



*Exploring Coaches Perceptions of Effective Teaching Methods in Skill  
Acquisition in Adult Learners within Sport*

By

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# Submission of Thesis and Dissertation

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## **Abstract**

Several studies have aimed to examine skill acquisition, effective coaching, and motor skill acquisition in general and with regards to children, with Fitts & Posner's (1967), Gentile (1972) and Dreyfus (2004) being of key importance. However, little is known in relation to skill acquisition in relation to adult learners and whether coaching modalities may differ in comparison to methods used with children. This study aims to explore the effective coaching methods on skill acquisition in adult learners in sport from the coach's perspective. The significance of this study is rooted in my own personal and professional interest in sport. The primary aim of the study is to determine whether there is one or more coaching method which may be effective in coaching a new skill to adult learners. However, the study also aims to explore the meaning of effective coaching from the perspective of the coach. The chosen research design for this study follows an inductive approach, seeking to explore coaches' experiences and perceptions of skill development in relation to adult learners through semi-structured interviews, with the raw data collected being organised and transcribed inductively into themes, through thematic analysis. The emerging themes of effective coaching, coaching behaviour, coaching methods, communication, and adult vs children aimed to answer the proposed research questions. Results found that a multitude of coaching methods were outlined as effective, from questioning and guided discovery, problem-based learning, and experiential and game-based learning. With no single method being identified as effective but rather a holistic approach as the most effective approach to coaching. Findings also suggested that coaches focus on skill acquisition and development with children, however suggested when coaching adults, they do not teach them new skills but simply develop their current skill set, arguing that if an athlete has not picked up a skill by a certain age their ability to achieve a skill will be inhibited. As little is known in relation to skill acquisition with respect to adult learners, this study is merely a steppingstone in

aiming to gain an understanding, however further research could delve deeper into the process of motor skill learning in adults and how aspects of coaching may influence the learning process.

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### **LIST OF ABBREVIATIONS**

GAA- GAELIC ATHLETIC ASSOCIATION

GDA- GAMES DEVELOPMENT ADMINISTRATOR

GDO- GAMES DEVELOPMENT OFFICER

DO- DEVELOPMENT OFFICER

PT- PERSONAL TRAINER

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# **CHAPTER ONE: INTRODUCTION**

## **1.1 Introduction**

This chapter aims to detail the background of the study in relation to the researchers personal and professional positionality in relation to the proposed study and the rationale and purpose behind researching effective coaching methods in skill acquisition with adult learners within sport.

## **1.2 Background & Rationale**

This study aims to explore the effective coaching methods on skill acquisition in adult learners in sport from the coach's perspective. The objective of this study is to explore the similarities or differences between skill acquisition within adults and children and explore effective coaching methods of skill acquisition in relation to adult learners. Several studies have tried to examine skill acquisition, effective coaching, and motor skill acquisition in general and with regards to children, however little is known in relation to skill acquisition in relation to adult learners and whether coaching modalities may differ in comparison to methods used with children.

The significance of this study is rooted in my own personal and professional interest from when I completed my undergraduate study of Sports Coaching and Performance where I took a keen interest in the process of skill acquisition and varying coaching methods and styles. Personally, I've had a keen interest and involvement in sport as a player since a very young age before then getting involved in coaching and performance analysis with various sporting teams. Both my time as a coach, player and performance analyst has allowed me to view sport through three different lenses, particularly in relation to skill acquisition and development, gaining different insights and perceptions from each role. From a psychological perspective I would argue that my own self-identity revolves around my

experience and background in sport, it is what led to my undergraduate degree in Sport Coaching and has influenced my decisions both professionally and personally to date. However, it was only when I injured myself through playing sport, that I began getting involved more in coaching and what ignited my passion and love for teaching. My most recent position teaching was in sports coaching, where I taught students different coaching styles and techniques to use when coaching in their preferred sport. This led to my initial curiosity of the effectiveness of different teaching methods when attempting to teach students a new skill and as a further education teacher, my interest was in relation to adult learners.

With a gap in literature in relation to effective coaching methods on skill acquisition, particularly in relation to adult learners, it was chosen as a topic to explore for research. This study aspires to answer specific knowledge on differences or similarities in coaching methods used and skill acquisition with both adults and children, while aiming to gain a greater understanding into coaches' perspectives on skill acquisition in adult learners. Both Fitts & Posner (1967) 'Three stages of learning model' and Gentile's (1972) 'Two stage model' were both influential pieces of literature which inspired the concept behind this study. However, research by Mezirow (2003) on Transformative Learning, and research by Knowles (1977) and Merriam (2003) on adult learning theories were of paramount importance in underpinning the theoretical framework of this study to gain understanding into the concept of learning in relation to adult learners. Knowles (1977) argues that adults learn differently to children, concentrating on student centred learning, where the learner progresses from dependent learning to self-directed learning, constructing knowledge from past experiences, with intrinsic motivation being a pivotal factor in the learning process. Conversely, Dania et al. (2010) contended that learners absorb new information both verbally and visually, storing the processed information for later use. However, it is argued

that individual learners have different styles of acquiring and processing new information, proposing learning performance may diminish due to the contradiction of cognitive learning style and teaching method used, (McCay, 1999). Suggesting one or more coaching methods may be effective for one individual but not for another, giving food for thought that possible differences among effective coaching methods in adult's vs children may be down to processing differences among adults and children or perhaps to individual learning styles or preferences.

