDIX C: RECRUITMENT MESSAGE AND STUDENT ASSENT FORM

Recruitment Message
(Verbal Announcement)

Dear Student:

We are requesting your assistance with a study conducted by a teacher researcher at the University of Illinois on the effectiveness of sport psychology curriculum and design. This study will focus on your perceptions of a *Sport Psychology* course that you have selected to take at Lena-Winslow High School. Your participation as a student would require nothing outside of the normal curriculum of the course. You would simply be consenting to having these items (surveys, interviews, grades, classwork) used for research purposes by the teacher researcher. The study will take place during the second semester at Lena-Winslow High School from January 2021-May 2021. The research team has pledged to keep your data confidential with only de-identified results published in a dissertation. Participation in this study is completely voluntary and will not impact your grades or relationship with the teacher or school. The teacher researcher will not be made aware of who chose to participate and who did not until after the course is over and grades have been posted. You may withdraw from participation at any time. If you have any questions, please contact the teacher researcher with the information provided:

Austin Rickels
University of Illinois at Champaign-Urbana
1310 S. Sixth St., Champaign IL 61820-6925
815-718-4248
rickels3@illinois.edu

Student Assent Form

University of Illinois at Urbana-Champaign
College of Education
1310 S. Sixth St., Champaign IL 61820-6925
(217) 333-0960
info@education.illinois.edu

Invitation to Participate:
My name is Austin Rickels. I am a doctoral student in the College of Education at the University of Illinois at Champaign-Urbana. I am inviting you to participate in a research study about the *Sport Psychology* class you have recently enrolled within at Lena-Winslow High School. Your parents will also receive a 'Parent Consent Form' informing them about this study. This 'Student Assent Form' will tell you about the study to help you decide whether or not you want to participate.

What is the key information about this research study?
The following includes a title of the dissertation and a short summary of this study to help you decide whether you want to be a part of this study:

Title: Class in Session?: A Case Study Investigation of the X's and O's Behind Teaching a *Sport Psychology* Course at the High School Level

The purpose of this study is to examine the effectiveness of this *Sport Psychology* course at helping students build mental skill and ultimately a better mindset in sport. You are being asked to participate in this study because you have chosen to take *Sport Psychology* at Lena-Winslow High School. The researcher is collecting data to help understand how an effective Sport Psychology class could be designed to meet the self-actualization needs of high school student-athletes.

What do I need to do?
If you agree to participate in this study, your participation will not require any time outside of the regular meeting time of the course. Your participation will take place inside and outside the classroom at Lena-Winslow High School and online through Google Forms and Google Meet. If

you agree to participate in this research, you are agreeing to allow the researcher to use your survey and interview responses, as well as your classwork and grades, as part of his research project. The survey will take approximately 20 minutes to complete. You will also be interviewed on three separate occasions throughout the duration of the course. These face-to-face interviews will last approximately 15 minutes and follow all COVID-19 safety protocols. The results of these surveys and interviews will be used as part of a doctoral dissertation being completed by Austin Rickels. Other student items like classwork and grades may also be used within the research. These results can be obtained upon request.

What are the benefits to me?
If you take part in the study, you will benefit by providing feedback that allows the course to be as effective as it can be in real-time. Likewise, future Lena-Winslow student-athletes will benefit from your assistance in the study through the positive development of the *Sport Psychology* course.

Are there any risks to me if I decide to be involved in this study?
There are no known or foreseeable risks from taking part in this study. Your grade in the *Sport Psychology* course is not dependent on your involvement in this study. Likewise, there will be no negative repercussions of choosing not to participate.

How will my information be protected?
Your responses will be confidential. Faculty, students, and staff who may see student grades and/or course artifacts will maintain confidentiality to the extent of laws and university policies. Personal identifiers will not be published or presented. Personal information will only be accessed by the researcher. Pseudonyms will be used during the reporting of the data. Your de-identified information could be used for future research without additional informed consent. The results of this study may be used in reports, presentations, or publications, but your name will not be used. The data will be stored on a password protected computer and only be accessible by the researcher. The data will be deleted as soon as possible after the dissertation is completed.

