

**HOW DO YOU DESIGN YOUR PRACTICE? UNDERSTANDING VOLUNTEER
SOCCER COACHES' BEHAVIORS IN TERMS OF SELF-REGULATED LEARNING
STRATEGIES**

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DEDICATION

First and foremost, I would like to dedicate this dissertation to my father, Eiji, and my mother, Nobuko. They have unconditionally supported me and believed in my dream since I started studying in the U.S. I appreciate my young brother, Chihiro, who has encouraged me from Japan. His persistence and perseverance inspired me to work harder when I needed to overcome challenges. I also would like to dedicate this dissertation to my girlfriend, Michelle, who has mentally supported me in the difficult times. Her kind and optimistic words made me resilient while writing this dissertation. みんな、長い間ずっと支えてくれてありがとう。

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ABSTRACT

Many sports studies investigated elite performance level or experienced athletes whereas there are few studies addressing non-experienced or volunteer coaches' perspectives.

Empirically, the effects of self-regulated learning (SRL) in sports performers have been proven in a variety of athletes. Meanwhile, few studies have addressed coaches' perspectives of using SRL strategies to facilitate their athletes to develop athletic performance. Furthermore, many studies of SRL in sports were rarely analyzed qualitatively in order to understand the meaning of behaviors related to SRL strategy use. Therefore, the purpose of this study is to address volunteer youth soccer coaches' understanding of self-regulation in athletes and strategies they used in the practice for developing athletes' SRL skills. In accordance with these purpose statements, two research questions were formed. First, what are volunteer soccer coaches' general thoughts and understandings of self-regulation in athletes? Second, what strategies do the volunteer coaches believe they use to develop self-regulatory abilities in their athletes and how do they employ them?

Eight volunteer soccer coaches of local youth (between 12 to 18 years old) team participated in a semi-structured interview and answered questions about general understanding of self-regulation in their athletes and strategies the coaches typically used to develop their athletes' self-regulation. Their interviews were transcribed and analyzed with thematic analysis.

Findings illustrated youth athletes' self-regulated behaviors as active engagement in sport, contribution to others, and proactive behaviors for playing sport while strategies the coaches used in the practice were related to approaching players, organizing the practice environment, motivational strategies, and learning strategies. These findings were discussed in terms of Zimmerman's self-regulation theory (2013), as the findings of the first research question

indicated athletes' self-regulated behaviors while coaching strategies for athletes' self-regulation emerged from the findings of the second research question. This study presents implications for evaluation of athletes' self-regulated behaviors and coaching strategies for athletes' self-regulation.

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CHAPTER ONE INTRODUCTION

In this chapter, the researcher introduced the research backgrounds that formulated the outline of this research study. Specifically, several research studies and evidence related to coach education, coaching frameworks, and self-regulation were presented. By these empirical studies and evidence, the purpose statements and research questions were developed. Lastly, limitations of this study were listed.

Background of Study

Coach education impacted coaches' competence and coaching style; however, many participants in coach education programs were not satisfied with the curriculum and learning structure of the program (Demers, Woodburn, & Savard, 2006; Paquette & Trudel, 2018; Piggott, 2012; Wiersma & Sherman, 2005). This issue was found not only in the professional level coaches but also local youth volunteer coaches. Harman and Doherty (2014) addressed psychological contract of volunteer youth soccer coaches and found that they expected to develop coaching skills and coaching competence. Their further investigation (Harman & Doherty, 2019) revealed the expectations of the sport club administrators for coaches. These empirical research studies displayed the necessity of support for coaches to develop coaching skills. In other words, evidence-based coaching style and strategies may contribute them to establish effective coaching skills by which their athletes' sport skills are effectively developed.

Several theoretical frameworks of coaching and pedagogies have reported their positive influences on coaching. For instance, athlete-centered coaching is expected to develop athletes' autonomy. Romar, Sarén, and Hastie (2016) investigated the effects of Sport Education, a mastery-oriented pedagogical model for sport, and how it facilitated coaches to develop an athlete-centered learning environment and influenced the perception of players, coaches, and

parents. Light and Harvey (2017) explained the game-based pedagogy, rooted in the concept of athlete-centered coaching, to develop an athlete-centered learning environment that may positively influence players' motivation and learning. Similarly, Pill (2015) conceptualized Game Sense coaching, an athlete-centered coaching that was rooted in constructivism and emphasized that coaches attempt to understand athletes' experiences and facilitate them to construct meaning in their learning experiences. This study indicated that social influence played an important role in behavioral changes in athletes, because athletes changed their behaviors when coaches also changed their behaviors.

Autonomy support is another theoretical framework of coaching that focused on developing one's autonomy. For instance, van de Pol and colleagues (2015) investigated the relationship between the perception of athletes' autonomy support, types of autonomy behaviors, types of sports, and relevant psychological and behavioral factors. Their study indicated that coaches needed to respect learners' autonomy in learning activities in order to enhance their learning experiences. To bolster their autonomy, coaches required reinforcing their autonomous behaviors and establishing supportive environments in which they were able to seek help from coaches when they made a decision in the learning activities. This finding was consistent with Lemos and colleagues' study (2016), as children practicing ballet skills in an autonomy supportive environment improved ballet performance and motivation to practice ballet. In addition, their sense of choice was enhanced, whereas somatic anxiety was reduced under the autonomy supportive environment.

Zimmerman's self-regulation model (2013) was one of the theoretical frameworks that developed learners' proactive learning behaviors by using self-regulated learning strategies. This self-regulatory process is a goal attainment process in which learners identify learning objectives

and tasks to achieve learning goals. They also require self-regulation to their thoughts and behaviors in order to sustain their self-regulation cycle. In Zimmerman's self-regulation cycle (2013), learners set goals and identify motivational sources to sustain the self-regulation cycle in the forethought phase. Theoretically, self-efficacy, outcome expectations, task interests and learners' goal orientation were recommended motivational sources for self-regulation cycle (Code, 2020). In the performance phase, learners execute cognitive strategies to keep executing strategies for goal attainments. In particular, imagery and attentional control strategies were involved in strategies for self-control (Vealey & Forlenza, 2013), while recording their performance and metacognitive monitoring were included in self-observation strategies (Zimmerman & Paulsen, 1995). In the self-reflection phase, learners recalled their performance and strategies for goal attainment as self-feedback for self-regulatory processes. Reflective practice was commonly used for self-evaluation so that they identified tasks and progress toward goals (Knowles, Tyler, Gilbourne, & Eubank, 2006). Based on this self-evaluation, learners revise goals and tasks to the goals. Therefore, this self-regulatory process is a cyclical and ongoing process toward goals.

Zimmerman's self-regulation model was commonly applied in education settings (Lai & Hwang, 2016); however, it has been developing in the sport settings, as self-regulated athletes tended to demonstrate high athletic performance (Bartulovic, Young, McCardle, & Baker, 2018). McCardle and colleagues (2019) distinguished the categories of the self-regulation studies in sports: engagement in self-regulated learning during the sports, self-regulated learning as athletes' characteristics, self-regulated learning as indicators of skill levels, self-regulated learning as outcomes of an intervention, investigation in the relationship between self-regulated learning and other variables, and self-regulated learning and motivational sources. While these

studies focused on athletes' perspectives of self-regulation, there were few studies that addressed athletes' self-regulated behaviors from the coaches' perspectives. Besides, several research studies investigated the effects of theoretical frameworks of coaching such as autonomy support and athlete-centered coaching. Meanwhile, few studies investigated how coaches developed a learning environment rooted in Zimmerman's self-regulation perspectives. Theoretically, Zimmerman's self-regulation model and strategies evidenced its effects in sport setting; therefore, it was estimated that coaches applied the concepts of the self-regulation theory into their coaching and designing the sports practice environment.

While several empirical studies investigated the effects of self-regulated learning strategies by quantitative analysis, few studies identified the learners' experiences of self-regulated strategies used by qualitative analysis. In order to address the participants' subjective experiences of self-regulation, thematic analysis was commonly applied to identify these experiences. For instance, Junggren and colleagues (2018) addressed sports coaches' perspectives on the influential factors of athlete-coaches relationship. In the findings section, they interpreted the influential factors by major themes and subthemes while they integrated the findings into theoretical perspectives in the discussion section. On the other hand, Burnie and colleagues (2018) qualitatively analyzed the factors impacting development of coaching philosophy. In their qualitative analysis, coaches believed that non-task related physical and resistance training contributed to sport skills, and training task-related strength was crucial to their sports, most of which were physical-oriented sports such as cycling and kayaking. As these previous research studies indicated, thematic analysis allowed researchers to identify the pattern of behaviors and thoughts related to the research topic.

Purpose Statement

Therefore, the purpose of this study is to understand how middle school volunteer soccer coaches design their sport practices. Through exploring coaches' narrations about their practice, this study will particularly examine: 1) coaches' understanding of self-regulation in athletes, and 2) how coaches develop SRL abilities in athletes. In accordance with these purpose statements, two research questions were formed. First, what are volunteer soccer coaches' general thoughts and understandings of self-regulation in athletes? Second, what strategies do the volunteer coaches believe they use to develop self-regulatory abilities in their athletes and how do they employ them? To address these research questions, the narrations of the youth volunteer soccer coaches will qualitatively be analyzed. The goal of this study is to contribute to the field of coaching and sport learning, and to develop the knowledge of effective coaching and learning strategies used by volunteer coaches for their athletes.

Limitations

In this study, several limitations were acknowledged. First, the current research study was allowed to collect one type of dataset, participants' interview. This limitation suggested that future researchers to collect qualitative data from multiple sources such as observation notes and transcribed interview. Second, the research utilized a convenience sample in order to recruit a sufficient number of coaches to participate in the study. Thus, there may be unintentional bias by way of those who volunteered to participate in the study being systematically dissimilar from coaches who did not participate. Also, the current research was limited as only coaches' perceptions, understandings, and thoughts about their athletes' self-regulated behaviors were examined. Thus, athlete perceptions were not evaluated. Further, no observational data was collected nor were any objective forms of data collected. Coach reported coaching strategies

were examined, but data related to players' perceptions of those strategies or other assessments of the outcomes related to those strategies were not collected.

The limitation of only one type of data collected, coach perceptions, is an important one. Experts recommend the study of a phenomenon involve the analysis of multiple types of data in qualitative research (Flick, 2014a; Lietz, Langer, & Furman, 2006). However, this limitation was unavoidable due to the unexpected worldwide coronavirus pandemic of 2020, practice observations that were originally planned were necessarily canceled for safety reasons. In order to bolster the trustworthiness of the current study without analyzing multiple datasets, the current study employed brief member checking, identification of the researcher's subjectivity, reporting direct quotes in the findings, and chain of evidence. Future qualitative research should collect multiple datasets in order to increase the trustworthiness of the study and to expand our understanding of self-regulation in youth athletes and sports.

Although coaches professed a strong belief that self-regulation was directly related to players' motivation, coaches did not emphasize directly addressing motivation through the strategies they applied to guide players' self-regulatory actions. Instead, coaches frequently mentioned that self-regulated players simply were motivated. This research was limited in that the researcher did not set out to directly assess how coaches address, improve, and leverage player motivation. Future research should examine motivation more directly as a part of similar self-regulation research with coaches both through qualitative and quantitative means.

Such past research in education has revealed that motivation plays the following important roles in the self-regulatory cycle. Notably, motivation sustains learners' engagement in the self-regulatory process (Gilson & Feltz, 2012; McCardle et al., 2019), and it improves the important self-regulatory variables of self-efficacy (Müller & Seufert, 2018; Pajares, 2008) and

agency (Code, 2020; Jääskelä et al., 2020). Further research is needed to address how sports coaches understanding of their athletes' motivation, self-efficacy, and agency.

The only dimension of motivation the current study approached is that of intrinsic and extrinsic motivation. However, the coaches struggled to explain what those variables were and means of increasing these forms of motivation were not addressed. Future research should explore the impact of professional development for coaches related to understanding and targeting intrinsic and extrinsic motivation. Some participants seemed aware that they could benefit from this type of professional development because their approach to coaching was simply based upon emulating how the coaches were coached when they were players and not on any pedagogical or evidence-based coaching models. As previous research studies support the benefits of professional development and formal coach education (Demers et al., 2006; Piggott, 2012), it may be worthwhile for coaches to receive training related to how to increase player motivation and self-regulatory abilities and for researchers to evaluate the impact of such training on coaches and players.

In the current study, participants were only asked to participate one interview for collecting qualitative data. This data collection strategy allowed the researcher to explore the patterns of the participants' understanding of self-regulation in their athletes and the use of strategies they used in practice. This provides a valuable snapshot of the coaches understanding of their coaching practice and heir athletes' self-regulation; however, a longitudinal research design would overcome this temporal limitation of the study and enable the researcher to specifically address the participants' coaching experiences and better understand how their understanding of self-regulation changes over time (Wibrowski et al., 2017). A longer period of data collection that includes observations of practices would also enable the researcher to obtain

and analyze the richness of coaching experiences. This could involve observational data on how coaches actually use strategies during practice to promote self-regulation, including those strategies that the coaches are not even consciously aware they use. Although this study had a number of limitations, leaving room for a number of future research avenues to explore, the current findings also add to the literature in meaningful ways and have implications for coaching.

CHAPTER TWO LITERATURE REVIEW

In this chapter, the researcher displays literature he reviewed for the current research study and describes how these studies are associated with this study. First, research articles related to coach education are reviewed. Second, research articles associated with Albert Bandura and his learning theories are listed. Third, research studies focused on Barry Zimmerman's self-regulation theory and self-regulated learning (SRL) are outlined. Fourth, research studies about thematic analysis are reviewed. In each topic, the researcher summarizes and synthesizes important ideas in this study.

Coach Education and Theories of Coaching

Studies of coach education investigated experiences of the participants in a coach education program and what they learned in the program. Coach education programs aimed to develop sport coaches by teaching knowledge of coaching and providing learning opportunities to the coaches. On the other hand, studies of coaching examined effects of a conceptual framework and evidence-based practice of coaching. These coaching frameworks were integrated psychological theories such as motivation and self-efficacy. For this study, studies of coach education emerged the needs of coach development in volunteer coaches while studies of coaching indicated the positive effects of using evidence-based coaching and designing practice environment as a coaching strategy.

Coach Education

Coach education plays an important role in developing coaches' competences with which they confidently teach sport skills and organize contents of practice (Avner et al., 2017; Demers et al., 2006; Paquette & Trudel, 2018), whereas many studies reported that the contents of formal coach education often fail to meet participants demands through the offered curriculum. For

instance, in the United Kingdom, Piggott (2012) addressed coaches' experiences of formal coach education designed by the notion of national governing bodies of sport (NGBs). They specifically investigated the following issues associated with formal coach education; little value of formal education, few opportunities to participate in formal coach education, the disconnection between technical-oriented instructions and solid coaching curriculum, and the existence of resistance from local sport stakeholders to generalized coaching curriculum. Content analysis based on sociological perspectives reveals that participants, who are local coaches, tend to perceive that a comprehensive formal coach education program is not helpful for them, because its curriculum strictly follows required manuals or textbooks, and instructors are unidirectionally teaching to coaches. This finding suggests the necessity of more appropriate coach education systems in which coaches are able to collaboratively and interactively learn coaching methods as well as contents in the coach education program. Nelson, Cushion, and Potrac (2013) supported this finding that the coaches expect to be provided more of a variety of learning topics in NGBs coach education. In sum, even though several successful models and cases of coach education exist, improvement of the coach education curriculum and contents is still needed.

Perspectives of youth volunteer coaches have been examined to establish their psychological characteristics. For example, Harman and Doherty (2014) investigated the factors that develop and influence the psychological contract of volunteer coaches. They found that the volunteer coaches perceived high responsibility to develop coaching skills and demanded to be provided sufficient resources and support from their team. They concluded that the volunteer coaches' psychological contract is affected by the external environment the coaches' club established. As a further research, Harman and Doherty (2019) addressed sport club's

perspective of their coaches and themselves. In their finding, the board members of the sport clubs expected their coaches to provide positive sport experiences to the children in the club. At the same time, the board members also paid attention to club administration and fulfillment of coaches' assigned roles.

Another type of study that examined the perspective of volunteer coaches addressed their experiences with formal coach education. Wiersma and Sherman (2005) investigated the volunteer coaches' perception of coach education programs and parental issues in youth sports. This study particularly focused on general experiences of coaching, perceived issues of the coach education programs, and expectations and demands of the coach education based on their experiences. Their research interest was formed with following assumptions; volunteer coaches rarely participated in coach education programs, challenges volunteer coaches experienced may be attributed to the lack of preparation for coaching their players, and there may be organizational issues that prevent sports leagues from developing effective coach education programs. Wiersma and Sherman conducted interviews with four focus groups to address general experiences of coaching and issues of the coach education programs the coaches experienced. Transcribed data were analyzed with inductive content analysis. They found 27 lower order themes and four higher order themes through the analysis. Based on this finding, they discussed that the volunteer coaches struggled with organizing their training effectively and efficiently due to little experience and limited knowledge of pedagogy. In addition, most coaches demand improvement of the coach education programs. Specifically, the coaches expected to receive supervision from mentors and to participate in continuing coach education programs multiple times a year. As several lower order themes are related to parental or child issues, many coaches experienced difficulties managing overwhelming parental behaviors. Synthesizing the previous

findings, it is assumed that several studies addressed volunteer coaches' experiences of formal education and their characteristics, whereas specific volunteer coaches' coaching experiences is needed to identify particular issues of concern while they are coaching their athletes.

Athlete-Centered Coaching

Several theoretical frameworks integrate with designing sport practice environment in order to enhance learning effects of sport skills. For example, athlete-centered coaching is a pedagogical concept in sports assuming that athletes' autonomy in practice is respected. To examine its effect, athlete-centered coaching has been investigated as a different coaching style than traditional coaching. For instance, Romar and colleagues (2016) explained how Sport Education, a mastery-oriented pedagogical model for sport, facilitated coaches to develop an athlete-centered learning environment and influences the perception of players, coaches, and parents. Twenty-three Finnish children, who have no experience playing for the coaches who are using the Sport Education approaches, learned concepts of the Sport Education. In this situation, most players on the team were assigned one of the roles (captain, fitness coach, skill coach, referee, or no role) during a practice in which they are responsible for the assigned role. During eleven practice sessions, their role was rotated in each session. In order to collect qualitative data, the researchers observed players' behaviors in the practice sessions, recorded them in the field notes, and conducted formal and informal structured interviews to ask about their experiences in Sport Education. From the results of qualitative analysis, four themes emerged: "autonomy and responsibility", "team affiliation", "competition", and "player's roles". In autonomy and responsibility, players were responsible for an assigned role even though they were assigned a different role in another session. Particularly, some of the players proactively designed modified patterns of warm-up and took advantage of the warm-up drills in other

situations. The behaviors related to the team affiliation were also observed. For instance, players voluntarily developed team songs to get psyched up, and players on another team attempted to use positive feedback for teammates. Although the Sport Education model highlighted mastery processes and the enjoyment of playing, most players made an effort to win in games. Lastly, the players demonstrated positive manners of being responsible for a variety of team roles. For example, some introverted players displayed positive and active behaviors they do not usually display when they were assigned specific team roles rather than just being a member of the team with no particular responsibility. These findings suggest that Sport Education positively impacts players' responsibility, autonomy, and performance by experiencing a variety of roles. That is, players were able to practice making decisions on their own while being responsible for a team role. In addition, as player's autonomy was respected, their motivation for sports also improved. On the other hand, there were limitations because the educational training for coaches teaching the concepts of Sport Education was insufficient. Further research is needed to examine the effects of Sport Education with experienced or trained coaches. This study infers that coaches need to thoroughly learn theoretical frameworks and applications when they implicate a new coaching style and develop a theoretical-based learning environment for players to improve their athletic performance.

Light and Harvey (2017) explained the game-based pedagogy to develop an athlete-centered learning environment that may positively influence players' motivation and learning. The game-based pedagogy focuses on improving the learning experiences of the players by playing team sports. It is assumed that positive learning experiences enhance their interest in sports, cognitive skills, and proactive learning behaviors. The game-based approach, therefore, allows coaches to conduct athlete-centered coaching through which athletes develop humanity,

interest, a sense of enjoyment of sports, and positive social interactions with peers. Focusing on its pedagogical aspects, there are four key concepts. First, it is required that coaches are involved in holistic perspectives in their coaching when designing a sport practice. In particular, the game-based approach assumes that athletes' learning experiences can be enhanced when they are exposed to complex situations such as playing a whole game and activities including actual match perspectives. In this learning environment, they are aware of improvement by learning and performance outcomes. However, this may be challenging because designing specific and effective practice drills for the athletes depends on coaches' knowledge and prior coaching experiences. Regardless of this difficulty, the learning environment corresponding to the game-based approach likely empowers athletes to engage in proactive learning. Second, coaches who rely on the game-based approaches actively use open-ended questions and encourage athletes to engage in problem-solving. Through open-ended questions by coaches, athletes are able to reflect on their performance and simulate multiple potential strategies for matches. In problem-solving activities, they develop potential solutions to achieve goals. For these strategies, coaches are responsible for facilitating their athletes to develop goals in the next practice and find better solutions to solve a problem in performance. It is, however, challenging for the coaches to acquire skills for using open-ended questions and encouraging their players to overcome mistakes that may highlight their weaknesses. Third, it is ideal that all players, including both experienced and non-experienced players, fairly engage in collaborative problem-solving processes. Coaches play an important role in encouraging non-experienced players to be involved in the collaborative problem-solving process so that the non-experienced players are able to develop a sense of relatedness to the group. Lastly, coaches need to design an environment in which athletes perceive that their mistakes are learning opportunities. In

conclusion, the researchers suggest that the game-based approach may positively impact players' learning experiences. That is, this approach facilitates coaches shift to athlete-centered coaching through which their athletes' interest in sport is enhanced. With the game-based approach, athletes' enjoyment in learning sport and a sense of relatedness are cultivated. Further research is needed to examine the effects of the game-based approach in athletic development.

Concepts of the learner-centered coaching style that respects learners' interests and choice in learning have been discussed. In order to develop an environment where athletes are able to sustain a learner-centered learning style, coaches play an important role. For instance, Pill (2015) addressed Australian football coaches' experiences that relate to Game Sense (GS) coaching. GS coaching, as a player-centered approach, is rooted in constructivism and emphasizes that teachers or facilitators attempt to understand learners' experiences and facilitate learners to construct meaning in their learning experiences. With this background, Pill interviewed two Australian football coaches to address their experiences of transforming traditional coaching style to GS coaching style. Several themes associated with sustainability of GS coaching emerged. For instance, equal relationship with the coaches' players facilitated the coaches to focus on learner-centered coaching. That is, this change of coaching style improved the players' engagement level in practice, as the coaches' role shifted from unidirectional teaching to facilitative coaching that respects players' interest and enjoyment of the sport. Therefore, a mutual coach-athlete relationship may facilitate athletes to engage in an athlete-centered learning style. Another remarkable theme was that coaches needed to believe in the effect of their learner-centered coaching; otherwise, they may struggle to maintain transforming their original coaching style into a GS coaching style. In their study, winning or positive performance outcomes of their players ensured the coaches' belief in GS coaching. In

conclusion, Pill conceptualized four principles that help coaches shift their coaching style to GS coaching: coaches focus on training their players but not winning or losing games, coaches need to involve their players in experiences that may help them manage challenges in a game, coaches need to consider that athletes are learners so that the athletes are secure in their autonomy of learning, and coaches need to consider themselves as educators so that the GS coaching style can be sustained. Pill's study infers that the coaches' presence or behavioral change may impact their athletes' cognitive process such as motivation to change behaviors and engage in practice. In other words, coaching style and the presence of the coach may influence sustainability of athletes' self-regulatory process.

Autonomy Support

Autonomy support is examined not only in educational settings but also in sport settings. For instance, van de Pol and colleagues (2015) investigated the relationship between the perception of athletes' autonomy support, types of autonomy behaviors, types of sports, and relevant psychological and behavioral factors. In this study, they distinguish autonomous behaviors as interest in athletes' input referring to given choices and information gathering by listening to and questioning others, and praise for autonomous behavior referring to rewarding and praising regarding independent decision-making. They were also interested in how autonomy support influences types of sport context such as practice and matches. Furthermore, the researchers paid attention to how influences of autonomy support effort, enjoyment, and cognitive and somatic anxiety are different between practice and matches. Based on these assumptions, they hypothesized that autonomous behaviors were highly perceived in the practice context in individual sports, and there may be differences in the perception of autonomous behaviors between practice and matches in individual sports. Another hypothesis in their study

was that effort and enjoyment were positively affected by autonomous behaviors, and cognitive and somatic anxiety are negatively related to autonomous behaviors. Two hundred fourteen collegiate athletes who play either a team or an individual sport answered the Autonomy-Supportive Coaching Questionnaire (ASCQ) that measures coaches' interest and athletes' autonomous behaviors, the Intrinsic Motivation Inventory (IMI) measuring athletes' effort and enjoyment, and the modified Sport Anxiety Scale-2. They found that there were no differences in the athletes' perception of coaches' autonomy supportive approaches, including giving autonomy for choices or praising athletes' decision-making process between practice and matches.

Regarding this finding, van de Pol and colleagues (2015) predicted that the competitive elite level in this study may affect the athletes' perception of coaching and coaches' coaching style. That is, enormous pressure to which the coaches in the high competitive level were exposed may influence their players due to the high expectation to win the match. They also found that athletes perceived the coaches' behaviors related to interest in input more in individual sports than team sports. In addition, athletes in both team and individual sports similarly perceived the degree of praise for autonomous behavior by coaches. Another finding is that both praises for autonomy behaviors and interest in athletes' input were required to promote the degree of athletes' effort. Furthermore, athletes' enjoyment was closely related to praise for autonomous behaviors in practice settings. Lastly, there was a positive interaction between somatic anxiety of the athletes in individual sports and interest in athletes' input. It was predicted that specific behaviors of interest in athletes' input, such as giving autonomy for athletes' choice and asking questions may increase their sense of control and reduce anxiety. Synthesizing these findings, the researchers suggested that in practice context, coaches who desire to employ autonomy-supportive coaching should proactively respect players' decisions in practice and

matches, and frequently ask questions through which the athletes are aware of a sense of control of their own behaviors. Another suggested implication was that coaches should be supportive in creating opportunities for athletes to make decisions by themselves. To support their decision-making process, praising their decision-making behavior can encourage them to consistently attempt to make a decision. As this study did not reveal any causes in the correlations, further research needs to highlight specific relationships investigated in this study and address causes in the relationship.