### **1.3 Research aims & Purpose**

The purpose of this study is to gain further insight into skill acquisition with regards to adult learners, exploring effective coaching methods from the coaching perspective. The primary aim of the study is to determine whether there is one or more coaching methods which may be effective in coaching a new skill to adult learners. However, the study also aims to explore the meaning of effective coaching from the perspective of the coach, identify effective coaching methods, and examine similarities or differences in coaching methods and skill acquisition with adults and children.

### **1.4 Outline of dissertation**

The outline of the dissertation aimed to follow a logical flow from introduction to literature review, to methodology, to findings and discussion before concluding the findings of the study.

Chapter 1: The outline of the dissertation begins with this chapter, where the chapter begins with a brief introduction, before detailing the studies background, rationale, purpose, and objectives. Aiming to justify the chosen topic of research before moving to chapter two where a review of literature took place.

*Chapter two:* Within this chapter a review of literature is observed. Chapter two explores the concept of skill acquisition, detailing a general overview on the topic of skill acquisition and its function within sport with regard to adult learners, while exploring what is meant by effective coaching and examining relevant literature on various teaching methods in both adults and children. The review was organised thematically, before refining key pieces of information into research questions.

*Chapter three:* Within this chapter a detailed description is provided of the research process, detailing, and justifying the researchers methodological approach, which is broken into subsections, research sample, research design, data collection, data analysis, ethical consideration, trustworthiness, and possible limitations, while also aiming to define the role of the researcher.

*Chapter four:* This chapter gives a defined description of the findings from this study, with a detailed discussion in relation to the findings and literature. This chapter discussed each overarching theme and the sub-themes identified, with verbatim quotations and discussions for each, before concluding final findings.

*Chapter five:* This chapter begins with a brief introduction, before summarising the findings within the study and their contribution to current research before acknowledging limitations of the study, and detailing implications and recommendations of the research undertaken.

## **1.5 Conclusion**

This chapter gave a detailed description on the background and rationale of the research, with the researcher's interest stemming from both personal and professional involvement and passion for coaching and sport. The chapter then outlines the purpose and main objectives of the study, giving the reader a sense of the key questions, which

aimed to be answered throughout the research. The chapter then gives an outline of the dissertation, providing a brief outline of what to expect within each chapter.

## **CHAPTER TWO: LITERATURE REVIEW**



## **2.1 Introduction**

The key topics explored within this review of literature will be the concept of skill acquisition, giving a general overview of skill acquisition and its application in a sporting context in relation to adult learners, while investigating teaching approaches and effective coaching methods. This review has been organised thematically, aiming to introduce and discuss the topics of skill acquisition, theories of skill acquisition viewing Fitts & Posner's (1967) Three Stage model, Gentile's Two Stage (1972) model and Dreyfus' (2004) five stage model, open and closed skills, coaching, effective coaching, coaching methods, andragogy, adult vs child learners, learning styles and verbal feedback and communications. This organisational plan aims to introduce each topic before funnelling and refining them into research questions.

The aim of this review is to gain insight into how adult learners acquire new skills, examining the motor process in which skill acquisition occurs and the most effective coaching methods utilised.

The chosen research question's purpose to examine the following:

1. How do coaches define their coaching as effective?
2. What coaching methods do coaches utilize when coaching children and adults?
3. What are the similarities and/or differences defined by coaches in skill acquisition in adult and child learners?

Skill acquisition is a term widely used in teaching, learning, and sporting contexts, but what is meant by skill acquisition. It is often coined as the action of learning a new skill or referred to as skill development but to gain a greater understanding of the term skill

acquisition, one must look at what actions or steps occur during learning a new skill, which will be defined throughout this review.

## **2.2 Skill Acquisition**

### *2.2a What is Skill Acquisition*

Learning a skill is not as simplistic as it seems, several theories have been used to try and understand skill acquisition, with Fitts and Posner (1967) Three stage model, Gentile's (1972) Two stage model and Dreyfus model of skill acquisition being at the forefront. The concept of skill is broadly viewed as the ability to control our body and movements, a human necessity, creating different movement patterns for daily life such as walking and eating, (Magill & Anderson, 2014).