Do I have to be in the study?
No, you don't. The choice is yours. Your participation in this study is completely voluntary and you may choose to withdraw at any time throughout the course. It is okay to decline participation as you will remain an important member of the course. This decision will not affect your grade.

What if I have questions?
If you have any questions about the study, you can ask me now or at any time during the study. Any other questions you have concerning the research process or your participation in the study, before or after your consent, will be answered by Austin Rickels at rickels3@illinois.edu or Dr.

Mary Kalantzis at marykalantzis@illinois.edu. If you have any questions about your rights as a participant in this research or if you feel you have been placed at risk, you can contact the IRB office at irb@illinois.edu. You will receive a copy of this form for your records.

Participant Signature

This form explains the nature, demands, benefits, and any risks associated within participating in this research study. By signing this form, you agree to participate in this study. Remember, your participation is voluntary and you may withdraw at any time without penalty in this course. Your signature below indicates that you consent to participate in the above study:

Name of the Participant Date

Signature of the Participant Date

Researcher's Signature Date

APPENDIX D: COVID-19 HUMAN SUBJECTS RESEARCH SAFETY PLAN

The Office for the Protection of Research Subjects (OPRS) in collaboration with the Division of Research Safety (DRS) must review protocol safety plans before any in-person data collection is re-initiated. This applies to only those procedures that cannot be completed remotely.

You may contact DRS, drs@illinois.edu, with any specific safety plan questions. Please submit your completed plan to OPRS, IRB@illinois.edu.

Section 1. PROTOCOL INFORMATION	
IRB Number: 21517	
Protocol Title: Class in Session?: A Case Study Investigation of the X's and O's Behind Teaching a *Sport Psychology* Course at the High School Level	
Section 2. PRINCIPAL INVESTIGATOR	
Name: Dr. Mary Kalantzis Department or Unit: Education Policy, Organization, & Leadership netid: kalantzi	
Section 3. IN-PERSON STUDY PROCEDURES and PRECAUTIONS	
Instructions: List study procedures and data collection methods that can only take place in-person. Detail information/instructions participants will be given prior to their campus visit and precautions that will be employed to reduce the risk of contagion. Standard precautions can be found on the CDC website here.	
As a high school teacher, I will be teaching a course with in-person students and remote students online. Any at-risk student will be at home remoting into the course through Google Meet. All other students will be in class every day wearing masks and six feet apart per school policy and health department regulations. Data collection will be done as a normal part of the course curriculum, regardless of whether students choose to participate in the research study.	
(1) Procedure: Interviews	**(1) Precautions:** Interviews will be done virtually through Zoom for remote learners and at a safe distance adhering to social distancing policies. Masks will be worn at all times with interview chairs at least six feet apart. Interviews will not be recorded with only notes taken by the researcher. Interviews will last approximately 5-10 minutes. All interviewees will have undergone temperature checks and other health screening measures upon entrance to the school.
(2) Procedure: Surveys	**(2) Precautions:** All surveys will be done online through Google Forms. Some students will take the survey in-person as an in-school learner while the remote learners will take the surveys at home. The surveys will be provided online through Google Classroom with no physical interaction.
(3) Procedure:	**(3) Precautions:**

Section 4. VULNERABLE POPULATIONS

Instructions: Some individuals are at higher risk of developing more severe symptoms if exposed to COVID-19. Please indicate if your protocol targets any at-risk populations, select all that apply. Detail additional safeguards that will be taken to provide added protections. For information on those at higher risk for severe illness can be found on the CDC website here.

- ☐ Older age (>60 years)
- ☐ Immunocompromised
- ☐ Hypertension
- ☐ Obesity
- ☐ Metabolic Disease
- ☐ Cardiovascular Disease
- ☐ Chronic lung disease
- ☐ Asthma
- ☐ Neurologic disease
- ☐ Renal disease
- ☐ Other:

Additional Safeguards: *Any student with medical issues at-risk due to COVID-19 will be a remote learner and online during this course.*

Section 5. INVESTIGATOR ASSURANCE

- I certify that the information provided in this application is complete and correct.
- I accept ultimate responsibility for the conduct of this study, the ethical performance of the project, and the protection of the rights and welfare of the human subjects who are directly or indirectly involved in this project.