It is assumed that athletes' autonomy for choice mediates the improvement of their athletic performance. That is, the improvement of their performance is enhanced when their need of autonomy is satisfied. In addition, higher perceived self-efficacy also indicates optimal impacts on learners' motivation, thoughts, and goal setting. Lemos and colleagues (2016) investigated how the autonomy supportive approach influences self-efficacy, positive affect, and thoughts during practice. Twenty-four mentally and physically healthy preschool children were randomly grouped in either an autonomy support or a control group and learned five specific ballet positions. In 50 practice trials, the children in the autonomy support group were able to request to watch video demonstrations when they desired to watch them. On the other hand, video demonstrations for the children in the control group were scheduled in the practice term. To measure their improvement, 10-trials of retention tests were conducted. Their dance performance was scored by experienced instructors, and the children answered self-report questions of self-efficacy, reported their degree of happiness in practice, and explained their general thoughts about practicing ballet tasks. As a result, there was a statistical significance in self-efficacy and the degree of happiness in practice between the autonomy support group and the control group. The additional questions regarding practice sessions also support that the

children in the control group consistently reported the concerns with their ballet performance. The researchers explain that their concerns are caused by the absence of control of access to the video demonstrations, whereas the children in the autonomy group are able to request video demonstrations on their own, as needed. They suggest that further research analyzing the influence of autonomy support from neuroscientific perspectives may develop this research field.

Albert Bandura and His Learning Theories

Albert Bandura is one of the most influential and significant psychologists impacting our understanding of human motivation, behavior, and learning by demonstrating how human behaviors were affected by environments and people (Almeida, 2014). He conceptualized several influential learning theories and concepts, such as modeling and aggression (Bandura, 1974; Bandura, Ross, & Ross, 1961), social learning theory (Bandura, 1978a), reciprocal determinism (Bandura, 1978b), social cognitive theory (Bandura, 1991), and self-efficacy (Bandura, 1993, 2012). Bandura explained that human behaviors were affected by the model they observed. This assumption hypothesized that children demonstrated aggressive behaviors due to the model demonstrating violence. By examinations of modeling and aggressions, He conceptualized social learning theory, individuals learn from the model by emulating behaviors it demonstrates. This theory further describes social aspect of learning that learning occurs through interacting with others and environment.

These theories impacted later psychologists to further develop learning theories, such as Zimmerman's self-regulation theory. This chapter describes a history of Bandura's learning theories and how they impacted Zimmerman's self-regulation model.

Human Aggression and Learning

Bandura posited individuals learn by observing others' behaviors, and this learning theory is rooted in his Bobo doll experiments (Bandura et al., 1961) that specifically investigated effects of the model to human aggression. In this study, Bandura and his colleague conducted an experiment that investigated how behaviors that children observed in a model influenced the children's aggressive behaviors. They also examined how gender difference in the model affected their behavior after observing the model. Seventy-two children (36 boys and 36 girls, with an average age of 52 months) were divided into experimental groups and a control group. The children in the experimental groups were categorized into groups in which they either observed the model's aggressive behaviors or a group in which they observed the model's non-aggressive behaviors. In addition, half of the children in the experimental groups observed the same gender model, whereas the other half of the children observed an opposite gender model. The model demonstrating non-aggressive behaviors played with toys, whereas the model demonstrating aggressive behaviors aggressively attacked the Bobo doll after briefly playing with toys. All children, including the control group, were allowed to play with toys in the same room as the Bobo doll. The children's behaviors were evaluated by adults using a five-point scale, on which they scored what they observed to be the children's physical and verbal aggressive and non-aggressive responses. The researchers found that the children who observed aggressive behaviors demonstrated a higher degree of physical and verbal aggressive behaviors than the children who observed the model demonstrating non-aggressive behaviors. In addition, most children who observed aggressive behaviors did not control their aggressive behaviors, whereas the children who observed non-aggressive behaviors controlled their aggressiveness. Highlighting the gender difference in the model, the children who observed the male model were

more likely to exhibit aggressive behaviors rather than the children who observed the female model. These findings suggest that observation is a foundation of learning for individuals.

Social Learning Theory

Based on Bandura and his colleagues' (1961) research, Bandura further developed the social learning theory (Bandura, 1977a). In terms of social learning perspectives, learning does not correspond to internal and external stimulus response. Moreover, Bandura stressed individuals learn through consistent interactions between the learners and the environment. That is, learning occurs when individuals observe models that demonstrate ideal learning outcomes or skills they desire to learn. This learning process may reduce the mistakes occurring in a learning process because learners are able to project the desired performance from observing the models.

Theoretically, Bandura explained that this learning process corresponds to three cognitive processes. First of all, the cognitive process is influenced by images and symbols that create meanings from the objects including activities and behaviors. Another cognitive process related to social learning theory is the self-regulatory process. This process refers to controlling behaviors that resulting from the arrangement of environment and self-consequences. For instance, a student decides to reward herself by purchasing a snack after completing a homework assignment in order to motivate herself. Lastly, vicarious experiences correspond to learning by observing the model. That is, learners imagine how the model behaves using the learning objects and emulate the model's behaviors to transfer the observed learning that was demonstrating. With this model, the learners are able to teach themselves in their imagination and reflect on their behaviors. In sum, Bandura theorizes that human learning is associated with the cognitive process in which learners rely on the model and vicarious experiences to obtain desired learning.

This cognitive learning enables them to regulate their behaviors with metacognitive strategies and management of learning environment.

With the aforementioned assumptions, three different interactive learning processes are discussed in terms of social learning theory (Bandura, 1978b). First, the unidirectional interaction regards that behaviors are productions resulting from integrating personal and environmental factors. In this point of view, however, personal and environmental factors do not interact with each other when personal behaviors are produced, and personal behaviors do not affect both personal and environmental factors. Another type of interactive process is the bidirectional interaction in which personal and environmental factors affect each other when personal behaviors are produced. Meanwhile, it is considered that the personal behaviors are not affected by productions developed with personal and environmental factors, as well as the unidirectional interaction perspectives. Because the unidirectional and the bidirectional interaction do not include perspectives that personal behaviors are not influenced by personal and environmental factors, Bandura (1977a) conceptualized the triadic reciprocal interaction process in which personal factors, personal behaviors, and environmental factors influence each other. He particularly explains how an individual's cognition (personal factor) is influenced by environmental (external) stimuli. In terms of the social cognitive theory (Bandura, 2005), individuals connect as they interact with others in a group, community, and society.

In order to become a functioning member of the group, individuals observe others' behaviors and consequences to adapt in society (Bandura, 1974). Bandura particularly explains that a significant function of observation is capturing information from the model who demonstrates behaviors the observers desire to learn. In this context, the model guides the direction of learning and minimizes potential errors learners might make in the learning process.

Learners are also able to capture essences of learning from the model. That is, by observation of several similar models, learners may capture the common themes or generalized patterns from them. This observation process enables learners to develop personal disciplines, a variety of patterns of movements and the cognitive schemas with which learners effectively perform in a series of situations. Observational learning proceeds with four phases. First, learners collect necessary information from the model. Second, the guidance for performance is developed with the collected information. Third, this new guidance is incorporated into internally existing other performance guidance. Finally, the motivational process dictates whether the new performance is activated or not. Bandura summarizes that learners develop the capacity of observational learning through experiences of 1) observation to obtain new skills, 2) integration with existing abstract patterns, and 3) implementation to perform personalized new performance.

Self-Efficacy

Self-efficacy is another significant theory Bandura conceptualized and a fundamental concept in social cognitive theory. It is assumed that coping mechanisms selected by an individual, whether select avoidant or active behaviors, are influenced by self-efficacy (Sides et al., 2017). With this assumption, self-efficacy was conceptualized to predict individuals' behavioral change, choice of activities, and coping efforts. The mechanism of self-efficacy was described, as it was a cognitive process in which individuals' belief in successful performance increases when they 1) perceived accomplishment of their performance, 2) emulated models who demonstrate successful performance, 3) led themselves towards personal goals by conveying internal instructions, and 4) moderated dysfunctional fears (Bandura, 1977b; Gilson & Feltz, 2012). However, Bandura further explained that emulating models whose performance was relatively similar to individuals' performance level additionally enhances their self-efficacy

rather than reducing the fear of performance. Furthermore, self-efficacy increased when individuals perceived their competence from their skills, but not coincidence. It was also described that an effective way to develop a strong sense of efficacy was for individuals to perceive achievement by developing their own capability through self-directed mastery experiences (Bandura, 1997; Müller & Seufert, 2018).

Another important mechanism in self-efficacy is the perception of ability. That is, individuals who perceive strong efficacy of their ability tend to perform better than the individuals whose perceived efficacy is low (Bandura, 1993). Bandura also explained that personal sense of efficacy increased when individuals perceived that ability was acquirable, and errors were involved in the acquisition process. On the other hand, individuals who believed that their ability was inherent, and paid attention to error reduction, decreased their sense of efficacy. Together, higher perceived self-efficacy predicts better performance and decision making, whereas individuals who perceived lower self-efficacy tend to both perform and make decisions poorly. In social cognitive theory, individuals' self-efficacy increases when they practice vicarious experience. In particular, individuals are encouraged to change behavior when they observe a model that exemplifies successful performance and learning. In other words, a successful model is a coping resource that eliminates the fear of failure and ambiguity that may be caused when individuals attempt to acquire a skill. Therefore, individuals who perceive high self-efficacy by observing successful modeling are encouraged to continuously engage in an activity.

Social Cognitive Theory

Bandura (2005) further developed the social cognitive theory rooted in the social learning theory. A remarkable assumption in this theory is that individuals learn through observing a

model. Specifically, they capture the social cues that may help individuals acquire a skill and the abstract notions a model displays during a performance. Observational learning also justifies cognitive development in learners. For developing creativity, for instance, from a variety of the notions captured from several different models, a gap emerges between the captured notions. As a result, individuals are able to find new, innovative ideas that fill the gap.

Another cognitive learning process social cognitive theory stresses is the self-regulatory process. Bandura interpreted that self-regulatory process in social cognitive theory included proactive regulation systems corresponding to goal orientation and reactive regulation systems including controlling feedback. Goal orientation in this context refers to goal setting strategies with which a learner desires to develop his or her skill through trial and error and establish personal principles that encourage him or her to attempt challenging goals. By controlling feedback, the learner maintains the effort to engage in a task to achieve a goal. This self-regulation results in developing a sense of mastery with which a learner is empowered to change his or her psychological state and is motivated to maintain its change.

A current study supports that social cognitive theory perspective explains the change of behaviors in cancer survivors. Stacey and colleagues (2015) meta-cognitively analyze previous intervention studies that employed social cognitive perspectives. In their findings, six studies using social cognitive theory-based intervention reveal positive effects of the intervention. In particular, the participants relied on specific strategies for controlling behaviors such as goal setting, recording their behaviors and diet, developing social support, journaling, and preventing relapse. These six studies concluded that using social cognitive theory-based strategies positively impact participating in exercise and controlling diet. Previous studies of social cognitive theory emphasize the social cognitive theory and resonates with the self-regulatory process in learning.

Barry Zimmerman's Self-Regulation Theory

Barry Zimmerman is an educational psychologist who has mainly studied learners' motivation and self-regulation. Self-regulation is a general theoretical approach with which individuals control their thoughts, feelings, and behaviors and adapt their behaviors in order to pursue goals to acquire expected learning outcomes (Zimmerman, 2000; Zimmerman & Pons, 1986). Self-regulatory processes were considered to be self-directive processes with which self-regulated learners take advantage of their cognitive skills and strategies for learning and performance (Zimmerman, 2002). Zimmerman also stressed that self-regulated learners were proactive regarding desired learning objects because they recognized the extent to which they were confident. Other behaviors self-regulated learners commonly demonstrate were making an effort to overcome setbacks and weaknesses, proactive choices toward their goals, and recording the progress of their development. Specifically, self-regulatory processes involved four important concepts; social learning perspectives in self-regulation, the use of learning strategies to enhance learning effects, management of self-efficacy as a motivational source, and goal orientation (Zimmerman, 1989).

In addition to these concepts, individuals who cultivate their skills in ongoing processes and continuously engage in learning or activities tend to demonstrate three characteristics in the self-regulatory processes. The first aspect in the self-regulatory processes is that individuals who control themselves rely on cognitive activities related to self-awareness, self-motivation, and strategies to control their behaviors. That is, the degree of the self-regulated strategy use indicates learners' expertise. Specifically, expert performers tend to take advantage of setting goals, specific techniques to attain goals, self-consequence strategies, and self-efficacy to adapt their behaviors to attain their goals (Cleary & Zimmerman, 2001). The second concept in self-

regulatory processes is that the use of self-regulatory strategies is individuals' choice, but not their ability to use the self-regulatory strategies is either obtained or absent. In other words, learners' self-regulatory processes can be indicated the emergence of the use of self-regulatory strategies. Finally, self-efficacy and intrinsic motivation enhance individuals' motivation to self-regulate behaviors and thoughts. This motivation is important to maintain the high quality and quantity of practice that enhance the individuals' skill level and the degree of engagement in practice (Ericsson, Krampe, & Tesch-Römer, 1993).

Definition of Self-Regulated Learning (SRL)

The term of self-regulated learning (SRL) has commonly emerged in the studies of self-regulation. SRL is defined as the level of proactive engagement in learning, and self-regulated learners frequently rely on metacognitive, motivational, and behavioral strategies to integrate their prior learning experiences into current learning activities (Zimmerman, 2013; Zimmerman & Schunk, 2008). Learning behaviors of SRL are proactive, and SRL involves the use of metacognitive learning strategies and self-motivation to pursue learning objects and development (Zimmerman, 2013). Pintrich (2004) clarified four assumptions in SRL. First, learners proactively engage in learning activities. The definition of proactive includes constructive perspectives in which learners create a meaning to understand rather than being given meaning from others. A second assumption is that learners regulate their thoughts, feelings, emotions, motivation, behaviors, and an environment with an effort to objectively monitor self. Third, self-regulated learners are goal-oriented, yet their type of goal orientation differs from personal standards, types of goals they have set, and manners of self-monitoring. This assumption derives that learners' goal-orientation may change, as they are exposed to internal and external approaches. A fourth assumption is that learners' achievement and their cognitive skills are

influenced by the use of self-regulatory strategies. Synthesizing these assumptions, Pintrich (2000) defined SRL as “an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment” (p. 453). Pintrich (2004) also conceptualized the phases and the area of self-regulated learning, and several SRL concepts overlap with those from the Zimmerman’s self-regulated learning theories (2013). There are four phases of self-regulated learning: 1) forethought, planning, and activation, 2) monitoring, 3) control, and 4) reaction and reflection. In each phase, four areas of regulation are included: cognition, motivational/effect, behavior, and context. This concept derives that each type of cognitive activities of self-regulated learning needs to regulate learners’ cognition, motivation, behavior, and context. Even though these phases and areas are distinguished, the transition between these phases is neither linear nor step-by-step progress. In addition, some of the required self-regulated activities in each phase are associated with some other phases. In other words, learners’ activities of self-regulation, self-monitoring, self-motivation, and self-reaction may adapt depending on the context and the degree of their development. Pintrich also stressed that the use of these cognitive activities is an ongoing process, so that learners rely on, for instance, self-monitoring strategies in monitoring and control phases.

Social Cognitive Model of Self-Regulation

In terms of social cognitive theory of self-regulatory process, several empirical studies stress that social aspects influence individuals’ self-regulatory process. Bandura (1974) explained that human behaviors are regulated by the assistance of external stimuli. The environment in this context included artificial materials, learning space, and a personal

relationship with others. In other words, individuals were a part of the environment that affects others to change behaviors. In this study, Bandura suggested environmental management as a strategy to control and maintain a person's own behavior. Zimmerman (1989) explained that the combination of modeling and external feedback bolsters learning effect. That is, students who observed the model displaying learning objects, and took advantage of the teachers' guidance, tended to demonstrate faster comprehension than the students who did not rely on such learning strategies. Zimmerman summarized this learning effect as the reinforcement of symbolic meaning of the learning objects and external assistance from others. Pintrich (2004) also interpreted social influences on self-regulatory processes as regulation of context.

When learners attempt to manage their learning environment, they not only rearrange a learning space, but they also reframe recognition to the learning context. In addition to developing an opportunity for them to manage the learning environment, the degree of learners' autonomy regarding the learning environment is important. In other words, the learners in the learning environment where they freely choose learning contents are given an opportunity to control the learning context whereas the students in a typical classroom where learning contents are given by instructors have limited ability to change the learning context. Furthermore, Pintrich also stressed that self-monitoring was a significant self-regulated learning strategy that enabled them to manipulate the context of learning. Learners were able to change the learning context because they are aware of an absence in their learning environment. To compensate for this absence, they sought help from peers and adults. Synthesizing aforementioned concepts of social aspects in self-regulatory processes, social influence is a remarkable assumption rooted in self-regulatory processes. Modeling is an influential resource for self-regulating learners' behaviors.

Finally, learning climates where students were assured free choice of learning contents and seek help from peers and adults facilitated them to control the learning context.

Zimmerman (2013) stressed that self-regulatory process involved aspects of individuals' cognition, behaviors, and environment based on social cognitive theory, and regulatory processes were maintained by observing self-regulatory processes and feedback from outcomes of the self-regulation. Based on these components, self-regulatory processes were distinguished with three different types of self-regulation. First, behavioral self-regulation occurs between individuals' cognition and behavior. In this regulatory process, individuals use cognitive self-regulatory strategies such as reframing a context and self-consequence, controlling his or her behaviors, and receiving feedback from behavioral regulatory processes. For instance, a student decides to allow himself to play a video game after finishing homework. This external motivation may change his study behavior regarding his homework. Second, environmental self-regulation takes place between the environment and behaviors. Specifically, this type of self-regulation corresponds to manage the external environment to regulate individuals' behavior. For example, a student cleans up her study desk before she starts studying for an exam. Organizing the external environment by cleaning the desk, may affect her ability to study efficiently. Finally, covert self-regulation is considered as metacognitive and as an intradependent cognitive process in self. In other words, this regulatory process is involved in a self-feedback system that adapts malfunctioning feelings and thoughts. For instance, a student who struggles with pressure from a final exam persuades himself by using internal positive phrases that encourage him to be confident for the final exam.

The Use of Self-Regulated Learning Strategies

The use of learning strategies associated with self-regulatory processes is rooted in the study of Zimmerman and Pons (1986). They investigated what learning strategies were used

proactively by successful high school students. In their qualitative analysis, self-regulated high schoolers relied on 14 particular learning strategies: 1) self-evaluation referring to self-directed objective evaluation of their learning progress, 2) organizing and transforming referring to personalizing learning materials, 3) goal-setting and planning referring to setting personal goals to attain learning outcomes and to develop skills, 4) seeking information referring to obtaining information for learning from materials, 5) keeping records and monitoring referring to developing personal record of learners' progress, 6) environmental structuring referring to organizing learning space to improve learning effects, 7) self-consequences referring to cognitive reframing regarding learning process, 8) rehearsing and memorizing referring to cognitive activities such as mental rehearsal and memorizing, 9–11) seeking social assistance from peers, teachers, and adults referring to addressing others to obtain advice, and 12–14) reviewing tests, notes, and textbooks referring to preparation and revising learning content using materials. Zimmerman and Pons's study confirmed that high achievers frequently rely on the aforementioned self-regulated learning strategies to attain their academic goals. In particular, they more frequently seek help from adults, teachers, and peers than non-self-regulated students. In addition, self-regulated students reported the use of multiple self-regulated learning strategies whereas non-self-regulated students relied on only a single self-regulated learning strategy. The researchers suggested that these findings were the indicators that distinguish between self-regulated and non-self-regulated learners.

Zimmerman (1998) further investigated the use of self-regulated learning strategies in writing, sport performance, music, and academic study. From this study, ten specific self-regulated learning strategies used by expert performers are derived: goal setting; task strategies; imagery; self-instruction; time management; self-monitoring; self-evaluation; environmental

structuring; and seeking help. He found that the expert performers in each field took advantage of self-regulated learning strategies to develop their skills even though particular activities of self-regulated strategies are unique. Zimmerman stressed that self-regulatory processes in expert performers commonly emerge not only in the academic field, but also in other fields.

Zimmerman explained that measuring the degree of use of SRL strategies reveals the degree of the learners' self-regulation. For instance, Stoeger and Ziegler (2008) examined the effect of SRL skills training (Zimmerman et al., 1996) on fourth-grade children in a mathematics class. In this study, children were randomly assigned to either an experimental (SRL skills training) or a random group, and teachers who treated the experimental group were trained to be able to conduct activities associated with self-regulation. During the five-week training, the children in the experimental group learned the self-regulation process, self-evaluation, self-monitoring, time management, goal setting, goal attainment strategies, and journaling as self-regulated training strategies. The children's self-regulation, such as their use of time management, self-reflection, self-efficacy, helplessness, willingness to exert effort, motivational orientation, interest in mathematics, academic achievement, daily math exercises, and homework handouts were quantitatively measured by self-report questionnaires, and the collected data were statistically analyzed. The self-recorded journals were also analyzed with hierarchical linear models to observe the degree of change in their performance. Among these self-regulation skills, this study particularly focused on time management, self-efficacy, and self-reflection, and these three skills improved significantly. In particular, learning goal-oriented children who perceived lower self-efficacy and developed time management skills demonstrated significant improvement through the five-week training period. Their self-efficacy also increased through training by self-recording (journaling) and homework assignments. Because positive findings are

related to learning goal-oriented children, it is estimated that learning goal orientation may be advantageous in self-regulation. Meanwhile, several limitations are explained. First and foremost, influential factors in the intervention need to be considered. That is, while the SRL training was conducted, actual study time of mathematics was decreased because the children in the experimental group were taught SRL strategies in the mathematics class time. Also, teaching styles of the teachers in the experimental group were not manipulated. Furthermore, the effect of learning goal orientation might have strongly affected the children's learning rather than SRL strategies. Regardless of these limitations, this research reveals the positive effects of SRL training.

Zimmerman's Cyclical Model of Self-Regulation

Integrating with social cognitive theory, self-efficacy theory, and empirical studies associated with SRL, most of which are Bandura's work, Zimmerman (2013) conceptualized a cyclical model of the self-regulation model. Zimmerman includes social cognitive perspective in the cyclical model, as individuals' self-regulatory process may be influenced by their cognition, behaviors, and external environmental stimuli. In the cyclical model, self-efficacy plays an important role in that individuals maintain self-regulatory processes by self-efficacy reinforced by a sense of accomplishment, vicarious experiences, persuasive words to themselves, a sense of emotional regulation, and experiences overcoming setbacks and weaknesses (Bandura, 1993; Gilson & Feltz, 2012).

Bandura (1991) conceptualized a triadic model of social learning that explained that learning occurred through interaction between cognition, behavior, and environment. In terms of self-efficacy theory (Bandura, 1977), self-efficacy influences self-regulation, as it is a motivational resource that enables learners to maintain control of their own behaviors to attain

goals. In other words, self-regulatory processes estimate that high self-efficacy mediated high performance and achievement (Zimmerman & Kitsantas, 2014). Specifically, individuals who perceive high efficacy of their performance or skills are predicted to be proficient performers, whereas individuals who perceive low self-efficacy tend to demonstrate undeveloped skills.

Zimmerman (2013) explained that self-regulatory process is a cyclical and ongoing goal-oriented process in which learners identify tasks to achieve goals (forethought phase), control themselves to engage in the tasks (performance phase), and reflect and evaluate their own performance (self-evaluation phase). In particular, learners regulate behaviors in the ongoing process formed by the forethought, performance, and self-reflection phases.

Forethought Phase

In the forethought phase, learners metacognitively prepare to attain their learning goals to develop desired skills. Zimmerman (2013) explained that this phase involves task analysis and self-motivation beliefs or values as subcategories. For task analysis, self-regulated learners particularly rely on goal setting and strategic planning to maximize learning effects.

Bandura and Schunk (1981) emphasized that proximal goal setting enables elementary school children to effectively develop their mathematical skills with self-initiated learning style. Specifically, comparing the effects of proximal goal setting, distal goal setting, and no goal setting, children's self-efficacy was most developed by proximal goal setting. Strategic planning referring to an appropriate choice of specific strategies for optimal performance is another strategy in task analysis. One important concept in strategic planning is that selection of strategies is a dynamic process to adjust individuals' development and personal differences. That is, strategies for goal attainment needs to be tailored to each individual, and requirement in each development level (e.g., novice, experienced, and expert) is different (Zimmerman, 2000). Self-

motivation plays an important role in self-regulatory processes, as learners need to encourage themselves to maintain controlling their behaviors. Among several motivational resources, (self-efficacy, mastery experience, and task interest), self-efficacy is one of the influential motivational resources in self-regulatory processes. Self-efficacy is enhanced when individuals 1) perceive accomplishment throughout the goal attainment process, 2) comprehend learning objects from a model, 3) are persuaded by self-instruction or social support to master skill, and 4) take advantage of coping strategies to moderate anxiety to behavioral change (Bandura, 1977b; Gilson & Feltz, 2012). Empirical studies also emphasize that self-efficacy needs to be reinforced because high self-efficacy mediates appropriate choice of tasks, maintains the self-regulatory processes, and attains challenging goals to develop skill (Bandura, 1993). At the same time, goal attainment processes where mastery is experience also bolster the learners' sense of self-efficacy (Pajares, 2008). Interest or intrinsic motivation is also an influential motivational resource in self-regulatory process, as intrinsically motivated learners are more engaged in life-long learning and mastery orientation (Reeve et al., 2008; Ryan & Deci, 2000). In summary, mastery learning experiences in which individuals attain desired goals improve the perception of their self-efficacy that facilitates maintaining the self-regulatory processes.

Performance Phase

In the performance phase, individuals apply cognitive and somatic strategies to execute the selected tasks. Performance phase refers to the performance execution during which individuals volitionally control their behavior and thought. In this phase, Zimmerman (2013) interpreted that the learners require self-control and self-observation to sustain self-regulatory processes. For self-control, several psychological strategies are suggested, such as imagery and attentional control as well as other strategies including managing learning environment and help-

seeking. In the field of sport psychology, athletes commonly take advantage of imagery to rehearse and simulate a variety of performances (Vealey & Forlenza, 2013). Similarly, attention control is a major strategy to control behavior in motor learning. Specifically, internal attentional control includes paying attention to internal instruction and feedback that guides learners to specific tasks with which they control their behaviors, whereas external attentional focus leads them to performance outcomes and a target object on which they focus to perform (Schmidt & Lee, 2011).

Self-observation includes self-monitoring, self-recording, and self-experimentation. These strategies enable athletes to objectively observe themselves so that they are able to find useful information and feedback that enables them to control their behaviors. For example, Young and Starkes (2009) reported that Canadian competitive swimmers who had recorded a training log for a month improved attendance to practice. A major role of self-monitoring strategy is to specify a choice of behaviors by reflecting and judging from previous and current events (Zimmerman & Paulsen, 1995). Through this metacognitive process, individuals also eliminate ineffective and inappropriate behaviors to regulate their own behaviors. Bandura (1977b) explained that individuals metacognitively experiment or test information when they consider its appropriateness. As a result of this self-experimentation, they determine to change or sustain behaviors. Together, physical and psychological strategies to control behavior are crucial for individuals to maintain the self-regulatory processes.

Self-Reflection Phase

Self-reflection phase consists of self-judgment and self-reaction. One of the types of self-judgment is self-evaluation referring to comparing individuals' past experience or personal principles with self-observed performance (Zimmerman, 2002). Zimmerman (2000) listed four

concepts of self-evaluation. First, mastery processes that demonstrate the progress of skill development allow individuals to recognize their skill level somewhere between novice and expert. In other words, they are able to evaluate their current skill level within the range of skill levels. Another, but similar, concept of self-evaluation is the comparison of their current performance with their previous performance. With this comparison, individuals are aware of the range of change in their performance. The normative principle, meanwhile, is the comparison of individuals' performance with social norms, standards, and expectations. For instance, any type of awards is a result of the comparison of students' performance with the criteria in an award. Finally, the collaborative principle is comparison with requirements or expectations from a collaborative team to an individual. That is, the individual evaluates their performance based on their expected role in the group. Causal attribution referring to "beliefs about the cause of one's errors or successes" (Zimmerman, 2002) is another form of self-judgment. Schunk (2008) suggested attributional feedback as a strategy influencing learners' cognitive processes including self-regulatory processes. Specifically, attributional feedback emphasizing the learners' capability to work, competence, or effort is the most influential feedback to enhance their self-motivation, self-efficacy, and self-regulation.

Self-reaction involves self-satisfaction and adaptive or defensive mechanism. Self-satisfaction plays an important role in controlling behaviors, because satisfaction leads individuals to further progress towards goals, whereas dissatisfaction often discourages them from participating in an activity, changing behavior, or controlling self (Bandura, 1977b; Zimmerman, 2000). With these sources, individuals evaluate their progress and future direction towards goals. Another type of self-reaction is adaptive or defensive mechanism. While adaptive mechanism directs individuals to dynamically shift their goals, appropriately select tasks, and

develop better strategies for goal attainment, the defensive mechanism prevents them from facing setbacks and dissatisfaction (Zimmerman, 2002).

These mechanisms and self-judgment are also resources with which individuals choose better strategies or adapted goals (Zimmerman, 2000). Zimmerman also stressed that satisfaction and dissatisfaction corresponding to performance outcomes affects an individuals' motivation to attain the next goals. Therefore, self-regulatory processes are regarded as a cyclical model with which individuals continuously control behavior to attain desired goals.

Thematic Analysis

Thematic analysis is a qualitative analytic method with which researchers develop themes and find patterns from data (Flick, 2014b). Braun and Clarke (2006) specifically explained that grounded theory and discourse analysis rely on theoretical frameworks to identify emerging themes and patterns, whereas thematic analysis conducts coding process and defines core ideas in the data based on research questions. This characteristic of thematic analysis allows researchers to flexibly address data to clarify concepts that rarely emerge from transcribed data. In other words, thematic analysis enables researchers to address real-life issues that are occasionally difficult to identify through theoretical lenses. However, theoretical perspectives are also important in thematic analysis when researchers collect data from interviews or observations. That is, data collection based on a theoretical lens, SRL for instance, enables researchers to determine the range of the data so that the collected data is sufficient to analyze. Braun and Clarke systematically demonstrated several considerations that determine the quality of thematic analysis. First, researchers consider a number of themes they would need to analyze their data. Because thematic analytic coding does not require any theoretical frameworks, setting boundaries for the number of themes depends on researchers' decision. Second, researchers must

also identify whether they will address developing specific themes and codes that thoroughly cover the entire data set or highlight particular and narrowed perspectives in the data set. Third, understanding the differences between inductive and theoretical thematic analysis is important. By inductive thematic analysis, without adapting previous findings and code books, researchers develop themes from the data set by being familiar with the data to create themes in terms of the researchers' perspectives, whereas themes are developed based on theories and previous studies in theoretical thematic analysis. Fourth, researchers develop either semantic or latent themes. Semantic themes are created by the surface level of understanding of the data, whereas researchers attempt to address deeper meaning or go beyond the context of the data when they develop latent themes. Fifth, determining the researchers' theoretical position as either essentialist or constructionist is another important consideration. That is, researchers as an essentialist conceptualize themes from their perspectives and prior knowledge; however, researchers as a constructivist consider that meaning is developed by social context and external conditions. Finally, researchers need to separate research questions and questions for an interview. This study will employ this analytic process to the interview data of the coaches.

Thematic analysis is used in sport studies to identify environmental factors impacting coach-athlete relationships. For example, Junggren and colleagues (2018) collected qualitative data from an interview with coaches, observation in practice, and relevant documents to identify influential factors of the coach-athletes relationship in a swimming club. First, they read through transcribed data, field notes, and relevant documents to be familiar with the context of this study. Second, initial codes are developed based on the data sets. Third, subcategories related to cultural aspects of the swimming club are created based on organizational cultural perspectives. Fourth, the researchers reconsider the initial themes and subcategories, deciding whether they

sufficiently describe the data sets. As a result, three major themes and several subcategories belonging to each major theme emerge such as “Cultural artifacts: Training structure looking like chaos”, “Espoused beliefs and values: You may learn from everybody but need to make it fit yourself”, and “Basic assumptions: Swimmers are part of the enterprise”. In the results section, the researchers interpret each subcategory with direct quotes from the data and researchers’ perspectives. In the discussion section, they further explain the integration of a subcategory into actual activities found from data sets. Specifically, they explain the learning environment in the swimming club shares perspectives of athlete-centered coaching and autonomy-supportive environment. It is concluded that coaching philosophy and practice of coaching is a necessity in an organization so that the learning environment is consistent.

Similarly, Burnie and colleagues (2018) identified specific beliefs and ideas that may impact elite coaches’ philosophy to practice. This study focused particularly on how the coaches transfer strength training into sports training regarding their athletes. The researchers conducted an interview asking 13 elite individual coaches about their coaching philosophy and their thoughts on physical and technical training. Transcribed data was analyzed with thematic analysis by which the researchers created initial codes for major themes that emerged and revise the themes. Ultimately, they developed two dimensions (strength training and transfer of strength training to sports performance) as major themes. From these major themes, several higher order themes were attributed, and several lower order themes were related to one of the higher order themes. In terms of the dimensions, the researchers explained specific coaches’ thoughts associated with the dimension with direct quotes. In the discussion, the researchers synthesized the findings to interpret coaches’ abstract ideas that reflect on their philosophy of either physical training or transferring physical training into sports performance. In this study, coaches believed

that non-task related physical and resistance training contributes to sport skills, and training task-related strength was crucial to their sports, most of which are physical-oriented sports such as cycling and kayaking. Another belief of transferring strength into sport skills was the coordination of their body and sport skills. On the other hand, the researchers reported a limitation that the findings in this study focused only on physical-oriented individual sports, so it was difficult to apply to team sports and skill-oriented individual sports.

CHAPTER THREE METHODOLOGY

In this chapter, the researcher presents methodology for the current research study. Participants' demographic information is presented while the researcher describes his own subjectivity that may affect the data collection and analysis. The process of data collection and analysis are described. Lastly, the researcher explains trustworthiness in this study.

Participants

Ten volunteer soccer coaches of local youth (between 12 to 18 years old) team were recruited from sports clubs in local sports organizations and youth sports leagues in a southeastern state. Note that two participants were not included in data analysis due to the absence of meeting the selection criteria and criteria for the data, which was discussed in the data analysis section. Ultimately eight participants were involved in the current study. These eight participants (male = 7, female = 1) have been coaching for three to twenty four years (M age = 9.28 years, SD = 6.14 years). All coaches were responsible for a team, and their team belonged to a local soccer league in a southeastern state.

In terms of the Long Term Athletic Development (LTAD) model (Balyi & Hamilton, 1995), children start developing their cognitive skills and physical capabilities between the age of 12 and 23. This model infers that demands of self-regulation in sport may increase in these youth age ranges. In addition, Lloyd and colleagues (2015) defined the age of youth boy and girl athletes as 14 to 18 years old. Therefore, this study adopted these definitions and defined youth athletes as athletes between the ages of 12 to 18. Nine participants were recruited due to some recommendations by previous studies (Harding, 2018; Terry et al., 2017).

The participants were purposefully selected from the volunteer soccer head coaches of the team due to the interests of this research project. The majority of coaches in local sports are

still volunteer coaches (Harman & Doherty, 2014); however, evidence-based coaching behaviors and strategies and how they articulate them when designing their practices have rarely been studied. In addition, this study focused on one sport, soccer, in order to control sports cultural aspects and characteristics of sports (e.g., team vs individual, equipment vs non-equipment, etc.). Therefore, the aim of the sport practice environment is in the context of a one-to-many practice environment.

Selective sampling and snowball sampling were employed due to criteria of the participants who identify as volunteer youth team sport coaches. The selection criteria included 1) the soccer coaches should be a head coach or were responsible for coaching a team, 2) the coaches worked with a team at least three years, and 3) the coaches belonged to a soccer team in a local soccer league and identified themselves as volunteer coaches. The researcher addressed the administration of the local youth soccer clubs in order to obtain permission to select potential participants for this research project. When this request was approved, the researcher contacted the coach to explain the purpose of the research project and asked for an agreement with an interview via email. An informed consent form was delivered with attachments and was sent by email to the coach. After a consensus was made, appointments for the interviews conducted on the online conference software, Zoom, were scheduled. Table 1 shows demographic information of the participants.

Researcher's Subjectivity

The researcher in this study identifies himself as a qualitative researcher who attempts to understand phenomenon through the lens of sport science. An interest of the researcher is how teaching and learning theories in educational psychology can be applied to sport settings. There

Table 1. A List of The Participants

Pseudonym	Gender	Year of coaching	Team	Level	Others
C4	Male	3 years	Girls U15 -U18	Traveling, competitive	Played soccer outside the U.S.
C3	Male	6 years	Boys U12	Competitive	Coaching two teams (head and assistant coach)
C7	Female	4 years	Girls U15 -U18	Traveling, competitive	Played soccer in the past
C2	Male	10 years	Boys U10 - U14	Recreation	Coaching his son, almost same members over the years
C1	Male	24 years	Coed U13 -U16	Recreation	Coaching at the coed league
C5	Male	7 years	Boys U6 - U12	Recreation	Coaching his son
C6	Male	10 years	Boys U14-U18	Competitive, school team	Coaching basketball and soccer
C8	Male	10 years	Girls U15 -U18	Traveling, competitive	Coaching for his refereeing

have been numerous opportunities in which the researcher has worked with athletes and coaches to improve their learning experiences. This background may have strongly influenced the choice of a research topic, a target population, and theoretical frameworks. As a practitioner who has supported the coaches and athletes who struggled with promoting the quality of practice and coaching, Zimmerman's self-regulation theory (2000) described mechanisms by which learners obtained proactive learning behaviors. This thought reminded the researcher of the possibility of applying the self-regulation theory to sport practice.

The researcher also assumes that proactive learning behavior can be an alternative strategy for old school coaching that may decrease engagement in sport for youth athletes. It was witnessed that old school coaching impaired youth athletes' engagement, while they did not improve their sport skills much under the old school coaching. This subjective experience has been stuck in my mind, and it turned into curiosity as to why many coaches rely on old school coaching or teaching-heavy relationships with athletes.

In addition to understanding the participants' thoughts of self-regulation, the researcher also paid attention to their coaching backgrounds, history, and culture. This interest might have led him to further address these issues with additional questions during the interviews. Even though understanding the demographic information of the coaches is a subordinary topic of this study, it is still important to increase reliability of analysis.

Data Collection

A semi-structured interview was conducted, and an interview guide was adapted from Spruce and Bol's (2014) study. In their study, the questions correspond to either planning, monitoring, or evaluation, so that they cover Zimmerman's SRL strategies as a whole. Their question guide included 16 questions that aim to address how learners use SRL strategies.

Because this study planned to ask coaches but not learners, the questions needed to be adapted for coaches' perspectives. The researcher addressed administrators of a team in order to obtain permission to conduct an interview with the coach of the team. When this request was accepted, the researcher explained the purpose of this interview to the coach with an informed consent form. The interview was scheduled only when the participant agreed with the informed consent form. The interview was held in an online conference room created by Zoom, and participants were required to enter the conference room from a private room where only a participant existed, in order to protect the participant's privacy. Each interview that was held was around 44 to 61 minutes long (M time = 54.6 minutes, SD = 5.77 minutes) and was recorded in the Zoom conference after the participant asked all the questions, he or she needed to know before the interview. However, due to unexpected interactions with a third person, and insufficient recording time of an interview, two interviews were excluded from data analysis; therefore, eight interviews were eligible to be analyzed. All interviews were transcribed to Word documents that were able to be opened using NVivo, a computer application for coding.

Data Analysis

All qualitative data in this study were analyzed by thematic analysis. One of the characteristics of thematic analysis is flexibility because there are no solid standard rules for thematic data analytic processes (Braun & Clarke, 2019). However, it is common that qualitative researchers rely on an analytic process reported on previous research studies. Because the analytic process reported by Braun and colleagues (2016) corresponded to sport setting, this study adapted their analytic process. In the first phase, the researcher read through transcribed data in order to understand the context and contents of the data. The researcher deeply engaged in the data to critically and reflectively analyze the participant's narration, perspectives, and

assumptions. Any remarkable ideas the researcher found while reading through the data were also recorded in the researcher's research journal.

In the second phase, coding phase, the sentences associated with research questions and researchers' interests in the study were labeled as codes, and 77 initial codes emerged. The labeling process occurred in NVivo that enabled the researcher to create and manage initial codes. The researcher highlighted sentences that integrated with the research questions and research interests. The initial codes were labeled with a specific sentence that expressed one of the aspects of the research questions. There is no standard rule for the number of coding; however, several researchers (Creswell & Poth, 2016; MacQueen, McLellan, Kay, & Milstein, 1998) explained that nearly 30 codes were the manageable number to develop themes. Braun and colleagues (2016) recommended conducting the second coding to reshape the initial codes so that major themes would precisely reflect research questions of the study. Therefore, the 77 initial codes in this study were tweaked, the labeled codes modified, and 31 revised codes were created.

In the third phase, initial major themes were developed by the revised codes. This coding phase was a clustering process of the revised codes in which the researcher merged multiple revised codes to develop initial themes. Furthermore, initial themes were developed for each research question. Ultimately four initial major themes were developed for the first research question, which was, what are volunteer soccer coaches' general thoughts and understandings of self-regulation in athletes? Four other initial major themes were developed for the second research question, what strategies do the volunteer coaches believe they use to develop self-regulatory abilities in their athletes and how do they employ them?

All revised codes were considered by which research question was involved. Then, nine revised codes were related to the first research question while 14 revised codes were associated with the second research question. These initial major themes broadly include a part of the ideas in the whole dataset and are associated with research questions (Braun et al., 2016). In other words, “a theme can be an outcome of coding, categorization, or analytic reflection, but it is not something that is, in itself, coded” (Saldaña, 2015). As for the coding process, there are no specific rules for the number of themes (Braun & Clarke, 2019), yet three or four major themes enable researchers to describe significant patterns and findings in the whole data (Braun & Clarke, 2006). Ultimately, four major themes for each research question emerged.

In the fourth phase, reviewing themes phase, a thematic map illustrating the relationship among the initial major themes was developed. Braun and Clarke (2006) stressed a couple of considerations for the initial major themes in order to proceed with analysis. First, researchers consider the degree of pattern emergence from the initial themes. Specifically, each initial major theme is thoroughly reviewed to see whether it precisely expresses the meaning of the theme. Another way to consider the initial major themes is to pay attention to an association with the whole dataset. That is, researchers consider whether each theme precisely represents a part of the whole dataset. Throughout these processes, the initial themes were redefined as the final themes. In this study, the numbers of references in each revised code were reviewed to consider the pattern or frequency of the major themes. The minimum number of codes was two, while the maximum number of codes was 44. Also, the number of codes under a major theme were combined. For instance, a reference number of “*Motivated to play*” and a reference number of “*Focus on during the practice*” sixteen references, were combined as the number of a major

theme, *Active Engagement in Sport*. Afterwards, all major themes were reconsidered to determine whether each major theme reflected an aspect of each research question.

In the fifth phase, the reporting phase, even though this part is distinct from the coding and reviewing themes phases, it is considered as analytic processes in thematic analysis, describing findings corresponding to analytic processes (Braun & Clarke, 2006). Braun and colleagues (2016) recommend that when reporting analysis, the fair balance between demonstrating data related to themes and describing themes as analytic outcomes is required. They also stress illustrative and analytical descriptions for persuasive descriptions of qualitative data analysis. Illustrative descriptions cite actual data partially to demonstrate context of a theme, while analytical descriptions involve discussions, analytic insights of the researcher, or supporting ideas gained from references.

Trustworthiness

In qualitative research, trustworthiness of the findings is a common issue that is frequently criticized for the degree of validity and reliability. In order to maintain the quality of findings, several methods and strategies were employed.

First, authenticity was developed by describing participants' backgrounds, coaching culture, sport environment and parental involvement. Understanding the nature and culture of the dataset increases the credibility of the study (Rossman & Rallis, 2011). In this study, the nature of volunteer soccer coaches in a certain local area was described by patterns of codes emerging from participants' narrations. In addition to participants' perspective, the researcher's subjectivity was described in order to illustrate implicit assumptions and biases. This process enables qualitative researchers to be aware of their own standpoint to understand the participants view (Morrow, 2005).

Second, peer-debriefing was employed. It is an effective strategy that reduces the researcher's bias by comparing and contrasting other researchers' perspectives (Lietz et al., 2006). Two researchers who have experience in qualitative analysis and thematic coding reviewed the researcher's analytic memos that demonstrated the process of how codes and themes were revised and renamed.

Third, the findings were interpreted with the participants' direct quotes in order to capture the meaning of the findings. At first, the researcher reviewed the participants' quotes labeled with a theme. Among the labeled quotes, rich descriptions reflecting the meaning of the theme were selected and presented with researcher's descriptions. By this procedure, findings of the current study were described with participants' perspectives in addition to researcher's explanations. For instance, when the findings of a major theme emerged, *Active engagement in sport*, relevant subthemes, *Motivated to play* and *Focus on drills during the practice*, were reviewed. Next, all quotes tagged with these subthemes were reviewed to explore detailed descriptions regarding the subthemes. The researcher then described the context of the quote and presented a summary of the quote. Therefore, these direct quotes bolstered the findings, and the trustworthiness of this study was enhanced.

Fourth, the chain of evidence was applied to reinforce the trustworthiness of the current research project (Yamagata-Lynch, 2010). This method allows qualitative researchers to demonstrate the judgmental process in the data analysis. The chain of evidence also allowed the researcher to display how findings were integrated into Zimmerman's self-regulation model (2013). In data analysis, Zimmerman's self-regulation theory played an important role in coding qualitative data while the initial codes were labeled in terms of research questions of this study. That is, when the participants' discourses seemed to be relevant to one of the research questions

and Zimmerman's self-regulation theory and SRL strategies, these discourses were coded. Thus, the initial codes were labeled with names that reminded the researcher of either research questions or self-regulated behaviors and strategies in Zimmerman's self-regulation theory.

Zimmerman's self-regulation theory also evidenced the findings, as the participants' quotes were connected with some aspects of Zimmerman's self-regulation or Zimmerman's SRL strategies (2013). That is, athletes' behaviors and coaching strategies found in this study were explained in terms of Zimmerman's self-regulation model and SRL strategies. For instance, coaches applied team goal setting strategies accordingly during the practice, and the goal setting was used in the forethought phase of Zimmerman's self-regulation cycle. Therefore, it was estimated that the team goal setting strategies the participants used in the practice may have impacted the forethought phase of the athletes' self-regulation cycle. By this chain of evidence, the trustworthiness of the data analysis and findings were reinforced.

CHAPTER FOUR FINDINGS

In this chapter, Results of the current study will be presented. First, participating coaches' self-described cultural and background information will be described. Next, the findings related to each research question will be outlined. Major themes and sub themes as findings were defined and described with participants' direct quotations that represented an aspect of the theme.

Cultural and Background Information of Coaching

From revised codes, there were several key characteristics that identify participants' backgrounds, coaching culture, external factors related to practice environment, and parental involvement. Participants' background refers to the participants' coaching experiences including who they were coaching, the team to which they belong, and why they started coaching. Coaching culture refers to an atmosphere with unwritten rules for coaching and typical behaviors and attitudes toward the team and stakeholders (e.g., team managers, parents, administrators/supervisors, school community/team community) (Wheaton, 2007). Practice environment refers to physical practice space and structure of the practice including interaction of people related to the team.

It is important for the researcher and his audience to understand both how participating coaches arrived at the role of coaching and their perspectives on and approaches to coaching their players. This information improved the researchers' understanding of participants' perspectives, diminished researcher uninformed assumptions, and helped the researcher better understand and explain the phenomenon explored in this study (Flick, 2014a). Thus, the following sections present the participants' descriptions the paths that led them to coaching, their coaching culture, and their perspectives on soccer practice.

Participants' Background

Understanding participants' backgrounds is also key to interpreting any response patterns (Flick, 2014a). Seven of the participating coaches had experiences playing soccer in the past whereas one coach had not played soccer. Five of the participating coaches began coaching because their children started playing soccer. Three participants also coached a club team for another sport. The following presents details related to these varying coaching backgrounds.

C5 began coaching soccer because his son started playing soccer. He noted that he volunteered because no other parents were available to coach the team:

Well, at first, I started, I never played soccer. I didn't know anything about soccer, so I started because they needed volunteers. Okay. And if they didn't get more volunteers, some kids weren't going to get to play. So, I'm like, I can learn enough about soccer to teach six-year olds, five-year-olds and, as time's gone on, I've just learned more and more. Somebody told me, "If you want to make sure your kid doesn't have a terrible coach, then you keep coaching him." So, I've just stuck with it and really learned to enjoy it. So, I'm not saying I'm the best coach out there. That's definitely not the case, but I'm pretty sure I'm not the worst either.

Although the other coaches had previously played soccer, five of them also began coaching as volunteers for their children's teams. C1 shared that when he coached his son, he had a great time, but he felt he had to be more stringent with his own children:

I enjoy it. It's a lot of fun. It's a good quality time. Probably a little harder on my kids than the other kids, but I tell them that upfront. I said you're probably going to be corrected before the other kids. I don't want to see my complain favorites.

C2 briefly mentioned he started coaching because his son started playing soccer:

Um, well at first the first team I coached was right out of college. So that was um, 1995. I coached for about two to three years. Didn't and then, uh, my son started playing 10 years ago. So, I've been pretty solid for about 10 years. So, you're looking at maybe 15 years, 13 to 15 years total.

C7, who formerly played soccer, started coaching when her team offered her to become a coach. While she was interested in coaching her team, she was also motivated to be involved in soccer. Because soccer was a familiar sport, she reported that it was not difficult for her to start coaching because she had played soccer through the collegiate level. She also reported that her level of familiarity with the people she would be working with as a new coach helped her transition into the role:

Um, I played in high school and college and, um, I loved it and I got involved with first, with the high school that I went to here in town and they needed an assistant coach. And so, I played there, I knew the people, so I started coaching there and then one of the girls was on the club team that I ended up coaching, then they needed a head coach. So, they asked me to coach their team. Um, but in terms of like personal, why I got involved in coaching, I just, I love soccer. I love the sport. Um, I liked being around the girls. It was fun. Um, and I was in between undergrad and going back to law school. So, I needed something to do and coaching was kind of like the easiest, um, job I could find at the time. So, that's kinda why I picked that up and they had opening. So, it was easy to kind of just like fill in.

C6 was teacher and coach. He was the middle school basketball and soccer coach. He noted his experiences playing sports informed this career choice. He shared he had been a better basketball player as a youth, but his favorite sport was soccer. His belief in his ability to successfully coach,

in part, arouse from his experiences of playing these sports. He reported his greater talent was in basketball, which led him to earn a college scholarship, and he reported that although his soccer skills were average, he assumed he could also successfully coach the sport at the middle school level:

You know, it's funny I'm a basketball coach, but my favorite sport playing the play. When I grew up with soccer, then I played soccer up through my 11th grade year in high school. My senior year, I didn't play because I just wanted to focus on basketball. Cause that was, that was the sport where I was going to get scholarships and whatnot. But, um, but, uh, soccer was always my favorite sport because you, you never stop. You just like there's no, I was, I was pretty good at baseball too, but I just, I quit baseball real early on because I couldn't, I couldn't just stay on there. So anyway, I love soccer. And then, um, the, the, the difference between that and basketball was the soccer was outside, you know, nice clean field. And it was just, it was an enjoyable, it was an enjoyable time, you know, good kids. So, um, that's, that's kinda why they had the opening. And I was like, well, I played high school soccer, so I probably know enough to coach middle school. And I did, I would never be a very good, probably high school coach unless I was maybe an assistant coach, but, um, but middle school, I knew enough, but I just did it because, um, there was a nice, it was a nice change of pace from basketball, um, with being outdoors and then, um, having a lot of the kids in class too, that was great to have kids in my class, on their, on the team. So that's why.

Coaching Culture

Coaches described several important aspects of their coaching cultures, including player motivation, teaching motivation and discipline, skill development, and growing player

confidence. Participating coaches also reported the shared experience of coaching soccer players with varying levels of both motivation to play soccer and soccer skills. For instance, one coach who was responsible for a girls' U-15 team struggled with differing degrees of player motivation. That is, some players were highly motivated and engaged while others inconsistently joined practice due to focusing on part-time jobs or socializing with friends:

Yeah. Um, so there were many challenges. One of them, um, was, um, attendance at practices. So, um, I think when players become, I think, especially in the older age divisions, players have other priorities in their life. Um, or they, they may see soccer as only a, you know, a hobby. Um, it's hard to get them to commit to attending practice regularly. And so, um, especially my, my second and third seasons when the girls were, you know, 16, 17, 18 years old, um, if we had a squad of 18, I might have 10 players in practice. Um, so there were often times where we practiced with five or six players because they had other responsibilities or priorities. So, um, I think, I think getting commitment to practices was really hard.