The original signature of the PI is required before this application may be approved (electronic signatures are acceptable).

Principal Investigator	Dr Mary Kalantzis	Date Dec 17, 2020

APPENDIX E: PARTICIPANT DEMOGRAPHICS SURVEY

Participant Demographics

1. What is your age?

   Mark only one oval.

   - ◯ 16
   - ◯ 17
   - ◯ 18

2. What is your gender?

   Mark only one oval.

   - ◯ Male
   - ◯ Female

3. What is your race/ethnicity?

   Mark only one oval.

   - ◯ White/Caucasian
   - ◯ Black/African-American
   - ◯ American-Indian
   - ◯ Alaskan Native
   - ◯ Asian
   - ◯ Other

4. What is your school classification?

Mark only one oval.

- ◯ Freshman
- ◯ Sophomore
- ◯ Junior
- ◯ Senior

5. What high school sports will you play during the 2020-2021 school year? Check all that apply.

Check all that apply.

- ☐ Football
- ☐ Volleyball
- ☐ Golf
- ☐ Cheerleading (Fall)
- ☐ Boys Basketball
- ☐ Girls Basketball
- ☐ Wrestling
- ☐ Cheerleading (Winter)
- ☐ Baseball
- ☐ Softball
- ☐ Boys Track and Field
- ☐ Girls Track and Field

APPENDIX F: PRE-COURSE SURVEY

Your degree of personal growth, or self-actualization, within this course will be measured through pre- and post-course surveys. These two surveys will gather data on your level of skill (ability) within 14 different sport psychology mental skills which are critical to who you are as a student-athlete.

The purpose of this pre-course survey is to understand your current psychological profile as it pertains to mental skills and athletic performance and well-being. This information will help me construct your individual 'Performance Profile' while also helping me design the course in a way that better assists you on your chase of becoming the best student-athlete you are capable of becoming.

Specifically, the pre-course survey will help establish the baseline of your current amount of mental skill as it exists right now in your life. As a result, for each mental skill, you will give yourself a self-rating from 0-100 (i.e., goal-setting=75; mental toughness=84; visualization=62) based on your mental ability within that skill. This number should go in the short answer box. Use the following grading scale to help anchor your selection of your score, and again, please respond ONLY with a number in the short answer box when assigning yourself a 'Self-Rating 0-100':

A+ (State Champion): 100
A- to A (Excellent): 90-99
B- to B+ (Good): 80-89
C- to C+ (Average): 70-79
D- to D+ (Fair): 60-69
F (Poor): 0-59

After assigning yourself a self-rating score out of 100, you will then be asked in a follow-up question to type a brief response explaining why you selected that score for that specific mental skill. These questions will be marked as 'Explanation'. You may now begin the pre-course survey using the following question stem (shown in all caps) to introduce each question:

BEFORE TAKING THIS COURSE, WHAT DO YOU THINK IS YOUR CURRENT LEVEL OF MENTAL SKILL (ABILITY) IN THE FOLLOWING:

Mental Skill	**Level of Mental Skill (Self-Rating 0-100)**	**Explanation**
Goal-Setting		
Mental Toughness		
Visualization		
Focus		

Self-Talk		
Body Language		
Confidence		
Managing Anxiety		
Intensity		
Enjoyment		
Leadership		
Time-Management		
Being a Good Teammate		
Commitment to Excellence		

APPENDIX G: INTERVIEW QUESTIONS

Semi-Structured Questions for Interview #1 (Weeks 1-2: January 5th, 2021-January 15th, 2021):

1. Why did you choose to take this course? What have you liked about it so far?
2. What role have sports played in your life?
3. How has COVID-19 and the cancellation of sports affected your well-being as a student-athlete?
4. How do you see yourself as a student-athlete?
5. Describe your general mindset in sport.
6. What motivates you?
7. What scares you?
8. What are some of your goals this semester as an athlete?
9. What should I know about you that will help me teach you within this course and reach those goals?
10. If this course could help you build one mental skill to help you perform better, what would that mental skill be? [look at 'Mental Game Scorecard']

*Note: Additional questions will be asked and differentiated based upon individual responses within the pre-course survey.