In addition to teaching soccer skills, C1 also stressed the importance of teaching his middle school athletes both sportsmanship and discipline:

I'll remind them that, "Hey, we've got a game coming up." I don't want you, you know, trash talking the other team, we're going to be respectful when we address the referee. We say "Yes, sir." "Yes, ma'am." And, uh, shake the other teams a hand after the game. And the only thing you can say, something positive, like a game or nice job, because especially with middle school, boys seem to want to talk trash to one another.

C4 stressed that the continuous growth was more important than winning a match. Rather than simply learning soccer skills, he expected his athletes to improve every practice, as both a person and an athlete:

Well, ultimately success is not always about your win loss record and how many championships you won at least at this level. Um, it's about, you know, teaching the kids to just be able to work and improve themselves, to get better, teaching them life lessons outside of soccer. Um, you know, sometimes you deal with kids that come from, you know, maybe not the best home situation or maybe not to parents or who knows what difficulties that they're facing, but sometimes it's just teaching them and helping them through situations and how to manage just life in general. Um, so success to me is somewhat relative. It's not about how far you can kick the ball, how many goals you can score, how good of a defender you are, how many goals you saved. It's about you getting better consistently because no, everybody in the team can't be the best player in the world. Um, but all you can do is keep on getting better. So do your best. Keep on improving to me. That's more of a definition of success then than winning a championship.

C4 grew up outside of the U.S. in a country where soccer is the most popular national sport. He reported. He noted that cultural differences affected how he had to coach in the U.S., as compared to his native country. He emphasized that U.S. players lacked early development of basic soccer skills compared to other nations, and he found that creating opportunities for teaching those basic skills was a new challenge:

Okay. So, my family is from ... and I grew up in So, you may be familiar. Um, okay. And in many, uh, very good soccer countries, um, you are raised with skills from a very,

very young age. And so by the time you're 14, 15, 16, um, there may be less emphasis on skills, more emphasis on game play, um, situations you're going to see in the game in the United States, it's different because even players who are 14, 15, 16, they may not have the skills to be highly competitive to players. Mmm. So, the shift that has been happening in ... for the past two years has been trying to focus on providing game place scenarios. Um, so instead of standing in lines and learning how to kick the ball or learning how to pass the ball, um, like you, like, you might see, you know, if you drop that any soccer field in the U. S. okay, as coaches, we were being challenged to, uh, if you want to work on passing, don't make them stand in a line and pass back and forth, create a scrimmage and say the emphasis for this agreement is going to be passing.

C8 emphasized the importance of his athletes working through challenges, as it helped them develop greater confidence in themselves. While this developed their confidence in their ability to play soccer, he noted that the middle school girls sometimes struggle with confidence, and it was great to see them overcome that on the field. C8 also noted that he found it important for his athletes to integrate what they learned during practices into match play. This process helped them to overcome challenges during matches:

Well, I'm still doing coaching. Um, yeah, it's, uh, I love seeing the development that happens in players and I love it when they're able to connect something that we do in practice with, uh, something that happens in a game and that's, that's happened. It happens pretty rarely, but it does happen. It's awesome. Really cool. Um, so you know, that, and, um, I guess I just, it's also great to, especially working with middle school girls, um, who sometimes struggle with confidence. Um, it's fun to challenge them and see them rise to that challenge and struggle and get through that process and develop confidence

by doing that. Um, you know, I, I've never really coached a boy's teams; so, I can't really speak to how they, um, how they operate, but with girls' teams, that's just been, um, something that I enjoy watching.

External Factors Related to Practice Environment

The participating coaches also described the organization of their practices. Typically, the participants organized a 60-minutes practice session and divided the session into two phases: basic skill drills or physical training and scrimmage. C6 explained a typical flow of the practice that included practice time, contents in the entire practice, and expectation to his athletes:

60 minutes? Yeah, I think it's a lot of what you just said the first 30 minutes of training, um, with the, um, skill work, um, you know, just more individual passing, dribbling, um, just your basic fundamentals and then for 30 minutes, so you do a little more team concepts and, and like I said, these kids already came to me with pretty good skill level. So really a lot of that last 30 minutes would have been, um, some kind of competitive scrimmage. Um, not usually we didn't have 22 players, so you couldn't just go 11 on 11, but, but, um, you know, you'd work on your things, then your team things, the last half corner kicks and goal kicks, you'd have your all go against your defense. And I don't think I did anything real revolutionary, just, um, and I tried to keep practice. Uh, I always try to keep practice competitive and fun, having a good time, and I'm going to work a lot harder for you if everything becomes just to drill oriented and there's not any competition to it.

Another shared challenge for the soccer coaches was bad weather, which can force changes to practice and game schedules. C5 shared a coaching experience of a season when there were many rainy days that canceled practices:

Well, the plan was, first of all, I'm not sure we ever had truly four days in a week of practice because of rain. We got rained out some, but the plan was to practice Monday through Thursdays and we're going to have two of just kind of like mostly skills and conditioning and then have to, to, um, two days of, um, I guess you would call it more game-like scenarios, kind of teaching what to do in different games situations. So that was kind of what the plan was. Um, it kind of got thrown out the window when we had rain cause this spring, if you were, I don't know if you were here this spring, we had a bunch of rain. And so we, uh, had a lot of practices that were missed. So I kind of had to wing it a little bit, but was able to, to try and stay to that. Generally try to do some conditioning and training and skills training on some days and then do some game like situations and other days.

Parental Involvement

Coaches shared several aspects of soccer practice they felt were important, including challenges related parent involvement and behavior and weather interruptions to schedules, as well as the general design their practices. Four coaches described the role of parents in soccer environment. Parental relationships were frequently reported as a crucial aspect in sport practice (Tamminen et al., 2020). For example, shared that parents intervening when they did not agree with a coach's decision is a common challenge:

Um, you know, a lot of times you have the parents, uh, they can be a challenge to the parents when the kid, um, when no, there have been decisions. So, in a, so every, every kid plays half the game. Well, there have been times where, you know, if I only have 15 players on my team, then there's going to be some players that get to play three quarters instead of, instead of two quarters, let's see. And, you play quarters, it helps me, it helps

keep it more fair. um, so, you know, somebody will see me play the same kids, um, perhaps, uh, three quarters instead of just two quarters and parents cannot be happy when their kid is the one only playing two quarters. So, I have to navigate through that.

C3 reported issues with parents overreacting to referees' calls and players' performances. In the beginning of the season, this coach attempted to stem these types of parental overreactions by explaining his expectations for their behavior:

Parents can be very critical of other players, other teammates, uh, the opposing team, the brachial referees. Mmm. I try hard to tell them at the beginning of the season. And sometimes at the beginning of games, say, let me talk to the refs. Let me, um, let me handle any problems on the field. Just clap when your kid does something good. Uh, we do not, this is for fun. These are kids. We don't need yelling and screaming. They're basically very challenging, not all of them, but just spend all their time yelling at the ref and other kids. It's not productive.

Research Question One

In this section, the researcher will describe the themes and subthemes that emerged from the data related to research question one, "What are volunteer soccer coaches' general thoughts and understandings of self-regulation in athletes?" Below, a thematic map for the first research question is presented (See Figure 1). Major themes reflected aspects of athletes' self-regulation described by the participating coaches and included active engagement in sport, contributions to others, and proactive behaviors for playing sport. The thematic map includes three major themes and eight subthemes.

Active Engagement in Sport

The participants described how their athletes actively engaged in practice activities when

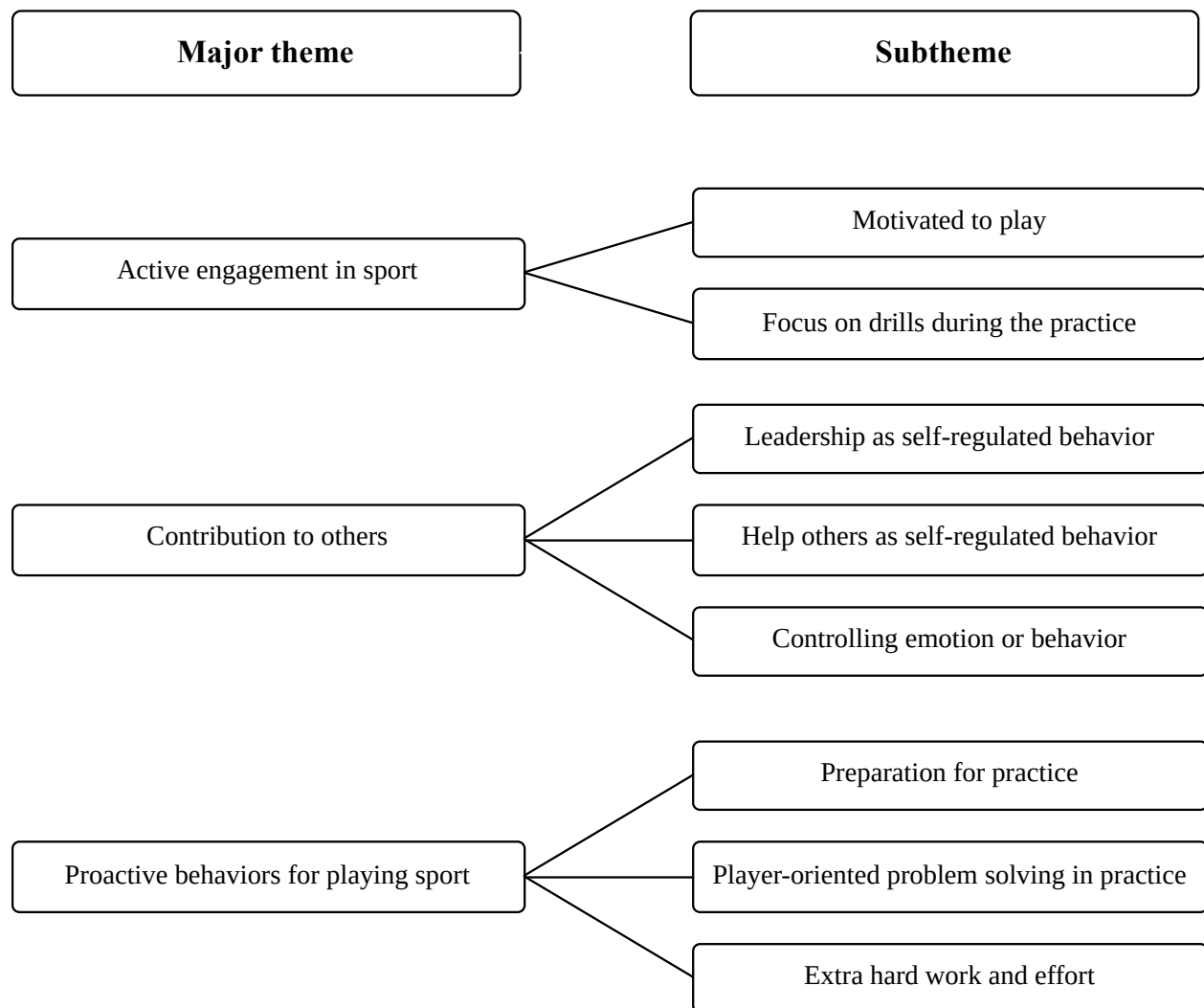


Figure 1. A thematic map for the first research question.

they considered athletes' self-regulated behaviors that require motivation and focus. That is, self-regulated athletes were not distracted, paid attention to tasks at hand, and were interested in and excited about playing soccer. Therefore, coaches explained athletes' active engagement as a key component of athletes' self-regulation, which was explained as consisting of two specific psychological components, motivation to play soccer and focus on playing soccer.

Motivated to play. Coaches discussed both intrinsic motivation and extrinsic motivation and what increased each for their athletes. More specifically, five of the participating coaches explained that, during soccer practice, athletes controlled their behaviors best when they were both excited to play soccer and enjoyed playing soccer. Coaches expressed their belief that these athletes' behaviors reflected their motivation to play soccer. The more motivated the athlete, the more highly engaged they were when learning new skills or repeating drills to automatize skills, instead of chatting with teammates or being otherwise off task during practice. The coaches also explained players who were motivated to play soccer seemed to stay on task rather than engaging in some other possibly more desirable behavior. Some coaches explained attentiveness was indicative of motivation. For example, C5 interpreted players' attention as a reflection of their motivation indicates how motivated they are:

I think you just maybe set an example, um, talk to them about different things like that, and just hope that they, that they pay attention to something because internal motivation can be a huge difference maker. You can have two kids that are equally skilled, but when you have the internal motivation on one and not on the other, the one that has the internal motivation tends to go a lot further because they're working to get hard or to get working hard, to get better.

C5 further explained that happy players, as indicated by behaviors indicative of positive affect, seemed more self-regulated:

Mmm. Well, I would say, um, I can tell you one, that was very well self-regulated. Um, I had a kid that, you know, every time he showed up to the soccer field, he just had a huge smile on his face. So, it kinds of drew everybody to him because he was, he just looked like he's having fun.

C1 found that drills that were more applicable to what occurs during a match, or more authentic, tapped into athletes' extrinsic motivation, which he took advantage in practice to motivate his athletes. He seemed to perceive that the more authentic, match-relevant drills were more motivating. He also perceived these authentic tasks allowed for teammates to compete with one another for fun, which served as an extrinsic motivator for the athletes to work harder during practice:

Yeah. Yeah. Most of my, um, drills are our game. Like I think players are more motivated by game-like settings. Then, then just running drills with just practice handling the ball. If you, you know, encouraged them to at the end, or if there's some, some way to score or some way to, to outdo other teammates, they seem to practice harder.

C1 also discussed extrinsic motivation. He noted that some athletes are often naturally more excited to play and more self-regulated. However, he clarified that not all athletes are intrinsically motivated and extrinsic motivators are sometimes needed, such as positive feedback:

I think some kids are just internally motivated. Kids are just naturally hard workers and they, they, they regulate themselves and they don't need much praise. They're just constantly trying to get better. "Guys, hey, nice job." "Yeah, that was smart." "That was

good play.” Mmm. probably treat them similarly, but the kids who are externally motivated, probably give them more positive feedback.

In alignment with C5’s report that competitiveness seemed a good extrinsic motivator for athletes, C7 witnessed that the addition of more competitive players on her team, who raised the skill level of the team, increased other players’ motivation. She explained that this culture of competitiveness helped increase her athletes’ continuous engagement during practices:

Um, I think we had a few actually, that, um, were competitive players, but then when we brought in the, like other competitive players, they started showing up more and wanting to be there more because it became a more competitive environment. And I think they began to thrive in that and enjoyed it. Um, we definitely had a lot that just didn't, it didn't change at all, um, or didn't really try to, but, um, I think it was mainly that, like once we got more girls there and more girls showing up more competitive, uh, players on the team, we had a few that started showing up more, um, and wanted to be there more. And I think they kind of established that within their own like groups, that they wanted to be there, and they wanted to show up because they were better, and they could compete at these higher levels. Um, and it was kind of almost unspoken that if you weren't going to show up, they didn't really want you on the team, um, to be there. unspoken and spoken. High school girls are pretty, uh, dramatic. So, they would say stuff to each other.

Focus on drills during the practice. The participants also described focus as a reflection of athletes’ level of self-regulation. More specifically, coaches explained that athletes who were not distracted by external factors were more absorbed into practice activities. It was suggested that a lack of focus in some players could also serve to distract other players and decrease their self-regulation. For example, C5 described that athletes who were not focused and engaged in

practice drills tended to be off task and distract teammates, causing a self-regulation deficiencies in themselves and their teammates:

You know, maybe that's kind of what I am. Cooperation is somebody that's, that's well self-regulated versus somebody that's not well self-regulated, I would say, you know, they're not participating, maybe doing their own thing, not paying attention, maybe distracting other players. It doesn't necessarily have to do with how good of a player you are, just has to do with, you know, I guess your, your motivation and what you're doing to help or support the situation or to make it worse.

Similarly, C7 explained that separating unfocused and off task players was a key coaching strategy used in practice. Essentially, separating distracted players served as a way to refocus the team:

Um, they were mainly distracted by each other, so we would also try and split them up. So, like if we're doing a, uh, multiple team drill, um, we try to split up the girls that like were best friends, so they'd be with each other all the time. Cause they were the ones that would get very distracted and be chatting and, in the back, or whatever.

C3 explained that young athletes' focus was affected by a variety internal and external conditions. The coach described the multidirectional influence of a child's disposition, school day, home life, and developmental factors on varying performance levels across different practice sessions. Basically, players may have a terrific practice one day and not perform well the next. The coach explained the difference in performance level could be so drastic that it seemed as though the children may be completely different athletes across two different practices. He explained that the interaction of these variables impacted athlete's ability to focus and do well in practice:

Okay. So, what mindset makes a difference, um, you know, I think some of it comes from what type of mood they're in, that they, what, what has happened at school what's, what's happened at home? Uh, did, did something negative happen on the way to practice because no, some kid, some players will be highly focused on one practice, and then the next practice there'll be rambunctious and unable to focus. I mean, my son is a perfect example. There'll be a practice and he'll be doing really, really well. And then the next week he's a total terror. Oh my goodness. This is not the same kid. Mmm. So, yeah, I think a lot of it has to do with the disposition of the player, um, the disposition of the home, but a lot of it comes down to they're still adolescents and some of them, uh, especially the 11-year-olds now they're starting to move. Uh, and to the, what I would consider the prepubescent, or maybe even this part of their lives, where they don't really know what's going on, puberty starting to hit 'em no, they're acting different because of the hormones. So, you know, that's another challenge really with, with this particular age group.

Synthesizing the findings of *Active engagement in sport*, the participants believed the impact of motivation for playing soccer. From their perspectives, self-regulated players seemed to be motivated due to appropriately controlling their attention to tasks at hand. Remarkably, the coaches tended to rely on authentic tasks or extrinsic motivation whereas intrinsic motivation was theoretically recommended (Wang, 2018). However, Ryan and Deci (2020) acknowledged the necessity of and effects extrinsic motivation to learning. The current study therefore indicated that coaches assumed the effects of extrinsic motivation for their athletes to develop the athletes' self-regulation.

Contribution to Others

The participating coaches explained athletes' contributions to others such as assisting teammates to learn new skills, encouraging teammates, and leading the practice were important self-regulated behaviors. They also described how athletes' who successfully controlled their emotions and behaviors tended to help others, as they were unselfish and disciplined. The coaches assumed behavioral self-control and emotional self-control enabled the athletes to stay on task and help others succeed too. More specifically, these self-regulatory skills related to controlling their emotions and behaviors helped them help others to be more self-regulated and helped them take on leadership roles.

Leadership as self-regulated behavior. Five coaches believed that self-regulated players were unselfish and actively helped and worked with others. This behavior involved teaching teammates when they struggled to learn new skills and demonstrating leadership by which self-regulated players initiated parts of practice instead of the coach. From this perspective, self-regulated players were able to cooperate with and lead others. C3 explained that self-regulated players, along with the coach, helped their teammates who struggled with a new drill:

And sometimes it's been neat to see the kids, the players, um, correct. And so, correct one another. And it's real, a few seasons ago we were practicing the drill and there was one player who was kind of stumbling through how to do it. We had three cones set up and the player was supposed to receive the ball at one cone and pass it back and then run kind of out of the, so the other cone and pass it back. No, he didn't understand it that well, and he wasn't performing it very well. And so, the other players that they did understand were helping him. So, like, one of them was like, kind of held his, held his own like, kick the ball. I come back here, I go over here and we're kind of helping the new

player. So not only were they helping him, but they were helping the coach. Mm I see. So, to me, that's, that's in there. That's an example of what I would consider self-regulated players.

C2 explained how a leader on his team initiated the practice while the coach observed other teams. He mentioned that leaders were followed by teammates, and the leaders were self-regulated to lead the practice instead of the coach:

[A] lot of times they can, um, a lot of times I can pick my leaders. Okay. Leaders happen, you don't decide. I don't believe. I believe you can decide to be a leader. People follow who they want to follow. Um, I mean, you, you can, this guy can decide he wants to be the leader of the team, but it's really this other guy and you can see that happening. Um, so a lot of times in practice or before a game, I'll turn to that kid. Yeah. And I'll say, Hey, go run this drill. And then I continue to watch the game that's being played, because it may be a team. It may be two teams we're playing next week. So I want to I'm scouting. Right. But I don't want my kids to be idle running around. So I'll say go run a drill. And that guy will take them over there, and he'll say, all right, here's the drill we're running and they'll run the drill.

C5 explained one of his athletes seemed to be self-regulated and demonstrated leadership. This player always expressed positive emotions, inspired other teammates, and enjoyed playing soccer, and other teammates also followed him. As this player approached to his teammates, the coach assumed his leadership reflected an aspect of self-regulation:

I mean, no matter what drill you had, he was going to do it very, very well, but he would also encourage his teammates and help his teammates along to help them improve on their skills as well. So, he was a leader in that situation, and he would always do exactly

what you asked them to do. He was there ready, excited to be there. And there were maybe a few exceptions throughout the season where he was maybe having a bad day, but he just, he just always had that smile, infectious smile that everybody loved to see him when he showed up in the field and everybody would comment about it. And he was just always there doing everything you asked him to do and more, and then, and encouraging and helping his teammates to do better.

C4 also described the captain of the team was self-regulated because the captain led a small group during the practice. In addition, the captain also initiated athletes' discussions to solve problems. For the C5, the captain was a coach in the field and required to control himself to manage conflicts and the practice:

Okay. Um I saw that for, for players who I thought were good at self-regulating. Um, they often took on leadership roles within the team. Mmm. And so, you know, the best players, I think at self-regulation should naturally be the captains because they are an extension of the coach. Mmm. So I was thought it was really important for me to have a very close relationship with my captains, because if the players weren't going to listen to me, at least it would listen to as, as a leader off the field, they should listen to the leader on the field. So those players, uh, are typically able to address a situation without me interfering. And so, saying, "Hey, you need to get more motivated." or "Hey, you need to do this." Or they would show be able to demonstrate something that I, I did. Mmm. Now these were the minority of players on my team. There were, I didn't have many of these players on my team, but you know, okay. If I'm one coach and I have 15 players at practice and I just demonstrated how to perform, you know, a tackle, and this is an all assigned to game, um, based on, you know, how you read your opponent's position, then I

break them up into groups. I need to have a player in a group where I'm not observing say, "Hey, let's stop. This is what you're supposed to do. This is how I do it." Mmm. And so, a player who can demonstrate on their own players who can resolve conflict Mmm. On their own, um, players who can make, uh, decisions on, you know, passing or shooting, like the ultimate software decision.

In addition, C5 further described a leader of his team who controlled his negative emotions and inspired other teammates when they missed an opportunity to score in a match. The coach respected their athletes' responsibility for problem-solving in the game. In order to encourage them to discuss about the issue, the coach facilitated them to share their opinions and answered questions when he was asked. During the athlete-oriented discussion, the leader initiated the group of the players:

So, I thought, um, you know, uh, examples of leadership specific to soccer, uh, would be, um, taking, um, lead during a drill Mmm. And saying, "Oh, let's try it this way." Or "Let's do it this way." I made sure in my own evolution as a coach, I got to the point where instead of telling players, this is how I want you to do it. I'd say, "What would you do in this situation? I'm going to give you the ball, this player. What do you do?" And so, I would have them own up and figure it out on their own, even if they were wrong. So, leaders were naturally able to do that. They would say, "Oh, this situation, I would do this." So, I think leaders are able to make decisions on the fly, you know, make decisions in a, uh, very, very short span of time and then take ownership for that. Mmm. I also thought for, um, yeah, leadership, uh, and important demonstration of leadership was if we, our team was losing, if we just gave up a goal, getting back to the halfway line, the leader is the one who say, "Okay, let's go." "It's going to be fun." "Let's get back right

away.” Or during halftime, when, you know, we break the girls up, what I would almost do is I'd say, “All right, halftime, get your drinks, you know, talk to each other for the first five or 10 minutes I would talk.” And then I would come in, I would give them my thoughts and I would let them ask questions. So, I would kind of like facilitate, I told the players who were like, you know what, I didn't do a good job here. And then I think that was a problem here. And this is a problem that we have, or the player that I would say, “Hey, well, if we were winning, I noticed that, okay, player X did a really good job lifting their head and looking for the cross.” And so somebody who could, would speak up.

Help others with self-regulated behavior. The participant particularly paid attention to how their athletes help teammates during the practice. They assumed athletes were able to help others because they could use their skills or knowledge to others. They assumed self-regulated athletes were able to cooperate with others because they controlled their behaviors and emotions to appropriately communicate with others. C4 described a skilled athlete of his team who actively helped his teammates while he was always mentally ready to play and enjoyed playing soccer. The coach considered that this athlete demonstrated an aspect of self-regulation well, as he was devoted to teammates, to help them develop their soccer skills, and he controlled his behaviors and emotions well:

He was an extraordinarily skilled player for his age group. And he, so, I mean, no matter what drill you had, he was going to do it very, very well, but he would also encourage his teammates and help his teammates along to help them improve on their skills as well. So, he was a leader in that situation, and he would always do exactly what you asked them to do. He was there ready, excited to be there. And there were maybe a few exceptions throughout the season where he was maybe having a bad day, but he just, he just always

had that smile, infectious smile that everybody loved to see him when he showed up on the field and everybody would comment about it. And he was just always there doing everything you asked him to do and more, and then, he was encouraging and helping his teammates to do better.

C3 explained his athletes who taught and corrected their teammates' skills during the practice. Specifically, experienced or skilled athletes tended to support other athletes who were developing their soccer skills. The coach believed supporting other teammates reflected their self-regulated behaviors:

And so, the suffering, these, you know, some of it is, um, whenever the players come up to you and they ask you, "Hey, can I help you set up the field?" To me, that's a sign of them helping me manage the performance environment and them as well. Mmm. Yeah. Self-regulating themselves. And sometimes it's been neat to see the kids, the players, um, correct. And so correct one another. And it's real, a few seasons ago we were practicing the drill and there was one player who was kind of stumbling through how to do it. We had three cones set up and the player, it was to receive the ball at one cone and pass it back and then run kind of out of the, so the other cone and pass it back on your pleasant. No, he didn't understand it that well, he wasn't performing it very well. And to the other players that they did it, we're helping them. So like, one of them were like, kind of held his, held his on like kick the ball. I come back here, I go over here and we're kind of helping the new or the player. So not only were they helping him, but they were helping coach. Mm I see. So to me, that's, that's in there. That's an example of what I would consider self-regulated players.

Controlling emotions or behavior. Four coaches described the importance of players' behavioral and emotional control for soccer performance. That is, they believed that misbehaviors and exaggerated emotional reactions may contribute to poor performance. In addition, controlling behaviors and emotions was required not only in soccer practice, but also outside the field, in places such as school and home. C6 expected his players not to react emotionally; otherwise, they would not successfully play soccer:

I prefer players that don't really react too much to anything and just kind of stay level. And, um, I actually kind of talked to them too about, um, staying pretty neutral. Even if you do something good, you might give somebody a five or something, but you don't want to show emotion. And then you also don't want to act too down when something goes wrong. You just want to go on to the next play.

C6 also stressed that the better way to manage emotional reactions was to embrace or accept referees' judgements or failures. He had also coached basketball, and he gave an example of a basketball player reacting emotionally with negative consequences:

I had one kid this year who got several fouls because he didn't like calls with the ref and him and I had to work on that all year. They got better about it by the end of the year, but that's not very good self-regulation. Technical fouls because you're arguing chest to chest, stuff like that. I try to tell them that refs are refs, and they're going to call what they're going to call. You can't do anything about that. So you're just going to have to plug in and then let them, let them do their job. And you do your job. Just let that be it. Cause there's nothing really else you can do. Same if you miss a shot or in soccer. I don't know if, if you gave up a goal or something, I wouldn't want you to hang your head and quit. Just go get it out of the net and let's try to get it back. I mean, that's all we can do.

C8 similarly described the disadvantage of losing their own control. He assumed that offensive behaviors to others were sign of losing self-regulation:

Uh, okay. Um, so, uh, I've seen players that are, um, not very self regulated and, um, they struggle on the field sometimes. Um, they're often very good players, honestly, the ones who do not have good self-regulation are often very good players. Um, but eh, get in trouble a lot by, you know, fouling too much, um, getting an argument to the referees, other coaches, players, and that, that does hold them back. Um, the ones who are more self-regulated, um, do tend to be more team players. Um, they tend to be more leaders, people look up to them on the team and tend to follow them a bit more.

C1 encouraged his athletes to rethink their performance by asking questions:

I'll ask them questions, you know, how did that drill go? We need to work on what, what do you think we're doing? Well, it helps them think about, um, Nope, we just did, what? How could we get better individually? Can they get better?

C4 also inspired his players to control themselves. Instead of pointing out negative behaviors, he attempted to praise positive behaviors so that the players pay attention more positive things. He also pointed out their misbehaviors to maintain a balance between positive advice and suggestions to improve their behaviors:

Okay. To encourage self-control. So, I mean, yeah, that's one thing where, you know, if you're not gonna do what you need to do, if you're gonna be disruptive, you're pulled off. Um, I mean, some of it is encouragement. So, you know, you got some kids that tend to not do well with paying attention and behaving. And then when they do well, you really pointed out to them, you really encourage them to say, "Hey, that was really, really good." What you just did, even though they may have had 30 minutes straight of being

bad behavior, then they had five minutes of being good. Well, that's better than the first 30. So, sometimes just really pointing out their successes when they have troubles, can, can be a big, a big thing. Mmm Positive motivation, I guess, or positive encouragement when they do things well, cause so many times you just yell at them if you will, or get, get on them when they do bad things, but you don't encourage him when they do good things. So trying to keep that balance as much as possible.

C2 believed that core members in his team tended to control themselves because they understood the coach's expectations and aims of the practice. He also acknowledged they could not always control their behaviors due to their maturity. However, he assumed that it was natural for their age:

Well, you know, with the team that I've got now, the majority of them I've had for a long time, so they know they know me quite well. Um, so they understand my concepts, my strategies, my thought processes. They also understand when I'm about to blow up at them so they can see that coming. And they will, I get regulate back in control because, you know, sometimes the team gets being her middle school boys. They get out of control, which is fine. What, you know, we try to have fun with that, but you know, they kinda understand that now. So I've got it core group that I've had for a while. So when new kids come into this core group.

Overall, the participants interpreted that players could help others because they successfully controlled their behaviors and emotions to appropriately connect with teammates and the coach. The coaches further described that a captain or a leader in the team was followed by his or her teammates, as self-regulated behaviors of the leader positively influence on the followers. Therefore, this finding indicated that helping others as a self-regulated behavior

influenced their teammates. In addition, this self-regulated behavior was a consequence of successful behavioral and emotional control of the athletes.

Proactive Behaviors for Playing Sport

The coach participants reported athlete's proactivity was an important characteristic of self-regulation in their athletes. Coaches explained that athlete proactivity made them better prepared for playing soccer, indicative of preparatory self-regulated behaviors. The proactive, self-regulatory actions included preparation for practice, player-oriented problem solving in practice, and engagement in extra hard work and concerted effort focused upon improving their soccer skills.

Preparation for practice. The coaches explained that players' preparation for practice, ranging from degree of independence or dependence in preparation for practice to the dietary choices they made, were important self-regulated activities for their athletes. The coach participants reported that middle schoolers often relied on their parents to prepare their soccer gear such as shoes, uniforms, and socks. In addition to preparing soccer equipment, coaches also reported mental and physical preparation for practice was important and reflective athletes' levels of self-regulation. Even though relying on parents is common for teenagers, C3 expected athletes to be independent in preparing for soccer practice:

So, the best way that I can understand that is me as a coach, helping them see what it is they need to be doing and how they need to do it. And then managing that expectation themselves so that they're able to perform under the game situations, whether it's an actual game or practice. So, they are actually the ones doing the work themselves. Um, I'm just the facilitator, helping them learn how best to do it.

C8 also considered athletes' eating habits to be reflective of an athletes' self-regulatory abilities. He explained that eating healthy food on an appropriate schedule impacts player performance. He shared a story of a talented player who ate poorly. The athlete's eating habits affected her play because she frequently ate fast food right before matches, causing stomach aches during games. He believed her poor preparatory self-regulation led to poorer performance:

Um, that reminds me, Mmm. Yeah. Uh, you know, there are different personalities on the team, um, and the ones that seem to be more self-regulated, they call them the team, mom, at least on girls, girls, girls' teams, cause they tend to be more organized off the field. Um, they tend to be a little bit more serious. Um, they tend to be the type that gets their homework done on the bus or, you know, to games or, you know, in the car ride to games. Um, they tend to be more organized in terms of, um, making sure they have all their stuff for practice. And you know, it's not a situation where they're rolling up with, you know, a shin guard and one shin guard and one cleat and the rest of it at home. Um, so yeah, no, I think the ones that tend to have less self-regulation, um, tend to have bad eating habits too. They, they don't really eat like an athlete should eat the junk. You know what I mean? So, yeah, we had one girl who played on actually, um, it was on the team. ..., she shows up just before games having just eaten at ... and, you know, get midway through the game actually 10 minutes into the game and we'd have to pull her out. Cause she would say her stomach hurt, but, um, you know, then we'd be able to put her back in, but she was an amazing player as a forward. She scored, I don't know, probably half of our goals. Oh, season. Yeah. Just cause she was, uh, she was a tank, nobody could stop her. Um, and she had really good speed. She just had no self-regulation. Um, and she was not very coachable in some ways.

Player-oriented problem solving in practice. In addition to being prepared for practices, four coaches reported player-oriented problem solving demonstrated players' self-regulation. Their athletes with this self-regulator skill proactively explored better strategies for improving sport skills during practice. C4 Explained that he partially facilitated a team discussion during which the players actively expressed issues they needed to solve for the next half in a match. Later, they also discussed how they executed the strategies they developed. C4 did not immediately intervene with players' conflicts and watched how they responded. He decided to intervene when their conflict deteriorated. He believed that he needed to be patient and simply monitor so the players could exercise and develop problem-solving skills:

This is really hard, but giving them the time and space to deal with an emotion or an issue and not interrupting. Um, so like, I know, like there were times with like me and another coach where yeah. If we knew there was antagonism between players on the team and we were in a scrimmage and one of them bumped into the other one or did something natural and stopped, what are you doing? Apologize to each other. Uh, but being like, wait, wait. So, let's see if they deal with it. Um, and watching to see if they deal with it. And if they don't, rather than addressing it right there, waiting until after practice and saying, all right. So, "What happened there on the field earlier between you and okay." Mm. Like, "Okay. What's, what's going on? Is everything fun?" Yeah. And talking to them after I think giving them space in the moment, not interrupting and then maybe addressing it after was something I did.

C4 also expected his athletes to solve some issues during the practice and matches independently. From his perspective, his self-regulated players identified and addressed mistakes with little or no support from him:

And so, um, you know, at practice without me interfering and saying, Hey, stop, why didn't you just kick the ball away? Or "Hey, why did you elbow here?" or, "Hey, why are you sitting in the middle of the field instead of standing up?" You know, then being able to figure that out on their own and deal with their emotions or okay. Any um, stresses or stressors that were happening in the game or during practice. Um, so I think that's how I define it, the ability of my players to, on their own, figure out how to make it through a practice or a drill or a game without interference from the coach.

C7 specifically explained how she facilitated player-oriented discussions during half-time of matches. Before letting the players discuss it with each other, she asks some questions to help the athletes begin a purposeful and effective discussion. She provided an example of how she supported a player-led discussion of how to self-adjust and improve their play in the next half of a match:

Um, usually it would just be one of them coming up to us, um, during halftime and asking like a situational question. Um, uh, and then either of the three of us responding or they ask one person, just the one person responding. Um, occasionally we would let them ask questions. Like when we were talking to them as a group at halftime, usually though it would be, we would give them like our tips or info, you know, whatever information we had from the first half. And then they could ask some questions and then we usually let them try and figure it out with each other, um, and kind of talk about it, cause their problems weren't major problems. It was usually just like energy and enthusiasm being aggressive on the field.

Previously, C4 witnessed the importance of his athletes' preparation for the practice. He attempted to have players-oriented practice sessions; however, the athletes were not ready to

practice and did not prepare any drills or ideas they wanted to practice. Since then, the coach always prepared practice plans for every practice:

Um, no. I did try, um, uh, I think it was my second season. I said, "Uh, what we're going to do is, you know, we're going to spend a preseason period with your coaches, you know, leading practices, sharing drills, and then we're going to do one practice every week where I take a different group and you guys are going to organize the girls." Uh, and that was it, a failure. Um, the players didn't come prepared, um, or they didn't have the confidence to do it, to explain it. And so, um, we pretty much did as coaches. We pretty much did all the planning. I would say I would occasionally ask them to lead different drills that I prepared. Mmm. If it was for a, um, a larger group that was being broken up into smaller groups, um, I would do this with the injured players, especially, I'd say, "Okay, you're going to be my co-coach today. So, I have three groups of players. I have three sets of players right now, each doing small sided games. You're going to go watch those two games." And like we said, "Today, the focus is on passing accuracy and, um, you know, um, and quick touches. So emphasize those things over there. You're going to go oversee those. I'm going to go oversee this year." I try to empower them a little bit, but I wouldn't make them plan things.

Extra hard work and effort. Additionally, the participating coaches' responses suggested that they viewed harder work and more time spent practicing skills as indicative of higher levels of athlete self-regulation. The participants noted that self-regulated athletes tended to work hard and sometimes practice more than others. The coaches believed in the positive relationship between motivation and hard work. That is, they could work hard and practice in addition to regular practice session because they enjoyed playing soccer. C5 reported that the players who

did extra workout at home differed from the players who practiced soccer only at team practice. He witnessed that the players whose soccer skills developed remarkably tended to make an effort even outside the field and were responsible for their own skill development:

But if you really want to get better, you've got to put for some of your own effort outside of practice on your own time. Maybe you can do some of these things by yourself. Maybe you got a brother or sister or friend in the neighborhood but be outside doing some of these things. And even if you're not doing soccer, you know, stamina is very important in soccer. Be outside playing. Something that I've noticed now that we've just started practicing again about three weeks ago after this coronavirus, is that I can tell the difference between kids that never went outside and were outside a lot because some of them have lost a lot of their ability to run and run for long distances. Some of them are still doing well. I can see a big difference. So just, you've got to do stuff on your own. I'll help you while you're here, but you've got to put forth effort on your own if you really want to get good.

C8 described how self-regulated athletes made an effort in the practice. This type of athletes seemed to be motivated from the coach's perspective:

So for example, if we're looking, um, if we're doing a practice on, um, on, uh, I dunno, pass, accurate passing or something, that's the criteria of the person who's gonna, um, when practice the wildcard there is, there's always, if they feel like there's somebody who put in extra effort or really made it an effort, um, and was really motivated throughout the practice, then they can also win practice. And so that, that's usually the person who ends up winning is the one who put in the most effort clearly during the practice. And it's usually pretty clear who it is and oftentimes talk, it's the one that has more self-

regulation, honestly, it's the one who's willing to put in the work during practice. So, um, you know, I try and spread that around as much as I can. So I usually will pick somebody as well, who hasn't been selected to try and, um, you know, show them that, um, just with a little bit of effort, you can, um, you can achieve these things as well, just to try and keep them kind of motivated, but um, yeah, so, um, to be successful in practice.

C5 explained the close relationship between motivation and hard work. His players who were able to work hard were also motivated to play soccer. He believed hard work resulted from their motivation to play soccer:

A motivated player. Um, I do have to preface this by saying it's not always about the players at this point. Some of these things aren't about the players, because the parents are the ones who have to get in there, a player at eight years old, can't drive himself to the game practice. So, but to me, a motivated player is one that shows up. Normally I would say somebody that shows up on time, but like I said, that's the parent that's really responsible for that more than the kid, but one that is excited to play. He's going to listen and try his best, no matter how good or bad he does, he's going to try as best and do what I ask them to do and get better. He's not going to be a distraction to try and distract his teammates or to encourage them to do something different. He's going to be there, ready to practice, do his best, listen to work hard.

In summary, the participants considered proactive behaviors, such as preparation for the practice, player-oriented problem solving, and extra hard work and effort to skill development, were consequences of the athletes' self-regulation. Because self-regulated athletes were responsible for improving soccer skills, they engaged in extra activities in addition to the given practice. The coaches believed that these athletes' behaviors reflected their proactivity that was

associated with self-regulation. These findings were unique because Zimmerman's SRL strategies listed help seeking as a SRL strategy, but not helping others as a SRL strategy (Zimmerman, 2013).

Research Question Two

Figure 2 is a thematic map for the second research question, "what strategies do the volunteer coaches believe they use to develop self-regulatory abilities in their athletes and how do they employ them?" Four major themes were identified while nine subthemes that describe one of the major themes emerged. These themes describe what strategies the participants used for developing self-regulation in their athletes and athletes' soccer skills. The participants' direct quotes explained how they employed strategies and used them in their practice.

Approaching Players

The participants in the current study actively approached their athletes to teach soccer skills and strategies for improving soccer skills. Specifically, they directly taught knowledge and experiences during the soccer practice. The coaches also expected their athletes to improve their life by applying what they learned in the soccer practice. It was assumed that direct teaching was required for the young athletes to develop their soccer skills and skills improving their life.

Organization of the Practice Environment

While the participants directly taught soccer skills and knowledge to their athletes, the coaches also attempted to arrange the practice environment to enhance the athletes' learning experiences. By analyzing the practice, they mainly managed the structure of the practice, an atmosphere of the practice. On the other hand, the coaches also attempted to apply player-centered discussions to solve issues in the practice and matches.

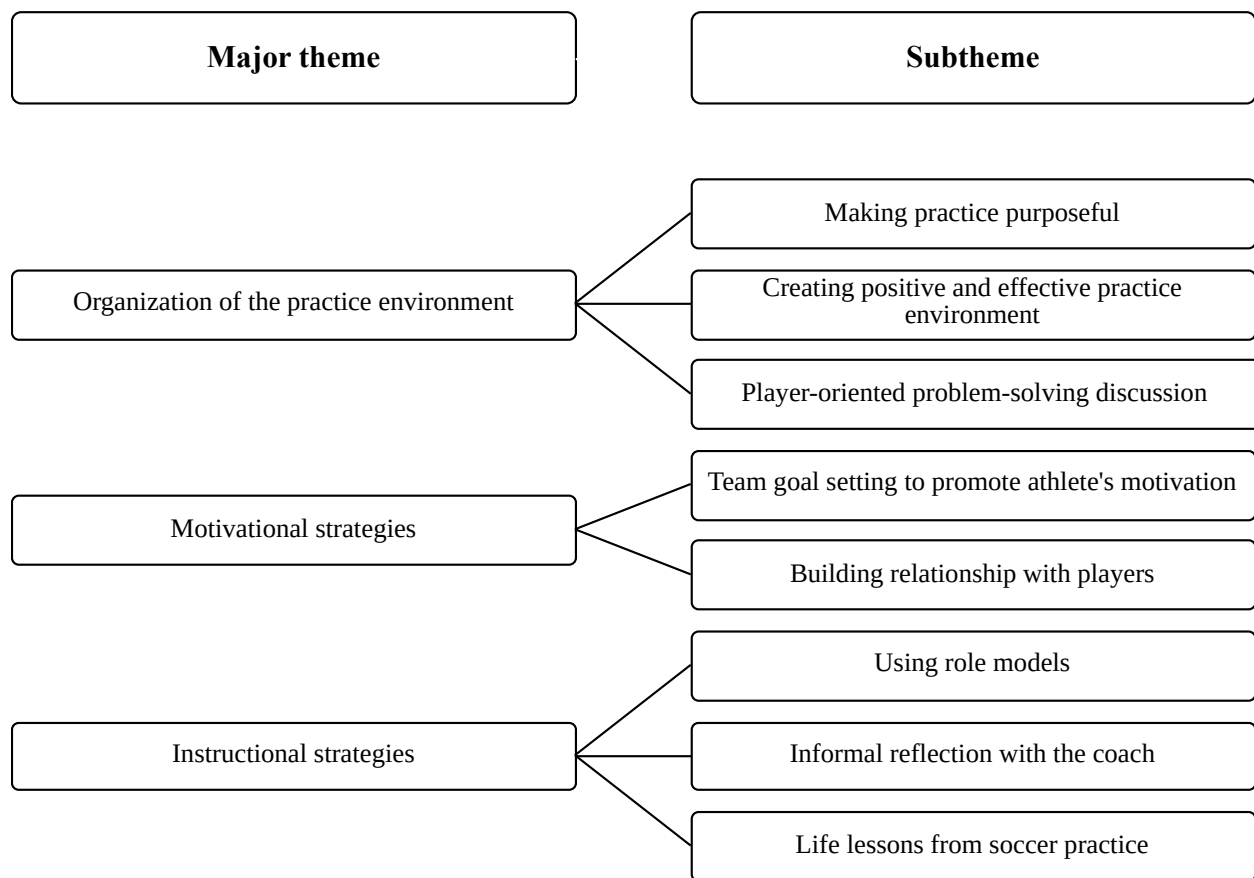


Figure 2. A thematic map for the second research question.

Making practice purposeful. Six coaches used the strategies associated with making practice purposeful. They proposed that clarification of the purpose of a given practice may help athletes stay focused on the practice and avoid practicing mindlessly. Similarly, time management of the practice and goal setting were reported as strategies to help the athletes to focus during practice. C2 attempted to integrate the purpose of a drill and a situation in a scrimmage, in which athletes would take advantage of what they learned in the drill:

Yeah. Yeah. So, we'll run. So then at some point we'll run a scrimmage, we'll run defense on offense, scrimmages against each other. And when I see the drill show up in that scrimmage, I'll stop scrimmage. And we'll talk about how that drill, how they did the drill. Subconsciously. They just did the drill, and sometimes you see the light bulb just pop right there just comes on. Boom. Oh, wow. That's why we do that.

In order for athletes to be mindful in a drill, C6 explained he set a goal for it. He often designed a challenging drill designed by setting a time and a small consequence. Based on the athletes' accomplishments, he changed the time or difficulty of the drill. Under this designed drill, the athletes attempted to finish the drill as a whole team, so that they stayed focused on the task at hand:

Oh yeah. Well, yeah. Goal setting. Yeah. Even if we're doing drills, if they're not doing drills where they're in direct competition, um, we, we will still have a, we'll have a goal. Some sort, even if it was just, if we were just dribbling through cones, we're going to dribble down through cones and back, I would still even then give them a time on it or something I'd say, okay, I want the whole team to get through these cones and lock up minutes. Or I don't know now what my numbers would have been. You usually I'd set a number and then based on how fast they did it, I would, I would adjust the number that if

they met our goal and the next time the goal would be a little harder. So if they had to get through their dribbles through their cones in a minute, the next time it would be that they did it the next time, we'd say, okay, next time it's 55 seconds. Then you try to get it down. Or, or if, um, but they were taking shots on goal. You might say, well, okay, everybody's going to take a shot on goal. And our goal is for eight 12 of you to make your shot on goal and that they don't make it. There's some little discipline, like maybe 10 pushups or something, nothing, nothing over the top. But I'm just, just, just a little consequence.

C7 emphasized the importance of preparation to make the practice more purpose driven. The preparation included organizing the field, setting up equipment, and simulating drills and descriptions of the drills. This preparation also enabled her and her athletes to be mentally ready to practice.

Okay. Um, I come to practice prepared. That's, that's the biggest thing, you know, to be prepared as a coach. Um, and then, you know, so as part of that whole preparation, you know, I have my session that I know that I'm going to do, and then I get there early enough to get the field set up. Um, and I set the field up in such a way that I don't have to go moving a lot of things, I just kind of worry about taking it away. Mmm. So, when I'm prepared, I feel as though the players are better prepared for that as well.

Creating a positive and effective practice environment. Six coaches attempted to develop positive practice environments where athletes maximized skill development and participation in soccer. A series of strategies were utilized by the different coaches, such as emphasizing development, conducting fun activities, and flexibly in adapting practice drills depending on athletes' needs or conditions. C5 relied on positive encouragement for novice

athletes who hesitated to try a new soccer skill. The coach also stressed that he neither forced them to play nor expressed negative emotions to them:

Um, positive encouragement. I mean, I think the example earlier of that girl that just really didn't want to be out there. I kind of think that was an example of positive encouragement. Um, because you know, I was never upset with her for not being out there. Even though in essence, I was playing a man down on the field and it didn't help the team. I was never upset with her. I just encouraged her, you know, supported her, helped her think through what's going on, you know, Hey, you can do this. You don't have to quit. You, you don't have to be the best player out there, but just do what you're comfortable with and learn as you go along. So, I'd say, I mean, there's a lot in that little story there, but I would say that was definitely an example of positive encouragement to kind of help them.

C4 particularly recorded his athletes' performances and gave positive feedback in the practice. He believed that this positive feedback may have helped the players who were difficult on themselves to pay more attention to positive performances they made at the last game:

I made notes. I kept a notebook and I made notes, uh, during games, after games, during practices and after practices. And so, I made sure that they knew what they did well or what we could keep working on. Mmm. Because some players are very hard on themselves. And so, I would say after practice, where I noticed, you know, a player had a bad game on Sunday, but they had a good practice on Tuesday, I would say, Hey, that was great. You know, you did a great job, keeping your head up. You had some great passes. You really did a good job getting around your defender and so inspiring

confidence in them by encouraging them when they Mmm. When they do things well.

Mmm. I love that Mmm. Really important.

Interestingly, C3 reported that the performance environment was not only a physical environment, such as the soccer field, but also the athletes themselves. In other words, the athletes also created a performance environment; therefore, their preparation for practice was important to develop a positive practice environment:

So, imagine a performance environment as you get to the field. And one of the, one of the things is, you know, the field isn't set up properly, say, uh, another coach came in the day before you, and he's moved the goal, um, out of place or there's trash on the field. Um, and or one kid shows up without shin guards. That's part of the performance environment as well. Um, so managing that and also, I mentioned the performance environment has to do a lot with the parents as well. Um, when you have to, you have to manually scan and manage it sometimes when it comes to the practices. No, some parents aren't as strict on their kids as you would like them to be. So, it's kind of like, alright, a little Johnny back out here on the soccer field, during the practices, picking the grass, because he's upset about something.

In order to create a positive sports environment, C4 often set up small competitions during the practice. This was a strategy for the coach that drove his athletes to engage in the practice:

I try to get them excited about the drill that we're doing. Okay. Really what it boils down to is getting them excited. Um, you know, and a lot of times they really get into the play to the small sided games because I can even turn that into a tournament of sorts. I've got 14 players, I've got seventeens and it's like, okay, well, we're going to play until, you know, until we have a two person, do we have a two-person team winner. Um, you know, that

may not always be my focus or my goal, but sometimes that's, that's what I will do, uh, just to kind of get them excited about what we're going to be doing.

C4 practiced at a facility where more than 20 teams practiced simultaneously. Due to this limited practice environment, he had to arrange drills and equipment for the limited space on the field. To avoid losing equipment and decreasing the quality of practice, he and his co-coaches invested time and effort to carefully design and prepare their practice space:

Yeah. So, I'd have to adjust my drills and we wouldn't the coaches, we wouldn't find out where our practice area was until an hour before practice. So, we get a text message that would say today, you're practicing on field A, in the corner and you'd get there and you'd see there are teams everywhere. They're like, Oh, we have very, very limited space. So how are we going to, you know, how are we going to practice corner kicks if we don't even have, you know, a corner and a goal. So, um, field space and, and equipment, um, was difficult. Me and one of the other coaches, um, the second season, what we did is we actually bought all of our own equipment because the club provided the equipment. But when you have so many teams sharing, it was easy for me to get lost or for somebody to, you know, they're working on a, a shooting drill, did they take all the balls and you had no balls left. So, we actually wound up handing out of our own pockets to have the equipment that our team needed. So, we knew that even if we didn't have field space, at least we had all of the stuff we needed.

C6 explained the merit of another practice-planning strategy. He found that when he held shorter practices for younger athletes, it helped the children stay focused on practice. On the other hand, when he held practices that were 90-minutes or longer, the players had more difficulty staying on task in practice and attending to the coach's instructions. Through these experiences, he planned

shorter practices to take advantage of players' ability to focus better to ultimately increase learning and skill development:

And I've learned to, especially with middle school kids, sometimes shorter practices that are a little more focused, tend to be a little more productive than a two-hour practice where you're taking breaks and you have all this time. And sometimes it's better just to go an hour to an hour and a half and just get in what you've got to get in. And that's it. You don't have to take all the breaks. You, you know, an hour practice you can get by on one water break, halfway through, a quick water break, and that's about it. And you can be just focused. They don't go really hard because they won't get tired. Um, you know, two-hour practice by the end of the two hours, they're usually so worn out. You're not, you're not really productive at that point anyway. So, um, over the years I've tend to tend to kind of get shorter practices. Anyway, now those kids didn't play travel sports or travel soccer. I might have I'm out of practice for about 90 minutes, but we only practiced for about an hour.