Semi-Structured Questions for Interview #2 (Weeks 9-10: March 8th, 2021-March 19th, 2021):

1. Tell me how this class is going for you so far. What's the main thing you've learned?
2. What do you think about our mission of becoming the best version of ourselves as student-athletes? Tell me about your journey of becoming a better version of yourself.
3. How has the course influenced your thoughts, feelings, and behaviors so far as a student-athlete?
4. Do you like the ERO mindset we are trying to build? Has it helped make your mindset better?
. Can you give me an example of where you have used it so far?
5. What has been the most effective thing about the course for you so far? [Show them slides to detail options of LECTURE, VIDEOS, GAME FILM, KNOWLEDGE, APPLICATION, BOOK]
6. How are you applying these mental skills to your life? Class, practices, games, etc.?
7. What mental skill(s) do you feel like you are improving within most so far?
. What specifically helped you within this?
8. What mental skill(s) would you like to keep working on or hear more about?
9. What can we do to make this course better?
10. Overall, do you feel like *Sport Psych* is helping improve your performance and well-being as a student-athlete?

Semi-Structured Questions for Interview #3 (Weeks 17-18: May 3rd, 2021-May 14th, 2021):

1. Had you heard of sport and performance psychology before taking this course and how do you feel about the general field of sport and performance psychology now?
2. Do you think one's mindset can influence their performance and well-being?
3. Tell me how this class went for you. Did you like the course?
4. What do you think you learned in this course?
5. What was the most effective thing about the course for you?
6. How do you think the course influenced you in sports? In the classroom?
7. What was the course like in-season vs. out-of-season?

8. What about your mindset improved the most?
9. What about your mindset improved the least?
10. What can I do to make this course better?
11. What did you think about E+R=O?
12. What did you think about the grading philosophy of this course?
13. Do you feel you became a better version of yourself throughout the course?
14. What final comments would you like to make about the course?

*Note: Additional questions will be differentiated based upon individual responses within the post-course survey (if available).

APPENDIX H: POST-COURSE SURVEY

Your degree of personal growth, or self-actualization, within this course will be measured through pre- and post-course surveys. These two surveys will gather data on your level of skill within 14 different sport psychology mental skills which are critical to who you are as a student-athlete.

The purpose of this post-course survey is to understand your new psychological profile as it pertains to mental skills and athletic performance and well-being. This information will help me finish your individual 'Performance Profile' while also helping me analyze the effectiveness of the Sport and Performance Psychology course you have just completed.

Specifically, the post-course survey will once again ask you to assess your current amount of mental skill as it exists right now in your life. As a result, for each mental skill, you will first give yourself a new self-rating from 0-100 (i.e., goal-setting=75; mental toughness=84; visualization=62). This number should go in the short answer box. Use the following grading scale to help anchor your selection of your score, and again, please respond ONLY with a number in the short answer box when assigning yourself a 'Self-Rating 0-100':

A+ (State Champion): 100
A- to A (Excellent): 90-99
B- to B+ (Good): 80-89
C- to C+ (Average): 70-79
D- to D+ (Fair): 60-69
F (Poor): 0-59

After assigning yourself a self-rating score out of 100, you will then be asked in a follow-up question to type a brief response explaining why you selected that score for that specific mental skill. These questions will include the word 'Explanation'. You may now begin the post-course survey using the following question stem (shown in all caps) to introduce each question:

AFTER TAKING THIS COURSE, WHAT DO YOU THINK IS YOUR NEW LEVEL OF MENTAL SKILL (ABILITY) IN THE FOLLOWING:

Mental Skill	**Level of Mental Skill (Self-Rating 0-100)**	**Explanation**
Goal-Setting		
Mental Toughness		
Visualization		
Focus		
Self-Talk		

Body Language		
Confidence		
Managing Anxiety		
Intensity		
Enjoyment		
Leadership		
Time-Management		
Being a Good Teammate		
Commitment to Excellence		