Player oriented problem solving. Coaches reported that they wanted their players to become active, independent problem solvers, without becoming dependent upon their direction or intervention. The coaches expected their athletes to proactively solve problems on the field and off the field. Because athletes often have to solve problems during match play, the coaches encouraged and expected their athletes to engage in problem identification and solving without coaches' help during practice sessions. The coaches believed these were important learning opportunities for their young athletes to develop their soccer and life skills. C7 purposefully observed player-oriented practice outside the court. He encouraged a captain of his team to decide drills, and when they needed the coaches' help, he was ready to support them:

Um, sometimes if I don't, like, if I don't like how a practice went, like I felt like they weren't real focused or something like that. I'll, um, I'll put a clock up and, um, I've done this in soccer and basketball, put a clock up and then I'll take the captains and I'll write down for the captains, what they want, I want them to do. And there is, and I'll always pick drills that I know they know how to do cause we've done them a bunch of times. So I know they know how to do it. And I'll, I'll give that practice plan to the captains and I'll have the captains actually execute the practice plan. And me and my assistant coach will sit there will still help. And we'll still, um, you know, we'll, we'll still critique or whatever we need to do, but in terms of getting them in and out of one drill to the next drill or something like that, I leave that up to the captains. And usually that gives them good ownership over it. And, uh, I don't do it all the time. So when I do it, that's enough of a novelty that they usually like it or kind of get a kick out of it. So let's just see I'm watching the clock and they're like, okay, eight minutes is coming up at eight minutes.

C4 described giving opportunities for the athletes to decide drills for the next practice. However, because the athletes were not ready to choose the drills needed to improve their soccer skills, they did not prepare anything for the practice. Then, he and his co-coaches decided drills every time and divided them into small groups so that the coaches were evenly responsible for watching the athletes:

Um, no. I did try, um, uh, I think it was my second season. I said, uh, what we're going to do is, you know, we're going to spend a preseason period with your coaches, you know, leading practices, sharing drills, and then we're going to do one practice every week where I take a different group and you guys are going to organize the girls. Uh, and that was it, a failure. Um, the players didn't come prepared, um, or they didn't have the

confidence to do it, to explain it. And so, um, we pretty much did as coaches. We pretty much did all the planning. I would say I would occasionally ask them to lead different drills that I prepared. Mmm. If it was for a, um, a larger group that was being broken up into smaller groups, um, I would do this with the injured players, especially, I'd say, okay, you're going to be my co-coach today. So, I have three groups of players. I have three sets of players right now, each doing small sided games. You're going to go watch those two games. And like we said, today, the focus is on passing accuracy and, um, you know, um, and quick touches. So, emphasize those things over there. You're going to go oversee those. I'm going to go oversee this year. I try to empower them a little bit, but I wouldn't make them plan things.

C4 explained that because his players did not do well directing and designing practices, he started to describe the purpose and details of the drills he and the other coaches selected. Later, he encouraged his players to use this knowledge to help them select what drills they needed to improve their play. Thus, he developed their autonomy and allowed them to choose drills they needed in later seasons:

Mmm, so, you know, I don't know. I think I gave in the, in my third season, you know, as I matured as a coach, I think I gave players much more autonomy. And so, I'd say this is the drill, these are the goals of the drill. Mmm. And I would let them do it and I wouldn't interfere or interrupt them or nitpick them, um, for, the way they passed or the way they stood or the way they defended, or they didn't lift her head up, you know? Yeah. I thought there were some things that were minor that were not worth, you know, creating tension over. Um, and so I think I tried to give them autonomy and to decide on their own, like how they were going to do things in the current situation.

Synthesizing the findings on *Organization of the practice environment*, the participants believed in the influences of the physical practice environments and the structure of the practice. They further assumed the environmental changes drove their behavioral changes. One of the major approaches they used was to specify a thing on which they needed to focus in a drill. They believed this approach helped players be motivated. In order to specify tasks of the practice, the coaches analyzed the drills and their athletes' performance. The finding further indicated the positive impact of player-oriented discussions to solve problems in the soccer practice and matches, yet the coaches needed to facilitate the discussions. As C4 described, young players needed coach's facilitations to learn self-regulation through activities. Therefore, the participants in the current study interpreted the necessity of external influences including environmental structuring and coach's approach to enhance their learning.

Motivational Strategies

In the findings of the first research question, the participants reported the importance of motivation to play soccer. They assumed goal setting and a positive relationship with their athletes may enhance their athletes' motivation. From their perspective, these motivational strategies were aimed to increase participation and engagement in the soccer practice. The coaches relied on goal setting that aimed to specify coaches' expectations and team agenda that displayed requirements for the athletes in a season.

Goal-oriented strategies. The coaches assumed that motivation of the athletes was one of the impactful factors for them to self-regulate to play soccer. The coaches attempted to motivate their athletes to increase participation in soccer practice so that they constantly improved soccer skills. Interestingly, the coaches who conducted motivational strategies mainly approached the whole team but not individuals. That is, they relied on team goals, team agenda, or expectations,

and these strategies were directly suggested by coaches. C8 emphasized the value of motivation to improve the quality of practice. Because his practice was held at seven p.m., he needed to inspire his athletes to work hard drills:

I'm kind of thinking about it, but, um, so they'll do a warmup on their own for the first five minutes or so. Um, after the warmup, while they're stretching, I talked to them about, um, the, sort of the goals of the practice and you know, what we're going to be working on a while. Typically, it's from something that I saw in a game, uh, from the previous weekend. Um, and then I also try to get them motivated to give them something, to motivate them, to work hard during practice, um, which man that's like a super hard and it just, you know, they, they have so much other stuff going on. They come to practice and it's at, you know, seven o'clock sometimes at night and they're just, you know, done that. They just don't wanna have all that energy by that point.

C8 also shared another goal setting strategy in which he asked his players to write down realistic goals for their soccer performance on index cards. He expected them to remember what they wrote on the index card so they would achieve the goals:

Yeah. Uh, that's a good question. Um, so what I started doing last season was having them write down goals for the season on an index card. And we were going to revisit those goals midway through the season. And so I had them write down a goal and then write down how they were going to achieve that goal. You know, so for some of them, it was juggle more than 15 times in a row. And so they're, you know, how are they going to achieve that while they're going to practice juggling? So I made them be specific. Like, how often are you going to practice juggling or you're going to practice juggling once a week, or are you gonna practice every day, you know, and make sure that it's realistic.

Cause it's something that you can do. Can you practice five times a week? You're juggling. Um, so trying to match up their willingness to achieve their goal versus what their goal actually is and making sure those kinds of match up. We didn't really get to do that and revisit that this season just cause the season got canceled midway through. So, I don't know if it works or not. I'll try that again in the fall, I guess. So, there's that, um, trying to achieve their goals during practice? Uh, I dunno, we don't, I don't really do a whole lot of followup practices. We don't really do a whole lot of goal setting during practices.

C4 encouraged his athletes to set individual goals for the practice, but he also repeatedly stressed team goals in practice. He felt allowing players to select their own goals prevented them from feeling shamed by the coach or by teammates:

Yes, yes, exactly. I think that I definitely emphasize the team goals. And then I always, you know, I let players know if you have an individual goal. Like we had one player who I really wanted to score with her head said, okay, you want to score with your head. This is, these are things you can work on. These are things, you know, you need to do. And let's see it by the end of the season, you can score with your head. Mmm. Something like that. But I, I wouldn't announce if a player had an individual goal or if I set the challenge for them, I wouldn't, I wouldn't announce that to the rest of the team, or I wouldn't make that public because I didn't want them to feel the shame, not achieving, you know, whatever that was Mmm. As an individual, because the priority was always the team goal of being successful.

C7 codeveloped her team goals and team standards with her co-coaches. They shared expectations of their athletes from each of their perspectives and synthesized all of their

expectations to form shared team goals and standards. This process helped avoid conflicts with her co-coaches and helped the team understand one clear set of team goals and team standards:

Um, we met with them, like at the beginning of the season or before our season started to kind of talk to them about what we wanted for them as coaches, but also what they wanted as players. Um, because what we wanted could have been vastly different from what they wanted. Um, and like we sat down and wrote out like a list of four or five things that I think were our goals and their goals. So combined as a team, our team goals, um, and we kind of revisited them throughout the season to make sure we were all still on the same page. Um, especially as we added more players, um, throughout that season, we'd kinda revisit everyone and just make sure everybody knew what the standards were, um, and kind of just reinforce that throughout the season. Um, and then just be open to talking with them, like, as we went kind of talking with the captains to, to make sure that, um, they were like upholding their end of the job as a captain to be a liaison between us and the team.

In addition to explaining this process, C7 also shared how reached a consensus with her players regarding the team goals and standards. Specifically, she set up the team goals and standards combining the coaches' expectations and the athletes' capabilities:

Um, and I like to base it on like what the capabilities were of each player. Um, we had a lot of athletic players, a lot of competitive players, all very good technical players. And so I thought like they could win state. That was my expectation for them. And then from there, we'd kind of break it down, like what their weekly expectations were, um, like showing up to practice was like the bare minimum, um, which was the most difficult thing. Um, getting them to all show up every practice. Um, so like their bare minimum

ones that I expect, um, that were expected of me as a club player, a high school player, and a college player. So, I kind of took from that. And then, like I said, what I thought they were capable of. Um, and then the coaches would kind of talk about it and we were all fairly like on the same page, um, with like what we thought their playing level should be and the same base level expectations of showing up for practice and letting us know when they weren't going to be there. Um, and kind of like, uh, respecting each other, um, not being mean to each other. This was like a family, a team that, uh, we didn't want them to be exclusive or cliquey and stuff like that.

Similarly, C6 usually set team goals, yet his athletes were encouraged to set and attend to individual goals when the coach assigned competitive drills. The coach also had his athletes race and compete against each other so that they were able to push themselves to work on challenging tasks:

Um, and I don't know if I, I don't know if I really ever sat there and said direct things, but I, I definitely would be in kids' ears about things I want them to specifically work on. And maybe if something came to mind, I might say that I want to see you be able to do this, or I want you to try this. But, um, usually when with goal setting, I kept it more team oriented and stuff. Um, and, and probably the individual stuff would be more if they were doing competition. Like if you said, "Okay, we're going to, we're going to dribble down field through the cones and back. Cause we've got two guys or three guys racing each other to see who can do it the fastest." And I guess she could do some individual goal setting if they maybe you'd have three really fast guys, but you have a fourth guy who isn't as fast as them, but, but you want him to get faster. You might put him in a group with two of those three really fast guys and just challenge them and say, "Hey, I think

you can get them. If you really hustle, you can get them.” And then maybe he does, maybe he doesn't, but, but he would certainly work hard to do it.

Building relationship with players. The coaches reported the importance of building relationships with athletes to help support the development of their self-regulation skills. That is, a close relationship between coaches and athletes enabled athletes to equally communicate with coaches. As a result, most athletes on the team understood the thoughts of the coach well. C2 described an advantage of coaching the same athletes for multiple years. He reported that the athletes who had been coached by him for multiple years immediately understood the purpose of the drills the set up by the coach:

Well, you know, with the team that I've got now, the majority of them I've had for a long time, so they know they know me quite well. Mm okay. Um, so they understand my concepts, my strategies, my thought processes. They also understand when I'm about to blow up at them so they can see that coming. And they will, I get regulated back in control because, you know, sometimes the team gets being middle school boys. They get out of control, which is fine. What, you know, we try to have fun with that, but you know, they kinda understand that now. So I've got the core group that I've had for a while. So when new kids come into this core group.

In a soccer league where C5 belonged, most athletes were coached by him. This experience helped the athletes to communicate with the coach without barriers. Therefore, they could easily share their thoughts of practice and drills with him:

I mean, I've been coaching this league long enough that I know just about every kid in the league, you know, 90% of them, 80, 90% of them. I probably coached most of them at one point or another over the years. So, they all know me and they're usually not scared to

tell me if they liked or didn't like what we did. And sometimes you don't find out right away, but practice or two down the road, they're like, Oh, why don't we, can we do this again? I really liked doing this a couple of practices ago, or you try to bring something up again, had a practice. And like, I hated that drill. I didn't like that. So usually they'll, they'll just straight out tell you, let you know.

C4 shared a story that building relationship with his athletes improved team performance. At his first season, he struggled with connecting with his players who were discouraged by poor performance in the previous season. However, their performance improved, as the coach kept inspiring them to play soccer and improve their performance over time. He assumed that the development of a close relationship with the athletes enabled him and his athletes to perform better:

Yes. So, um, I think, Mmm, when I inherited the team that I was coaching, we were very bad, very bad. Um, and, um, I was, it was the only the third year that the team had existed. And I was told that the previous two seasons, they had one, like only one game and lost 20 games. And so, you know, I came in and I had a coaching philosophy. I knew the way that I wanted them to play. And the head coach wasn't really involved with the training. He really let me kind of take lead. And, you know, we only won two games that whole season, and I was so frustrated and then they were like, "No, we're actually better than we were before." Um, you know, and they, they were very encouraging. And I think, Mmm, the part that I loved about coaching was forming a relationship with the girls and, um, you know, letting them, um, trust me and then, and then developing like a, almost like a friendship with them, um, and being, being able to be a mentor. And so, I was very fortunate to, you know, the second and third year, our fortunes turned around and we

became very good and very competitive. Um, and it was, I think my final season, coaching them the third season that I coached them.

Findings of *Motivational strategies* demonstrated the usefulness of team goal setting and the importance of relatedness. The coaches relied on team goals that enabled athletes to make an effort together and become on the same page. The team goals also helped coaches display specific expectations of the coaches while athletes confirmed requirements that helped them specify tasks in the practice. The findings indicated that athletes seemed to be motivated to perform because they were focused on a specified task.

Instructional Strategies

The participants in the current study used role models for learning and informal reflections as learning strategies. They asked skilled players to demonstrate new soccer skills for novice players while the coaches demonstrated how to practice new skills. Moreover, they relied on group discussions with their athletes to look back their performance. Through this reflection, the coaches believed their athletes were able to find tasks to improve their soccer skills.

Using role models. Two coaches took advantage of model cases of soccer drills and how athletes learned from watching each other. They also believed that observing others may help athletes' learning of soccer skills. C4 expected his athletes to learn from drills in which they practiced both offense and defense and likely gained different ideas from opposing positions:

So, the first play model, um, and the play practice play, it would essentially be, um, if we're gonna focus on, uh, going to focus on defending than it would basically be, um, two players on, on each day that have two different colors on. Okay. Um, and one team started out with the ball and their objective of course, is to either score if there's a goal or dribble over a lot, like, well, the defending team, their purpose is to close and close the

gap to shut down passing lines and be receptive. And then once they intercept the ball, once they do that, then they work together to get to the end line or to score their goal. And then the team that started on offense would be the defense and wouldn't need to try to get the ball back. So, it's essentially playing a game.

C4 used another learning strategy that the coach demonstrated soccer skills as a role model. Prior to a drill, the coach demonstrated soccer skills the athletes were going to practice. While they were practicing, the coach was opened to be asked questions from the players:

I would often ask them to if they needed my help or guidance on something. Um, and so I think I created a comfort level where they were like, you know, I'm just like, "I'm not figuring out how to trap the ball with my chest." And like, "Okay, well, let me show you a little something that I do to remind me." And that often would have them in the beginning. I demonstrated all the drills. And in the end, I actually had them demonstrate to drill. So. I would say "You're going to stand here. I'm going to give one of you the ball, and I'm going to have you attack the other player." Whereas earlier I might have been the one that was doing the attacking. I was like, "You do it." And you figured it out. And they often do it. And look at me and say, "Well, was that right? Thanks." "What do you think?" "No, you're right. It was wrong. Let's go back and do it again." Um, making them demonstrate things.

C5 witnessed the impact of learning from others when one of his athletes observed a new athlete and subsequently changed his behaviors. The new athlete was not only the most skilled on the team, but also the hardest worker on the team. This skilled athlete was a role model for the team who influenced other athletes to work hard:

Well then halfway through the season, they added another player to the team who was better than my son. And so, throughout the first half of the season, it was, he just didn't want to put forth any effort. He just goofed off. If he did the drills, it was as little as he could do to get by, without me getting all over him and whatever. Well, then the other kid showed up and he wasn't the best player on the team anymore. And when he was going against this kid, he was like, he was getting beat and I'm like, well, you've got to put forth some effort to get better, watch what he's doing, learn from him. And so, he did, he did get a lot better. I don't know that he ever caught that other teammate, but I think that made him realize that he couldn't just be there and show up and just go through the motions. He needed to actually put forth some effort and he did make some effort as time went on too, to try and improve and get better and do the things the right way.

Informal reflection with the coach. Six coaches shared that they would engage in conversations with their athlete's to collaboratively reflect upon the athletes' performances during and after practice. C6 questioned his athletes about previous performance during the practice. When an athlete needed to objectively observe the overview of a drill, he took him out of the drill to enable him to see the flow of the drill. This observation allowed the athlete to rethink the purpose of the drill and reflect on his performance in the drill:

Um, they did fine. Not too bad. I mean sometimes, well, no, actually I take that back. Um, sometimes even if we had a good practice, I might still ask them, what's one thing we could work on because I don't, I don't want them to get a big head and think, Oh, I don't have to keep work then, or there's nothing to get that. Or, um, so I, you know, um, and sometimes if there's some particular thing I might call it, get off to the side and rather than the, just telling them what I think they need to work on, I might, I might, uh, ask

them, what do you, what do you think about today and what do you think we could be doing better? And that's usually a pretty good conversation.

C4 specifically asked his athletes questions to guide their reflection on their performances.

Interestingly, he asked “what if” questions to help them consider alternative actions they could have taken and other ways to improve. For athletes who need to step outside the drill to see the gestalt of it, he interpreted some key details of an observed drill:

Sure. Um, a lot of times it's asking them if they've made a bad pass, it's asking them, “Hey, what would have been the better decision?” “No. What can you do if you don't see a passing lane?” “No, if you can't find a passing line, you're, you're looking for an answer.” Whenever you can ask, you know questions, but you want them to give you the answer. And sometimes, well, I'll stop play, and if they're dealing with something in one of the players, “No, they didn't pass the ball well to an open player.” No, sometimes I'll stop and I'll rewind play. I'm like, “Okay, here's who you pass it to. What do you think would have been a better decision?” And like,” I don't know.” It's like, “Well, look around what you see.” Sometimes when players put their heads up and they looked around. Yeah. They see, well, I've got a player to my left that was open and like, “Okay, could you pass it to them?” And then the answer is “No, they couldn't because they don't have the skill level to do a move to pass to that person.” “No, sometimes, sometimes you do this skill, to get the ball to somebody on your other side, that's over.”

C4 also shared how his athletes and he reflected their performance. Mainly, the coach facilitated the discussion and asked questions to the athletes:

We, so what we always did is we had a breakdown at the end of the practice. So, everybody would come in, we would spend a few moments discussing everything and then

we'd have our team chain. So, we always had a reflection time, a short reflection time under five minutes at the end of practice to go over everything we learned so that it wasn't just like lost information. I said, their parents ask, what did you learn today? Like, Oh, well, we were focusing on attacking and this is what we did.

C8 shared an idea for monitoring the athletes' progress and reflecting their own performance. That is, he attempted to quantify athletes' soccer skills and performance by relying on resources. This strategy was recommended on a book of a soccer coach, and he was still trying to adapt the methods to his coaching. He believed that the quantified data of their soccer skills also helped his athletes to look back their performance and monitor their progress easily:

And so, each player knows where they are on in the hierarchy. Um, and they do a fantastic job at that and, and they quantify each of these skills that the players are supposed to have. And that's hard to do for a, um, volunteer coach, you know what I mean? And so, I've started trying to figure out how to do that in practices. Um, the really good coach, there's another really good coach who was coaching for the reds, who had been doing that for a while. And he said, it's a really good technique if you can quantify each player and where they are, um, that it helps them to understand, to monitor their progress. Uh, I just haven't been able to implement that yet, other than, um, in their timed mile runs, you know, and, um, and the number of juggles they were able to do and, um, sort of, I would rank them on their skills for these certain ball skills from a scale of one to five. And so, I started doing it kind of, I just wasn't able to share it with them. Um, but the ones that I shared their mild times with, um, it definitely was motivational big time. Um, they were able to see the progress and that's, that's huge. Um, so trying to quantify that I think was, was, um, for them to be able to see the progress. I mean, I can kind of feel that

they're becoming a better player, um, but to actually see it quantified is, is a big difference. And see progress over the course of the season.

Life lessons from soccer practice. Five coaches attempted to take advantage of failures or mistakes in soccer to instill life lessons for their athletes. They believed that these learning opportunities were beneficial for athletes to develop life skills by which young people manage conflicts and difficulties in their life. They expected their athletes learn not only soccer skills but also any other life lessons in the soccer practice. C4 believed that learning lessons from soccer was applicable to controlling their behaviors and emotions in their lives, as the athletes may not be reactive when negative life events occurred:

The, the value, the value of self-regulation? Mmm. I think self-regulation is still important because, um, beyond, um, soccer, you're going to need to be able to deal with your emotions and you know, the influences of people around you as an adult, as a student, uh, I think, I always say the lessons you learned on the soccer field, they apply to your life. Uh, and so the way you react to a tackle, you know, Mmm. In life, that may be the way that you react to an insult from somebody, or the way that you react to a negative comment on a test from the teacher, or the way that you react to a rejection during a job interview, you know, the application soccer, maybe the way you react to a tackle, the way you react to going a goal down. Um, and so I think that learning the ways of Mmm control and strength and confidence and, um, and, uh, emotional balance and the width that applies elsewhere is really valuable. Mm.

C1 emphasized sportsmanship while his athletes were skeptical with referees' judgement in a soccer match. He also expected his athletes to respect a match whether they performed well or

performed poorly. To create a learning opportunity for sportsmanship, he let his athletes discuss how they behaved at the end of the match:

Yeah. There was one, one game where, um, I had told my team the same things. I always say, "Just say good game." And it had, uh, it had been a tough game that, uh, we, we lost it. And then there were some questionable calls by the referee. And, uh, a lot of our players are really upset. And, um, afterwards instead of, you know, following my instructions, they went down the line, shaking hands and sort of saying good game that are saying bad game, or, you know, you're horrible, you know, this things like that exhibiting poor sportsmanship. And so, we, we circled up afterwards just to talk about the game and then we specifically addressed what happened when we were, yeah.

Shaking hands at the end of the game.

C8 shared an experience where he specifically taught athletes to overcome a challenge and how the athlete overcame and applied what she learned from this experience. At the bench in a match, he created an opportunity to instruct a simple and specific thing his athletes needed to do. As a result, the athletes took advantage of the coach's direct instruction and performed better after she returned the game and in subsequent matches:

Um, well, I know there was one moment. Um, and this was before I really knew that much about coaching. It was back when I was coaching at ... and I had one player who, uh, just seemed to be unmotivated during a game. And so, um, and couldn't really figure out how she was supposed to be playing her position as an outside winger outside midfield. And so, um, I, I realized that I need to give her very specific and simple instructions and I needed to try and motivate her to, to get out there and, and put a little effort in. So pull her out of the game, had her sit for a little bit and then talk to her about how we really

needed her. Her whole team needed her to, um, to step up because it, you know, you can't just sit back, it's a team sport. You can't just sit back and wait for somebody else to pick up the slack. It's gotta be you. That does it. And what I told her is what I want you to have a very simple job for you. All you have to do is just position yourself, um, down by the, um, the six yard or the six boxes, you know, down in the, sort of the, um, in the 18 yard ish area gave her sort of a specific spot to be so that when somebody takes a shot, she'll be right there to clean it up, is what I said. You know, it's basically like get the rebound. And that happened. I put her back in that exact same thing happened. She was down there, and she scored a goal, you know, and she, she was just like elated and it totally changed her demeanor, uh, for the rest of the game. And really the rest of the season. She kind of, it really lit a light ball, you know, turn light ball on for her. And so, um, she went from being kind of disinterested in soccer to being really into soccer and, and, um, trying out for the high school team. Uh, she made the high school team last year as a freshman. And, um, she tried out and made the high school team again this year as a sophomore. So, it's just kinda cool.

C6, who also coached basketball, shared a story where he explained the importance of keeping the playing area clean. Because they left garbage on the floor, the coach canceled the practice and urged them to clean the gym. He believed that manners were more important than practicing sports. Similarly, he also taught the importance of dedication and respect for the practice facility to his soccer team:

The same thing that happened on our soccer team, I would have done the same thing. Cause sometimes, you know, it's bigger than it's bigger than the sport. And that ended up being a good lesson. And actually, I think I got a lot of compliments from the parents on

that because we, we did an ad, it was an hour or an hour and a half of school service and, um, you know, school beautification, they, they liked that the parents liked that.

That's what we did, and the kids didn't feel punished. They, but they, I think they got the point.

Overall, findings of *Approaching players* indicated that the coaches in the current study applied direct teaching approach in order to develop athletes' self-regulation. As they reported the use of extrinsic approach to the middle school athletes, the coaches mainly relied on specific suggestions and advice to point out tasks on which the athletes needed to focus. On the other hand, C8 attempted to use the athlete-centered approach that encouraged his athletes to decide drills for improving their weaknesses or reinforcing their strengths, yet it was not successful. This finding may stretch an idea that the coaches were interested in athlete-centered approach; however, they were uncertain to shift the current coaching style to athlete-centered approach including indirect learning approaches. As a result, the coaches directly taught specific knowledge that may be a comfortable approach for them.

Findings of *Instructional strategies* indicated that the coaches in the current study employed reflection through group discussions initiated by the coaches while they applied modeling for practicing new soccer skills. It was estimated that coaches believed these learning strategies facilitated them to overcome tasks to achieve their goals. The findings indicated the coaches and skilled athletes become a model who demonstrated successful performance of the new soccer skills. In addition, the findings demonstrated the usefulness of informal reflection, reflection by conversation and discussion with others. That is, coaches mainly relied on informal reflection while the effects of formal reflection, reflection on the journal were reported (Tan, Koh, & Kokkonen, 2016). Even though the coaches expected athletes to initiate reflective

discussion without coaches, the coaches assumed the necessity of coach's facilitation in the reflective discussion.

CHAPTER FIVE DISCUSSIONS

In this chapter, the researcher discussed and interpreted the findings of this study. The current study examined seven youth volunteer soccer coaches' understanding of self-regulation in regard to their athletes. In addition, the analysis identified the strategies they used in their soccer practices. Findings were further understood by analyzing them through the lens of Zimmerman's self-regulation theory (Zimmerman, 2013), his theory of self-regulated learning (Zimmerman, 2002), and the related body of extant research.

Research Question One

Regarding the first research question, three remarkable ideas of general understanding of the youth athletes' self-regulation emerged. First, *active engagement in sport* (theme one) explained the effects of coaches' extrinsic approach to the athletes in order to develop their self-regulation. Second, *contribution to others* (theme two) indicated that athletes who helped others were self-regulated because these behaviors required successful behavioral and emotional control. Third, the coaches reported athletes' preparation for the practice, athlete-oriented problem solving, and extra hard work as self-regulated behaviors related to a theme, *Proactive behaviors for playing sport* (theme three).

Active Engagement in Sport

Active engagement in sport as a major theme emerged through the analysis. This theme indicated athletes' self-regulated behaviors associated with their motivation to play soccer and focus on the tasks of the practice. While they believed in the value of intrinsic motivation or enjoyment to play soccer for their athletes, they reported the use of extrinsic motivation to develop athletes' self-regulation. The coaches further observed the athletes who focused on the practice seemed to be self-regulated. These findings indicated that athletes who adequately

controlled their attention to tasks seemed to be motivated. This association between motivation and attention was discussed.

Focus on Drills during the Practice and Motivation

Active engagement in sport was described as athletes' motivation to play soccer and focus on the tasks in the soccer practice. The coaches explained the impact of intrinsic and extrinsic motivation on the athletes' ability to maintain appropriate levels of participation and engagement in the soccer practice. The coaches believed that self-regulated athletes seemed to be more motivated to play soccer. The coaches also reported the self-regulated behavior as athletes' focus on the tasks of the practice. Collectively, these coaches appeared to recognize the relationship among athletes' motivation, engagement, participation, and focus. Two of coaches in the current study described that self-regulated athletes were not distracted by teammates and other external factors, as C5 explained that if athletes lack self-regulation, *“they're not participating, maybe doing their own thing, not paying attention, maybe distracting other players.”*

Coaches perceptions aligned with extant self-regulation literature in important ways. While the coaches segregated motivation, focus, engagement, and participation from the act of self-regulation, they did identify these as related concepts. The coaches appear to separate self-regulation as an act, in and of itself, that manages the other aforementioned variables. However, theory (Zimmerman, 1998, 2000) and research (Jordalen, Lemyre, & Durand-Bush, 2020; Nurmi et al., 2016) have explained and supported with empirical evidence that motivation and focus fall within Zimmerman's (1998, 2000) forethought phase in which individuals set the stage for the more active self-regulation (Cleary & Zimmerman, 2004). Levels of intrinsic and extrinsic motivation impact one's ability to be and maintain focus, engagement, and active participation in

the performance phase of self-regulation (Cleary & Zimmerman, 2004; Laxdal et al., 2019; Zimmerman, 2000, 2013).

From the participants' perspectives, self-regulated athletes seemed to be motivated because they were focused on tasks or important ideas in a drill. The coaches further explained that athletes who engaged in the practice tended to pay attention to the idea of a drill to improve their soccer skills. That is, motivation played an important role to focus on tasks. The relationship between motivation and focus on tasks has been reported that Wolters (2004) described that a type of practice and a structure of goal setting differed the degree of motivation. In Wolters' study, performance-oriented goal setting and practice mediated goal achievement, whereas instructional practice weakened the motivation to practice. Furthermore, Zimmerman (2013) emphasized the process goal setting that focused on the learning process, and tasks to improve skills in order to sustain the learners' self-regulation cycle. The current study found the participants relied on team goals and reported the athletes' focus on the practice. It was estimated that their team goal might have been adequately specific for the players so that they could be focused on the tasks in the practice. These coaching behaviors and strategies were further interpreted in the implications for research question two. In summary, this finding is significant for coaching because observed athletes' behaviors may indicate an aspect of the athletes' self-regulation while the use of team goal setting facilitated team sports coaches to control their athletes' attention during the practice.

Contribution to Others

A major theme of *Contribution to others* described the relationship between leadership as self-regulated behavior and behavioral and emotional control of the athletes. In particular, athletes who demonstrated leadership regulated their emotions and behaviors. Previous research

studies reported the importance of emotional regulation that resulted in behavioral regulation (Balk et al., 2013; Bolgar et al., 2008). In terms of Zimmerman's self-regulation model (2013), emotional regulation played an important role in the performance phase because self-regulated athletes needed to execute strategies for achieving tasks and goals. Therefore, this theme described that leadership, including helping others, required athletes' emotional and behavioral control. As a result, teammates of the athletes demonstrating leadership were influenced by their behaviors. This indicated how athletes' leadership behaviors demonstrated their self-regulation in the practice.

Leadership as Self-Regulated Behavior

The participants described that self-regulated athletes tended to demonstrate leadership that required emotional and behavioral control. That is, leadership behaviors were outcomes of successful behavioral and emotional control of the athletes. For instance, C5 explained that when his team made a mistake, the leader regulated his emotions and encouraged himself and his teammates, telling them, "Okay, let's go." and "It's going to be fun." Another coach explained that strong players, self-regulated players, are those that can control their behaviors better avoiding fouls and avoiding disagreements with others; generally, he described self-regulated athletes as those that "do not get in trouble a lot" and as "team players". In turn, other players tend to be drawn to this positivity and self-control, and as a result, other players were described as tending to "*look up to them on the team and tend to follow them a bit more*".

Again, the coaches captured important components of self-regulation found in the theoretical and empirical literature. Emotional and behavioral control are hallmarks of the performance phase of self-regulation (Zimmerman, 1998, 2000). In the performance phase of the Zimmerman's model (2000), athletes required controlling their emotions to execute strategies for

achieving goals and overcome tasks. To control their emotions, cognition control such as self-consequence (Zimmerman, 2013) was recommended in the performance phase while Gross interpreted appraisal control to control emotions (Gross, 2015). Self-consequence refers to the change of cognition such as controlling self-rewarding (Labuhn, Zimmerman, & Hasselhorn, 2010). In the sports context, for example, athlete who perceived unexpected referring as a negative event may use appraisal control by perceiving the negative referring into a lesson to improve next performance. Based on the coaches' reports, they might have observed the athletes who controlled their perceptions and directly taught how to perceive negative events, as C1 mentioned "*just say good game*" instead of arguing the referring.

Sport research also has highlighted the importance of these self-regulator behaviors in athletes that play leadership roles for their teams (Larson et al., 2006). According to Larson and colleagues (2006), youth sports players who demonstrated leadership showed emotional regulation in group activities and sports. This research supported what coaches in the current study reported athletes showing leadership successfully controlled their behaviors and emotions. In Larson and colleagues' study, these self-regulated behaviors were developed by engaging in group and sports activities. This interpretation triggered a question, how did the self-regulated athletes develop their emotional and behavioral control in group and sports activities? It was possible to estimate that the athletes of the coaches in the current study developed emotional and behavioral regulation required for leadership in soccer practice. However, it is still uncertain what specifically impacted them to develop emotional and behavioral regulation as their self-regulated behaviors. Because the current research study did not investigate specific factors that affected the coaches' athletes to require emotional and behavioral control for leadership, future researchers should examine these factors, how they develop, and how they may be encouraged.

Therefore, athletes' demonstration of leadership as self-regulated behavior was important, as the sports coaches could consider whether their athletes are self-regulated based on this behavior.

This finding may contribute coaches to evaluate an aspect of the athletes' self-regulation.

Proactive Behaviors for Playing Sport

In addition to emotional control, behavioral control, and leadership, coaches discussed self-regulated players' as engaging in proactive behaviors. *Proactive behaviors for playing sport*, as a code, captured coaches' observations of their athletes' self-regulated behaviors associated with preparation for practice, player-oriented problem solving, and hard work were outcomes of athletes' self-regulation. The coaches in the current study believed these behaviors indicated athletes' proactive behaviors that resulted in self-regulation.

With regard to Zimmerman's (1998, 2000) model, what the participating coaches described fit within the forethought and performance phase of self-regulation. Notably, preparation for practice aligns with the forethought phase of self-regulation wherein the athlete's set the stage, or in this case the field, for an effective and successful practice (Bartulovic et al., 2017; Cleary & Zimmerman, 2004). Addressing challenges, obstacles, and problems and working hard reflect the motivated performance phase behavior of effort regulation (Pajares, 2008; Zimmerman, 1998, 2000).

The findings of this major theme were related to athletes' proactivity pertaining to soccer and engagement in extra activities in addition to the weekly practice. Notably, these behaviors were described as self-regulated because athletes' actions without any coaches' assistance. For example, C5 provided discussed effort regulation as being a self-regulated behavior that successful players engaged in, even outside of practice, noting that self-regulated athletes, "put for some of their own effort outside of practice on your own time." According to theory and

research (Pelletier et al., 2001; Zimmerman, 2013), effort regulation is a performance phase behavior that requires targeted motivation.

In Zimmerman's (1998, 2000) self-regulation model's forethought phase, learners determine interest and value levels for tasks, which serve as motivational sources that fuel and maintain the full self-regulatory cycle (Zimmerman, 2013). This applies to the sport setting, because athletes, as learners, must hold sufficient levels of task interest and values to sustain the three phase self-regulatory cycle. In terms of intrinsic motivation, athletes who were intrinsically motivated proactively engaged in practice tasks and additional, outside-of-practice activities without any coaches' suggestions or instructions (Pelletier et al., 2001). Jordalen and colleagues (2020) emphasized that intrinsic motivation played an important role in elite athletes' effort regulation and other performance phase regulatory behaviors. The current findings and the described theoretical and empirical literature strongly indicated that athletes who proactively engaged in extra activities demonstrated effective levels of motivation to sustain effort regulation and other aspects of successful self-regulation in athletes. Researchers have reported that by identify self-regulatory tasks important tasks

Summary of Research Question One

Overall, the findings of the first research question added to our existing understanding of athlete self-regulation by capturing this sample of coaches' perspectives on the topic. That is, findings of *Active engagement in sport* described how motivation encouraged focus and focus served as an indicator of motivation in athletes during soccer practice. If coaches were given a tool, such as a rubric, to help them evaluate athletes' motivation, task interest and values, knowledge of team goals, etc., coaches may be better equipped to identify and develop self-regulatory characteristics (e.g., intrinsic motivation) and behaviors (e.g., emotion, behavior, and

effort regulation) in their players. This would serve as an area for future research. For example, researchers could evaluate the types and specificity of the goals set by coaches, athletes' awareness of these goals, valuation of these goals, and interest in these goals and how that affects the phases of the self-regulatory cycle.

Additionally, the subtheme *Contribution to others* described coaches' perceptions that players' leadership behaviors were directly correlated to their emotional and behavior control abilities. Thus, it may be important to help coaches identify and develop emotion and behavior control abilities in their players. Players who already possess these skills may serve as effective models for those athletes still needing to learn those performance phase skills. Additionally, coaches could employ strategies like mindfulness practices with their athletes (Josefsson et al., 2019) to help them acquire these self-control skills. While these practical implications may be suggested, future research will need to assess the efficacy of these strategies for coaches and their players. Regardless of the necessity of further research, this finding contributed to our understanding of what coaches perceive as important aspects of their athletes' self-regulatory abilities.

Furthermore, the subtheme of *Proactive behaviors for playing sport* reflected coaches' point of view that proactive behaviors reflected aspects of player self-regulation. Notably, players who engaged in additional, outside of practice activities that boosted their soccer performance were perceived as more motivated and self-regulated by their coaches. Coaches recognition of this research-supported aspect of self-regulation, highlighted the importance of developing a better understanding how coaches can support athlete motivation and engagement in sport-supportive activities outside of practice. While there is a need for this and related research, the current finding added to our understanding of self-regulation in athletes by

explicating that these soccer coaches perceived athletes' motivation and their proactive engagement in additional, outside of team training activities as key to self-regulation. In the discussion of research question two's findings, the researcher discusses strategies used by the volunteer soccer coaches to promote player self-regulation.

Research Question Two

Regarding the second research question, four remarkable ideas related to SRL strategies emerged. First, *Organization of practice environment* interpreted how the coaches arranged the practice environment. By relying on setting team goals or agendas for a season, using positive feedback, analyzing drills to improve at the next practice, and encouraging athlete-oriented discussions, the participants attempted to improve the practice environment so that athletes gained positive learning experiences. Second, *Motivational strategies* indicating strategies related to building positive relationships with their athletes and goal setting were described. Third, using role models of the athletes or coaches and holding discussions to look back on the athletes' performances along with the coaches were explained with *Learning strategies*. In addition, transferring as a learning strategy was taught to athletes when they had a lesson in the soccer practice. The aforementioned themes were discussed in the following sections.

Organization of the Practice Environment

In addition to teaching players to connect life lessons and soccer lessons, coaches also reported using organization to promote athletes' self-regulation. *Organization of the practice environment* reflected the emphasis participating coaches placed on how they purposefully arranged practice environments by specifying drill tasks, providing opportunities for athlete-oriented problem solving, and creating a positive atmosphere. According to Zimmerman's SRL cycle (2013), these coaching strategies may encourage athletes to practice self-instruction and

attention control. By creating a positive atmosphere, coaches created an environment conducive to motivating their players (Laxdal et al., 2019).

Making Practice Purposeful

First, *Making practice purposeful* demonstrated that coaches applied goal setting strategies to clarify the purpose of drills. In addition, coaches carefully implemented goal setting into their practices to help motivate their athletes and to help them focus on practice tasks. The coaches reported utilizing individual goals, team goals, or team expectations to drive purposeful on task self-regulation and keep athletes focused. For instance, C8 described using outcome goal and process goals. Outcome goals specify what the athlete or team want to ultimately achieve. Process goals capture the specific actions needed to achieve the outcome goals.

The coach guided his players in making outcome and process goals. For example, he had them write a goal on an index card and had them evaluate their progress mid-season. He not only had them create an outcome goal (e.g., juggle the ball 15 times), but also had them explain precisely how they were “going to achieve it.” He noted that he “made them be specific” and assisted in making sure the goals were “realistic.” Research supports that setting specific and realistic goals, those that are not too easy or too hard, promote more successful self-regulation and improved outcomes (Kistantas & Zimmerman, 1998)

Goal setting is a key component of successful self-regulation and falls within the forethought phase (Zimmerman, 1998, 2000) of the self-regulatory cycle. In this case, the coaches and their athletes were setting specific and realistic goals for the individual players and for the team (forethought phase) that were intended to guide athletes’ behaviors (performance phase), with the ultimate aim of growing as individuals and succeeding as a team. Additionally, one coach reported reviewing progress toward goals, which is also an important performance

phase strategy that is associated with more desirable outcomes (Zimmerman, 1998, 2000). In the sports psychology literature, Kingston and Wilson (2008) explained that goal setting facilitated sports players to guide and change their attention to an appropriate task or a target, i.e., to engage in the performance phase of self-regulation. The extant research supports that these coaches' assumptions that their engagement in goal setting with their players would yield stronger self-regulatory behaviors (e.g., focused attention and time on task) and outcomes may be correct. However, further research is needed to determine how coaches may best engage in these practices to yield optimal outcomes for individual players and for their teams. It is important to note that a review of the effectiveness of goals and their related behaviors after the related outcome was not discussed by coaches. These behaviors fall within the reflection phase of self-regulation and can improve future goal setting and performance phase regulatory behaviors (Bartulovic et al., 2018; Zimmerman, 2013). Thus, future researchers may wish to specifically assess the presence or absence of these behaviors in youth coaching, strategies for helping coaches engage in these activities successfully, and the impact of such actions on players and team outcomes.

Creating Positive and Effective Practice Environment

While the coaches relied on goal setting to make practice purposeful, they applied other strategies to create a positive practice environment. *Creating positive and effective practice environment* indicated how the coaches further applied positive feedback and encouragement to create positive learning environment. They actively encouraged athletes who tried difficult skills to overcome by positive encouragement, as C5 encouraged a novice player to keep trying a difficult drill. Similarly, positive feedback was used by C4 that he praised good performance and keep working on tasks in the practice. In order to sustain the self-regulation cycle (Zimmerman,

2013), how learners managed motivation was important. For instance, Laxdal and colleagues (2019) investigated how motivational climate influenced on physical education classroom. By teachers' support, such as emphasizing enjoyment and giving positive feedback, students perceived positive atmosphere in the classroom. As a result, the students' self-regulatory skills were promoted because engagement in physical education class increased. Similar findings were observed in a college biology classroom where positive atmosphere was created Corkin and colleagues (2017) investigated students' perceptions of motivational climate in the biology classroom and self-efficacy. They reported that students who perceived supportive learning environment also perceived self-efficacy. However, there were few studies that specifically investigated the relationship motivational climate and athletes' self-regulation skills. Findings of *Creating Positive and Effective Practice Environment* found positive feedback and encouragement to athletes that may increase the perception of positive learning atmosphere. Even though there were few studies that reported the effects of motivational climate to athletes, self-regulation, it is yet possible to stretch to the sport settings that positive approaches from coaches may create motivational climate that facilitates athletes to sustain self-regulation cycle or develop self-regulatory skills. Further research is needed to investigate the relationship between motivational climate and athletes' self-regulation.

Player-Oriented Problem Solving

A subtheme, *Player-oriented problem solving* indicated that the coaches of the current study applied athlete-oriented practice as a part of the practice session. In this study, athlete-oriented problem-solving involved athlete-oriented practice referring to the practice that was initiated by athletes, and athletes decided drills by their own purpose. Coaches believed the structure of their practices were an integral part of the practice environment. Thus, the coaches'

comments suggested they believed their practice structure arrangement increased their players' self-regulation during practice. For instance, C7 explained that he will develop and practice skills with athletes, and then, he allows the athletes to lead and complete the drills independently while coaches minimally stepped in to provide assistance. He emphasized that these drills were ones he knew the athletes were well versed in and prepared to engage in, stating they “know how to do it.”

Without these coaches' explicit instructions, athletes had to engage in self-instruction in order to develop their soccer skills. Self-instruction or self-directed learning falls within the performance phase of Zimmerman's self-regulation model (2013). Self-directed learning in the sport setting has been defined as learning initiated by an athlete engaged with learning materials and additional resources (Turan & Koç, 2018). Turan and Koç's (2018) found that college students enrolled in a physical education class and engaged in self-directed learning developed a stronger sense of self-efficacy and improved cognitive skills. The implication being that through purposeful design coaches may engage athletes in self-directed learning, which will facilitate the development of other cognitive skills during the performance phase and improve self-efficacy in subsequent self-regulatory cycles. The coaches ascertained through their coaching experience facilitating player engagement self-directed learning promoted the development of their self-regulatory abilities. Turan and Koç's (2018) work support this assumption made by this study's participants. Future research is needed to further validate this assumption and to determine how athlete-led practice or self-directed sport learning influences athletes' motivation to practice and their acquisition and development of new skills.

Motivational Strategies

In addition to using goal setting to direct player self-regulation and promote growth and desirable outcomes, coaches reported using goal setting to improve their athletes' motivation to play soccer. This was captured by the *Motivational strategies* theme, which indicated how the coaches in the current study applied team goal setting to improve athletes' motivation.

Furthermore, a subtheme, *Building relationship with players*, describing connectedness created by team goals was also described as a part of motivational aspect in the *Team goal setting to promote athlete's motivation*. The findings of research question one demonstrated that team goal setting helped athletes guide attention. In addition, the findings in *Motivational strategies* further indicated that coaches mainly used outcome goals that likely extrinsically motivated the athletes while they emphasized the achievement of the goals; as a result, their athletes were extrinsically motivated. In this section, goal setting for motivating athletes was discussed.

Team Goal Setting to Promote Athlete's Motivation

In addition to the effects of attentional control by goal setting, *Motivational strategies to promote athlete's motivation* also indicated that coaches applied goal setting in order to extrinsically motivate their athletes. As C8 explained that his athletes “*write down a goal and then write down how they were going to achieve that goal*” such as juggling the ball 15 times in a row, athletes' achievements were stressed by goals. Furthermore, the coaches expected them to closely connect each other by sharing the season-long team goal, as C7 “*revisited [team goals] throughout the season to make sure we were all still on the same page*”. Research indicates team goal setting may increase team cohesion (Senécal et al., 2008) and athletes' commitment (Aubé & Rousseau, 2005). Senécal and colleagues (2008) revealed that long-term team goals enabled team members to strongly perceive team cohesion by intervening with systematic team goal

setting strategies. In particular, the team members came to a consensus regarding the performance level they aimed for and shared individual goals that may contribute to achieving the team goals. As a result of these goal setting activities, the athletes' perception of team tasks and team atmosphere improved. As the study of Senécal and colleagues indicated, the season team goal found in the current study contributed to the coaches' athletes to increase team cohesion; as a result, the athletes were motivated to participate in the soccer practice.

Furthermore, in C7's quote above, she discussed team goals and the importance of making a consensus with the team goals. Regarding athletes' commitment to team goals, Aubé and Rousseau (2005) reported that the high degree of team commitment mediated the high supportive behaviors and high team performance including acceptance of change, problem solving, inclusiveness of new members, and continuous cooperation with teammates. In addition, high team commitment was also associated with a high impact on interpersonal relationships. In other words, members of the team demonstrating strong commitment to the team goals actively interact with and support each other. In summary, the findings of *Motivational strategies* demonstrated how the coaches used the team goal setting strategies that were aimed to extrinsically motivate them by stressing achievement of outcome goals and connect athletes by sharing and committing the same team goals. Synthesizing the aforementioned discussions, in terms of goal setting and motivation, goal setting strategies applied by coaches in the current research study were supported by the previous research studies.

Instructional Strategies

In addition to *Organization of the practice environment* and *Motivational Strategies*, coaching strategies associated with instructional strategies for the athletes was explained with the *Instructional strategies* theme. Specifically, this theme reflected that the coaches applied

instructional strategies for developing their athletes' self-regulation. Particular strategies the coaches used were indicated by subthemes: *Using role models*, *informal reflection with the coach*, and *Life lessons from soccer practice*. For *Using role models*, the coaches relied on role models who demonstrated new soccer skills while they facilitated group discussions for performance reflection. Furthermore, the coaches taught how to transfer lessons in the soccer practice to the athletes' lives.

Using Role Models

As one of the learning strategies emerging from the *Instructional strategies* was *Using role models*. In the findings of *Using role models*, the coaches reported using modeling to help athletes develop and improve skills. Coaches reported requesting their more skilled athletes to demonstrate new skills. For example, one coach encouraged his son, one of his players, to watch a new, more skilled player. This not only motivated the son to improve, but he had a peer from whom to learn how to improve. Coaches reported that they also sometimes demonstrated body movements for learning new soccer skills. For instance, C4 demonstrated how to trap the ball for a player who struggled with this skill. He not only physically modeled the skill but provided an explanation of his thought processes utilized in doing this skill. Modeling these skills and cognitive processes helps the player consciously learn new behaviors manifested in the performance phase (Farsi et al., 2016; Laxdal et al., 2019), but it also helps the player learn on a subconscious level (Goudas et al., 2017). Learning effects of observing the model was discussed that participants who observed point-light model on the computer screen captured ideas to improve the start of the short track springing (Lhuisset & Margnes, 2015). Brain imaging research has revealed that modeling also works on the subconscious level via mirror neurons (Hardwick et al., 2018). These studies supported what the coaches reported believing, that coach-

modeling and peer-modeling helped athletes develop new soccer skills. Coaches reported leveraging other instructional strategies to enhance soccer skill learning.

Informal Reflection with the Coach

In addition to the use of modeling, the coaches applied on informal reflection to enhance learning experiences in the soccer practice. For example, they relied upon group discussions in which coaches and their athletes reflected on the teams' and player's performance in practices and matches. The coaches reported primarily initiating group discussions in order to identify tasks that may help improve players' soccer skills. They noted doing this even when athletes' performance was great. The coaches encouraged players to lead discussions, but when athletes were uncertain about issues that decreased their performance the coaches helped facilitate the group reflection discussions. Also, if disagreements arose, coaches would facilitate a return to productive discussions by using directive statements and questioning techniques. For example, C4 shared that when they watch team film, he may state, "okay, here's who you pass it to" followed by "What do you think would have been a better decision?"

The reflective phase is an important part of effective and successful self-regulation (Koh et al., 2017; Zimmerman, 2013); thus, coaches' efforts were well placed in the facilitation their players' engagement in reflective thinking. Self-reflection can be used as a strategy of self-evaluation or self-consequence by which individuals recall their performance and explore tasks to improve their performance (Zimmerman, 2013). The coaches in the current study held informal reflections with their athletes to facilitate their self-evaluation of their performance. That is, they discussed with their athletes the need to recall previous performances and expected them to reflect on their own performance without coaches. C7 encouraged her athletes to initiate peer discussions at half time in a match. After the discussion, the coach initiated the group

discussion in order to ensure the direction of their reflection. When the coach needed to add some important ideas that were absent in their discussions, she described the ideas that were missing. Shoffner (2008) described informal reflection as a flexible style of self-reflection for learners, and Knowles and colleagues (2006) discussed merits of informal reflection on pre-service sport coaches. Young and colleagues (2009) stressed that self-monitoring played an important role in athletic development, as self-monitoring skills mediated consistency in the practice participation. Similarly, Jonker and colleagues (2012) emphasized that athletes who constantly engaged in reflective practice promoted their performance level. They reported reflection of athletic performance further developed sport skills; as a result, athletes who practiced reflection reached higher competitive level. In order to facilitate learners to systematically reflect performance, Fraile and colleagues (2017) investigated the effects of systematic reflection with rubrics. In their study, the participants who looked back performances with the rubrics improved their cognitive skills. Even though further investigation to the reflection rubrics was needed, rubrics may help athletes who rarely experienced reflection to be familiar with reflective practice. The body of research regarding self-regulation supports its value in the self-regulatory cycle, but coaches reported use of these strategies provide context and highlight the value this sample of coaches put on the reflective process.

Life Lessons from Soccer Practice

Another instructional strategy found in the *Instructional strategies* was teaching life lessons from the soccer practice. The coaches taught life lessons that athletes gained in the soccer practice. As transferring knowledge was included in SRL strategies (Zimmerman, 2013), this coaching behavior might indicate how coaches facilitated their athletes to transfer life lessons in the soccer practice to their lives. In alignment with this subtheme, coaches reported that they

helped their athletes connect lessons learned in soccer practice to life and encouraged them to transfer those lessons in their daily lives. For instance, C4 explained that self-regulation in soccer applied to life as the players will “need to be able to deal with [...] emotions [...], the influences of people around them [...] as an adult, as a student”. The coach further explained that he purposely connected these ideas for players, reminding them, “the lessons you learned on the soccer field, they apply to your life.”

Zimmerman (2000, 2013) explained that transfer is a cognitive strategy by which extrapolate and adapt information learned in one context to another in order to expand and improve skills and knowledge. Sport psychologists’ research findings support that this strategy is important for athletes (Gould & Carson, 2008; Jacobs & Wright, 2018). Gould and Carson (2008) emphasized that athletes’ ability to transfer lessons between the two arenas of sports and everyday life improved youth athletes’ performance. Jacobs and Wright (2018) explained that athletes who transferred life skills gained in sports-based activities promoted their cognitive skills using for their lives. They proposed that sports content and life skills shared a reciprocal relationship and that direct instruction from coaches supported the transference between life skills and sports experiences. In addition, transferring cognitive skills used in the sport activities also improved the cognitive used in outside sports such as school. The coach’s belief that it was important for them to help their athlete’s connect life and soccer lessons to encourage self-regulation on and off the field aligns with this research. It also extends our understanding by highlighting the connection this sample of coaches made between their role as direct instructor in developing this self-regulatory skill in their athletes. Future researchers may wish to examine how coaches may best facilitate the development of this cognitive ability in their athletes, as well as the effect of such instruction for players both on and off the field.

Summary of Research Question Two

In summary, the findings of research question two indicated coaching strategies applied by the coaches in the current research study to develop athletes' self-regulation. These findings further developed the understanding of coaching strategies related to athletes' self-regulation. First, *Organization of the practice environment* indicated how coaches designed the practice by using some strategies. A subtheme *Making practice purposeful* demonstrated the use of goal setting to specify tasks of the practice. The coaches in the current study mainly used team goals that enabled athletes to pay attention specific tasks. Findings of the *Creating positive and effective practice environment* indicated how coaches applied positive feedback and encouragement to their athletes. Previous research studies supported that these strategies may develop motivational climate in which athletes were motivated so that they were encouraged to use SRL strategies (Laxdal et al., 2019; Morgan, 2017). Furthermore, Findings of *Player-oriented problem-solving* demonstrated that coaches relied on player-oriented practice sessions. This strategy was expected athletes to practice self-instruction during the player-oriented practice. Because Zimmerman's self-regulation cycle (2013) stressed the use of self-instruction in the performance phase, this coaching strategy may facilitate them develop self-instruction skills.

In addition to *Organization of the practice environment*, findings of *Motivational strategies* added further understanding of coaching strategies for athletes' self-regulation development. Specifically, the coaches applied team goal setting that was estimated to improve athletes' motivation to practice. Because team goal setting that coaches used in the practice seemed to stress achievement and performance outcomes, these team goal setting may enhance athletes' extrinsic motivation. Another aspect of the team goal was that coaches expected athletes

to connect by sharing the same team goal and making commitment to the team goals. As previous research studies supported these effects of team goal settings (Aubé & Rousseau, 2005; Senécal et al., 2008), the team goal settings the coaches used may developed athletes' motivation to the practice and self-regulation.

Furthermore, *Instructional strategies* indicated coaches' instructional strategies to teach learning strategies that may develop athletes' self-regulatory skills. First, the participants in the current study applied modeling for learning soccer skills and group reflective discussions for developing the athletes' soccer skills. As modeling was widely supported its effects (Farsi et al., 2016; Hardwick et al., 2018; Raaijmakers et al., 2018), the modeling the coaches used in the practice was estimated similar positive influences on the athletes' skill development. Second, the coaches applied performance reflection in group discussions. That is, they recalled their previous performance while discussing with teammates and the coach. In the discussion, positive effects of reflection to athletic performance were demonstrated (Faull & Cropley, 2009; Koh et al., 2017; Tan et al., 2016). In addition, sports coaches could use systematic strategy for reflection such as reflection with rubrics (Fraile et al., 2017). Lastly, coaches taught lessons in the soccer practice transferring to their lives. Transferring was one of the SRL strategies emphasized in the performance phase in Zimmerman's self-regulation model (2013). Through teaching direct lessons in soccer practice, the coaches expected them to learn better ideas to apply to their lives.

CHAPTER SIX IMPLICATIONS AND CONCLUSION

In this section, the researcher presented the implications for the findings for both research question one and research question two. In particular, the researcher described how the findings of these research questions contributed to the knowledge of coaching and self-regulation in sports, and the contribution via pathways to potential future research that further expands our understanding of coaching and athletes' self-regulation. For research question one, themes among coaches' responses emerged related to their observations of athletes' self-regulated behaviors. These themes related to coaches' perceptions of player self-regulation were interpreted via Zimmerman's (1998, 2000, 2013) model of self-regulation. The findings revealed how coaches understood self-regulation, how it affected player performance, and why it is important. For research question two, themes emerged related to the strategies that coaches used that related to athlete self-regulation. These coaching strategies were also interpreted through the lens of Zimmerman's (1998, 2000, 2013) work. These findings detailed coaches self-identified and self-described coaching behaviors in terms of how they designed practice and sought to facilitate player and team development.

Research Question One

Findings related to research question one revealed patterns in coaches' understanding of player self-regulation. A number of meaningful patterns arose, which have implications for future research and coaching practice. For example, this emerging understanding of how coaches perceive athletes' self-regulation and its importance to team and player success may be used to contribute to the development of evaluative criteria for middle school sport players' self-regulated behaviors. The development of such a tool could be used to prepare coaches to assess players' self-regulatory strengths and weaknesses in order to develop interventions for those

characteristics that need improvement. Such a tool would need to be validated in the research and interventions would need to be developed and studied in order to develop an evidence-based set of protocols for coaches to use to improve athlete self-regulation. Further research would need to evaluate the impact of any increases in athlete self-regulation on individual player and team performance, as well as any transference of these skills to academic or psychosocial settings and any resultant benefits of that transference.

Because this study was limited to a small convenience sample of Mid Southern volunteer coaches of middle school soccer teams, the findings cannot be generalized beyond this sample/ Thus, future researchers should collect further data on this subject with more volunteer coaches and non-volunteer coaches (e.g., teacher coaches) from a variety of locations, different player age groups, different types of sports, and varying athlete skill levels, ranging from inexperienced youth teams to more highly skilled school teams to professional teams. Additionally, the current research addressed athletes' self-regulated behaviors from only the coaches' perspectives.

Therefore, future researchers should collect observational data of athlete self-regulatory behaviors, interview athletes about their perceptions of their self-regulation and its impact on sport performance, and quantitative data should also be collected. At this time, no measure of athletic self-regulation was found in the literature. There are measures related to academic self-regulation such as Pintrich et al.'s (1993) Motivated Strategies for Learning Questionnaire that could be used as a model for the development of a sport self-regulation inventory. Additionally, the current findings related to coaches' perceptions of athlete self-regulation partnered with future research on athlete's perceptions of self-regulation in sport could be used to help develop and to validate such a measure. Furthermore, future researchers could further emulate educational research conducted by Spruce and Bol's (2014). Spruce and Bol collected data in the

form of observation notes of students' self-regulated behaviors and conducted semi-structured interviews with students' teachers.

Throughout the discussions, the sports coaches could apply some findings in the research question one. First and foremost, it is beneficial for youth sports coaches to use goal setting strategies that include multiple purposes. For instance, by team goal setting, the coaches adequately lead athletes' attention to tasks of the practice. At the beginning of the practice, the coach and athletes discuss about the team goals and how these team goals integrate into the drills. Second, cognitive change strategies such as appraisal control or self-consequence may help the coaches teach emotional control to their athletes. For instance, they could ask how to change a negative event to a learning opportunity. If athletes were not sure, the coach would give some examples of how to think of the negative event. By this learning experience, the athletes may notice their negative thoughts when they faced similar situations. Another application created by the findings of research question one is to hold athlete-oriented practice sessions that were expected to develop self-instructional skills. It is estimated that athletes who developed self-instructional skills may develop athletic skills to promote their performance level. Note that these recommendations were theoretically explained. In order to confirm their effects, further research studies are needed to investigate the effects of the strategies.

In summary, the findings of research question one provided some insight into coaches' perspectives on athletes' self-regulated behaviors, but there is a great deal left for researchers and coaches to learn on this topic. A number of avenues for coaching practice and research in this area were presented. To conclude, while the dearth of research and the current findings suggest a bastion of research opportunities, the current findings do suggest that coaches perceive athlete self-regulation is important to success in sports.

Research Question Two

Research question two findings suggested that coaches applied strategies that likely increased their athletes' self-regulated behaviors. These behaviors were supported in terms of Zimmerman's self-regulation model and SRL strategies (2013) and the reviewed, related research. The coaching strategies may apply to design the practice environment to develop athletes' self-regulation. Specifically, they may design the practice by using team goal settings, positive feedback and encouragement, teaching how athletes use role models, informal reflections, and transferring lessons in the soccer practice to their lives.

Designing Practice Environment to Encourage Athletes to Practice SLR Strategies

Findings of research question two mainly indicated coaching strategies for developing athletes' self-regulatory skills. These findings may contribute youth sports coaches to design practice environment in which athletes were encouraged to practice SRL skills so that their self-regulatory skills were developed.

Conceptualization of a framework by which coaches facilitate their athletes to develop self-regulatory skills is important. Whereas several theoretical frameworks, such as autonomy support and motivational climate, were well studied (Delrue et al., 2019; van de Pol et al., 2015), few studies conceptualized a theoretical framework for the practice environment for self-regulation. By this framework, youth sports coaches are able to design the practice environment for athletes' self-regulation. The current study, therefore, contributed to establish several coaching strategies that encouraged athletes to practice self-regulatory skills in the practice. For instance, while the coaches used team goal settings for increasing athletes' motivation, they also applied team goal settings to facilitate athletes' attentional control. Because attentional control is one of the important SRL strategies in the performance phase of Zimmerman's self-regulation

model, the coaches applied this team goal settings as attentional control strategies. On the other hand, the current research study found that the coaches may rely on outcomes goals and emphasize achievement, yet the current study did not specifically address details of goal settings such as specificity of the goals, the purpose of the goal setting, and actual impacts of goal settings to the athletes' motivation. These aspects should be addressed in the future research.

Addressing the perceptions of motivational climate and their self-regulatory skills is another consideration for the future research project. In the current study, the coaches relied on positive feedback and encouragement that may developed positive atmosphere. Furthermore, the relationship between motivational climate and students' self-regulatory skills were positively related (Fadlelmula et al., 2015; Pajares, 2008). Even though the positive effects of motivational climate to sports players' self-regulation was possibly estimated, it is worth to investigate how motivational climate of the sport practice influence on athletes' self-regulatory skills development. This future research project further adds perspectives onto the findings of the current research study. As a result, evidence-based practice design for developing athletes' self-regulation is available.

Furthermore, instructional strategies that coaches applied to their athletes also contributed youth coaches to develop better practice environment by teaching how to use role model, informal reflection, and transferring as a cognitive skill. These learning strategies were likely related to Zimmerman's self-regulation model (2013), yet further effects of these strategies should be addressed in the future research projects when coaches design the practice environments. In particular, self-monitoring skills were highlighted, as they indicated the athletic performance levels (Bartulovic et al., 2017; Tan et al., 2016; B. W. Young et al., 2009).

Therefore, future research should focus on how self-reflective strategies contribute athletes to develop their athletic skills and self-monitoring skills.

Although further investigation is needed to several findings of research question two, there are still some recommendations for youth sports coaches. First, the coaches facilitate their athletes to reflect their performance every after the practice. Considering athletic development, self-reflection is important for further development of their athletic skills. In order to efficiently reflect performance, pair-reflective discussion can be recommended. Whereas a large group discussion may limit some players to speak out or share their thoughts, pair-reflective discussions enable all players to output their awareness of their performance and thoughts. As a result of this reflective practice, athletes' self-regulatory skills can be developed. Another recommendation to the youth sports coaches is that using positive feedback and encouragement. In particular, encouragement for making mistakes may inspire athletes to keep trying difficult tasks. In motivational calamities, how athletes become process orientation is important to perceive positive environments and motivational climate (Fadlelmula et al., 2015; Kitsantas, Steen, & Huie, 2009; van de Pol et al., 2015). To shift their attention from outcomes to process, positive feedback to learning processes contribute athletes to sustain performance orientation (Osteen-Munch, 2018). In summary, pair-reflective practice and positive feedback focusing on developmental processes were recommended. Even though these were theoretically supported, further research fosters the effects of these strategies.

Conclusion

Overall, the current study addressed the general understanding of athletes' self-regulation from the perspective of volunteer middle school soccer coaches and the coaching strategies they used in soccer practice to develop self-regulation in their players. The current research found that

local volunteer soccer coaches considered that athletes' self-regulated behaviors were reflected in their motivation to play soccer, focus on the practice, and leadership as an outcome of behavioral and emotional control. Essentially, self-regulated athletes were also more motivated athletes who actively focused and engaged in soccer practice. Furthermore, self-regulated athletes successfully controlled their behavior and emotions that served as a foundation for athletes' leadership abilities, including helping others.

Coaches revealed that they did seek to improve their athletes' self-regulatory abilities, both on and off the field. Specifically, soccer coaches sought to teach lessons on the fields that players could use in everyday life. Research suggests that this transference is beneficial on and off the field (Zimmerman, 2013). Additionally, coaches sought to improve their athletes' self-regulation through peer and coach modeling, team and athlete goal setting, and facilitating team and athlete engagement in reflective practice.

Several limitations were acknowledged such as limited access to multiple datasets, the need to further address details of coaching strategies, and consideration of research design. However, limitations can serve as opportunities. The limitations outlined in the discussion also yielded recommendations for future research. Findings of research question one indicated some criteria of athletes' self-regulated behaviors for evaluation by coaches. To extend this research area, further research is needed to investigate in different populations, analyze with multiple datasets, and reconsider future research design. Regarding the findings of research question two, the participants reported several coaching strategies for developing athletes' self-regulation such as applying team goal settings, using positive feedback and encouragement to develop a positive learning environment, facilitating player-oriented discussions, and using the instructional strategy such as teaching modeling, informal reflective practice, and transference. These findings

contributed to establishing criteria for designing a practice environment in which athletes were encouraged to practice self-regulatory skills. In order to further contribute to coaching and self-regulation research, future research plans were suggested, such as investigating a variety of coaches to address their coaching behaviors and strategies for athletes' self-regulation. Overall, the current research study contributed the study of youth sports coaches and self-regulation to add further perspectives. That is, while athletes' self-regulated behaviors appeared, coaching strategies for designing the practice environment for athletes' self-regulation emerged. These findings are expected to further develop a theoretical framework by which youth sports coaches design the practice environment for developing athletes' self-regulation.

Because athletes carry the lessons from the field with them long after their athletic careers are over, it is important that we further develop an understanding of how to build athlete's self-regulatory abilities, not just for their success on the field, but for their futures off the fields and courts of their youths. Coaches clearly reported that they valued their players' self-regulation, believing that it helped them on and off the court. So much so that coaches sought to directly promote their athletes' development of these skills. It is important that future researchers continue to explore how to build these skills in our athletes, and to continue to explore the impact of the development of these skills both in sport and other aspects of life.

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Appendices

Appendix A. Email Script

Dear (Name of a coach),

My name is Takuya “Tak” Hayakawa, and I am a Ph.D. student in the Department of Educational Psychology and Counseling at the University of Tennessee, Knoxville. I obtained your email address with permission from the administrative director of your sport club in order to recruit for participation in my doctoral research project. I would really appreciate your time and consideration to participate regardless of the difficulty situation.

The purpose of my research project is to understand how volunteer coaches design practice. I am currently looking for a volunteer coach of a youth sport team (age of 10-18) who allows me to conduct an interview via video call (Zoom). However, this is voluntary participation, and you are able to decline or discontinue to participation at any time.

If you agree with research participation, I would conduct an interview (approximately 60 minutes long) at the time of your choice. The collected data will be used only for research. Your confidentiality is fully considered by reducing any specific identifiable information and giving a pseudonymous name when I discuss data in my dissertation.

More details are explained on the attached informed consent document, and I’m happy to answer your questions if you have any concerns.

Thank you so much for reading my email. I look forward to hearing from you.

Sincerely,
Tak Hayakawa
Email: thayakaw@vols.utk.edu
Phone: (865) 387-5966

Appendix B. Informed Consent

CONSENT TO PARTICIPATE IN AN INTERVIEW PROJECT

[How Do You Design Your Practice? Understanding Volunteer Coaches' Behaviors in

Terms of Self-Regulated Learning Strategies]

Introduction and Purpose

My name is Takuya Hayakawa, and I am a 4th year PhD candidate at the University of Tennessee in the Department of Educational Psychology and Counseling. You are invited to take part in an interview concerning your coaching experiences and interaction with your athletes. Your answers in the interview are going to be analyzed to understand how you design your practice sessions and specific factors associated with self-regulation of your athletes. This interview is a part of my doctoral dissertation research project, and its overall purpose is to understand the domain of your personal experiences and coaching to your athletes. Participation in this research project is voluntary; therefore, you are able to decline or discontinue to participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Involvement in the Study

If you agree to voluntarily participate in this research study, the researcher will conduct an interview that may take approximately 45 to 60 minutes with you at a mutually agreed upon time and location. The interview will involve questions about your general experiences of coaching, difficult times you experienced during coaching athletes, some of your behaviors the researcher observed during practice, and your thoughts about self-regulation of your athletes. With your permission, the interview will be recorded via an online conference application, and I may take notes during the interview in order to accurately record the information you provide. The recorded video file and the note will be used for transcription purposes only. The researcher expects to conduct only one interview; however, a follow-up conversation may be needed for further clarification. If so, you will be contacted by phone at a number or email that is most convenient to you. Also, if you have any questions about the nature of the interview, you are encouraged to ask at any time.

Risks and Benefits

Some questions about failures and difficult times during which you struggled to manage your practice may be uncomfortable for some to answer. If you become uncomfortable at any time, you are free to decline to answer any questions you don't wish to, or to stop the interview at any time.

While there are no direct benefits to you for participating in this interview, the information gathered will help to create an effective framework with which sport coaches can organize the practice environment to enhance learning experiences of the athletes.

Confidentiality

Any personal identifiable information generated for the course project and further research study, including any individual names or any names of institutions, will not be used. The participants in this study will be given pseudonyms and any other identifiable personal information will not be exposed. The data will be made available only to me and my supervising research professor, Dr. Karee Dunn. There are, however, small risks of loss of confidentiality, because other participants may accidentally know that they are participating in this study through conversation after engaging in the interview. Also, because this study may use the participants' specific personal experiences, there is risk that someone who is relevant in this study field might predict the participant by such unique personal experiences. To minimize this risk, qualitative data will reduce such potential identifiable information. Recording data will be retained until July 31st, 2022, planned data of completion for this project. After this day, all recorded data will be destroyed from recording devices and secured computer. The recording data, however, may have potential to be used in future research. In this case, additional informed consent will be requested.

Contact Information

If you have questions at any time about the interview or the study, you may contact me, Takuya Hayakawa, at thayakaw@vols.utk.edu or by phone (865) 387-5966. If you have questions about your rights as a participant or have experienced any adverse effects as a result of participating in the study, please contact either me or my professor, Dr. Karee Dunn, at kareedunn@utk.edu, the University of Tennessee at 514 Baily Education Complex, or by phone (865) 974-2410. If you have questions about your rights as a participant, you may contact the IRB Compliance Office at utkirb@utk.edu or by phone (865) 974-7697.

Consent

I have read the above information. I have received a copy of this form. I agree to participate in this study.

Participant's Name (printed): _____ Date: _____

Participant's Signature: _____ Date: _____

Researcher's Signature: _____ Date: _____

Appendix C. Informed Consent for Verbal Agreement

CONSENT TO PARTICIPATE IN AN INTERVIEW PROJECT

[How Do You Design Your Practice? Understanding Volunteer Coaches' Behaviors in Terms of Self-Regulated Learning Strategies]

Introduction and Purpose

My name is Takuya Hayakawa, and I am a 4th year PhD candidate at the University of Tennessee in the Department of Educational Psychology and Counseling. You are invited to take part in an interview concerning your coaching experiences and interaction with your athletes. Your answers in the interview are going to be analyzed to understand how you design your practice sessions and specific factors associated with self-regulation of your athletes. This interview is a part of my doctoral dissertation research project, and its overall purpose is to understand the domain of your personal experiences and coaching to your athletes. Participation in this research project is voluntary; therefore, you are able to decline or discontinue to participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Involvement in the Study

If you agree to voluntarily participate in this research study, the researcher will conduct an interview that may take approximately 45 to 60 minutes with you at a mutually agreed upon time and location. The interview will involve questions about your general experiences of coaching, difficult times you experienced during coaching athletes, some of your behaviors the researcher observed during practice, and your thoughts about self-regulation of your athletes. With your permission, the interview will be recorded via an online conference application, and I may take notes during the interview in order to accurately record the information you provide. The recorded video file and the note will be used for transcription purposes only. The researcher expects to conduct only one interview; however, a follow-up conversation may be needed for further clarification. If so, you will be contacted by phone at a number or email that is most convenient to you. Also, if you have any questions about the nature of the interview, you are encouraged to ask at any time.

Risks and Benefits

Some questions about failures and difficult times during which you struggled to manage your practice may be uncomfortable for some to answer. If you become uncomfortable at any time, you are free to decline to answer any questions you don't wish to, or to stop the interview at any time.

While there are no direct benefits to you for participating in this interview, the information gathered will help to create an effective framework with which sport coaches can organize the practice environment to enhance learning experiences of the athletes.

Confidentiality

Any personal identifiable information generated for the course project and further research study, including any individual names or any names of institutions, will not be used. The participants in this study will be given pseudonyms and any other identifiable personal information will not be exposed. The data will be made available only to me and my supervising research professor, Dr.

Karee Dunn. There are, however, small risks of loss of confidentiality, because other participants may accidentally know that they are participating in this study through conversation after engaging in the interview. Also, because this study may use the participants' specific personal experiences, there is risk that someone who is relevant in this study field might predict the participant by such unique personal experiences. To minimize this risk, qualitative data will reduce such potential identifiable information. Recording data will be retained until July 31st, 2022, planned data of completion for this project. After this day, all recorded data will be destroyed from recording devices and secured computer. The recording data, however, may have potential to be used in future research. In this case, additional informed consent will be requested.

Contact Information

If you have questions at any time about the interview or the study, you may contact me, Takuya Hayakawa, at thayakaw@vols.utk.edu or by phone (865) 387-5966. If you have questions about your rights as a participant or have experienced any adverse effects as a result of participating in the study, please contact either me or my professor, Dr. Karee Dunn, at kareedunn@utk.edu, the University of Tennessee at 514 Baily Education Complex, or by phone (865) 974-2410. If you have questions about your rights as a participant, you may contact the IRB Compliance Office at utkirb@utk.edu or by phone (865) 974-7697.

Consent

I have read this form, been given the chance to ask questions and have my questions answered. If I have more questions, I have been told who to contact. I understand that I am agreeing to be in this study. I can keep a copy of this consent information for future reference. If I do not want to be in this study, I do not need to do anything else.

Appendix D. Interview Guide

Interview Guide

Introduction

- I'm a 4th year PhD candidate in the department of Educational Psychology and Counseling, and I'm interested in how coaches think about self-regulation and how that informs their coaching strategies during practice as part of my doctoral dissertation project.
- I'm going to ask you about your general coaching experiences, formal and informal learning experiences of coaching, and your perspectives of self-regulation in athletes.
- Have you had any chance to read the informed consent form? (If not, I will explain)
- I will deal with this recoding only for the use of this research project, and it will be shared with only my research supervising professor.
- Do you have any questions?

(Start recording)

Demographic Questions

- Name, year of coaching,
- Players you are coaching (skill level, number of players, single or mixed gender)
- Practice (How often do you practice in a week? The length of practice time, available equipment)
- Frequency of matches during the season

General coaching experiences

- Describe your general coaching experiences
 - When did you start coaching? Why did you start coaching?
 - What do you feel is important for you to teach your athletes?

Research question one: What are volunteer soccer coaches' general thoughts and understandings of self-regulation in athletes?

- **How would you define self-regulation?**
- **What might you see a highly self-regulated athlete do during practice?**
- **What, if any, do you believe the value of self-regulation is for your athletes?**
- **What obstacles or challenges have you faced, internally or from athletes, in your attempts to develop self-regulatory skills in your athletes?**

Research question two: What strategies do the volunteer coaches believe they use to develop self-regulatory abilities in their athletes and how do they employ them?

Planning

- **Could you tell me how you use practice time to develop athletes' abilities to plan for a successful practice?**
- **Would you say you encourage goal setting during practice; if so, what does that look like?**
- **Do you ask athletes to make plans for practice; if so, how do you encourage your them to make a plan for practice?**
- **How do you promote students' internal motivation for and during practice?**

Monitoring

- **What techniques do you use in practice to encourage self-control for learning during practice?**
- **Do you encourage athletes to monitor their learning during practice; if so, how do you go about this?**
- **Do you encourage athletes to take control of their learning during practice; if so, how do you promote this in your athletes?**

Evaluation

- **After practice, how do you evaluate what your athletes have learned? How do you use this information to plan for the next practice?**
- **After practice, do you encourage athletes to self-assess their performance? If yes, what does that entail?**
- **After practice, how do you determine if your athletes' are satisfied with what they learned in practice? How does that inform how you plan for the next practice?**

Conclusion

- **Is there anything else you would like to share with me before closing this interview?**
- **Thank you so much for your participation and your time.**

(End of the interview)

Vita

Takuya Hayakawa was born in Kanagawa, Japan on July 13, 1984 to Eiji and Nobuko Hayakawa. At Tokai University, he earned a Bachelor of Science degree in Mathematical Science while he completed a Master of Science degree in Physical Education concentrating on

Sport Psychology. He moved to the United States in January 2011 and studied English until 2014. He started attending the master's program of the Kinesiology, Recreation, and Sport Studies Department at the University of Tennessee, Knoxville in 2014 and received a Master of Science degree in Kinesiology in 2016. He started a Ph.D. program in 2016 at the Educational Psychology and Counseling Department concentrating on Learning Environment and Educational Studies. He obtained a Ph.D. degree in Education concentrating on Learning Environment and Educational Studies at the University of Tennessee, Knoxville in May 2021.

While he has worked as a research assistant in the Educational Psychology and Counseling Department, he also worked as a teaching assistant in the Modern Foreign Languages and Literatures. His research interests include self-regulated learning, sport coaching, motivation, applied sport psychology, and learning environment design. He started practicing kendo in 2012 as a member of the University of Tennessee Kendo Club and earned 3 dan in 2018. He practices mental performance consultation with a variety of athletes and coaches dedicated to the Certified Mental Performance Consultant guidelines offered by The Association for Applied Sport Psychology.