Moe (2004) defines skills as tasks which are learned and developed through practice and repetition while Magill and Anderson (2014) refer to a skill as an action that has a set goal to achieve, and the ability to execute said goal. However, the term skill is not one-dimensional with skills being broken down into open and closed, gross, fine, discrete, continuous, and serial motor skills, (Magill & Anderson, 2014). Skill acquisition in sport can be a combination of various motor skills, with multiple complex movements and patterns. Though skills are often described as mental or practical skills, it is evident that practical skills require a large amount of cognition, and many skills require learners to manage arousal, stress, and attentional focus, (Weinberg & Gould, 2006). Current research has compared mental and physical practice during motor skill acquisition, with results stating that physical practice is the preferred approach, however mental practice can show slight improvements and is better than no practice in acquiring a new skill. It is also argued that when performing a skill, mental practice is effective in controlling anxiety level when preparing to execute a skill, (Magill & Anderson, 2014). Research on skill acquisition has

several themes which align with sport psychology, with a large crossover between mental and practical skills, suggesting that all skills are cognitive and focusing on both mental and practical skills can enhance performance, (Fairbrother, 2019).

### *2.2b Theories of Skill Acquisition*

A prominent approach to skill acquisition is the theory of information processing, suggesting learners gather information from their surroundings and environment to regulate movement, (Fairbrother, 2019). Moe's (2004) study aimed to define the information-processing approach to skills and phenomenology of skill acquisition within a sporting context, investigating both approaches, using discussion and dialect to argue both perspectives. It was concluded that the phenomenology of skill acquisition is greater than the information processing approach, however Moe (2004) argues the case for both concepts which gives the reader an insight into both the pros and cons of each approach, this piece is merely a reflection of the authors own discussions rather than research into how each approach may be effective or put into practice.

Recent literature has examined the connection between skill acquisition and neuronal plasticity in the central nervous system. Neuroplasticity refers to the neurological changes which occur in learning complex skills, suggesting that the brain re-organises brain cells to form new connections, (Dayan & Cohen, 2011). It is argued that repetitive practice and training enhances one's hippocampus, with a study carried out by Pi et al. (2019) suggesting that high level athletes had nodal parameters which were significantly higher than participants within the control group, suggesting this was interlinked to several years of practice and training.

To understand the process of learning a skill, the distinct phase a learner goes through must be analysed. Fitts and Posner's three stage model is recognised as instrumental in gaining an insight into the skill learning process, accounting for both motor and cognitive skills, breaking the process into three distinct phases, cognitive, associative, and autonomous stage, (Moe, 2004). The three-stage model takes into context the considerable attentional focus and demand required in each stage of learning, and the time and practice required to reach each stage, (Fitts & Posner, 1967). Within the cognitive stage the learner is focused on cognitive problems and situations, trying to grasp how to perform the skill, (Magill & Anderson, 2014). Within this phase the learner listens carefully to instruction on how to execute the skill, many errors will be present within this phase, but it is important to note, during the cognitive stage the learner does not possess the knowledge or understanding to correct their errors, (Pennington et al., 2001).

It is argued that during this phase feedback and instruction is highly important, as cognitive functions and motor skills develop alongside one another, thus suggesting ineffective instruction from the coach can inhibit or stunt athletic development and progression. (Pennington et al., 2001). When individuals continue through the stages of learning after a distinct amount of practice, they move into the associative stage where movement becomes more fluid, here less cognition is required, and the skill is performed both consciously and somewhat automatically, allowing the coach to vary performance conditions, (Fitts & Posner, 1967). Within this phase the learners examine their environment and links environmental cues with the actions required to execute the skill, it is within this stage where the coach must allow the learner to make mistakes, allowing the learner to self-correct and understand why specific errors occurred, (Pennington et al., 2001).

Light and Harvey (2017) suggest that teaching which focuses on correcting mistakes, inhibits key learning, as individuals are subsequently deprived of learning through self-discovery, which leads to high levels of self-confidence and autonomy. Following the associative stage learners progress to the autonomous phase where there is little cognition required as the skill or movement becomes autonomous, with focus now primarily being placed on performance and results, (Fitts & Posner, 1967). Unlike the first and second stage, the autonomous stage is where individuals now possess the knowledge to self-correct and adjust their performance accordingly, however, to achieve autonomous status, quality coaching, feedback and practice must be in place, alongside learner motivation to learn and improve (Pennington et al., 2001).

Though Dreyfus's model applies similar undertones of skill acquisition as Fitts and Posner's Three stage model, it is broken into five phases, novice, advanced beginner, competence, proficiency, and expertise, aiming to view skill acquisition through the lens of everyday experiences, (Dreyfus, 2004). Within the novice stage the learner has little or no experience, learning as they go along, adapting their process of thinking, creating a set of rules as they perform the skill, however during the advanced beginner stage the learner gains more experience with authentic situations, learning through observation and the coaches' cues and instruction, (Dreyfus, 2004). During this phase, the learner tries to spot and fix errors, however, still needs instruction and assistance to problem solve, while during the competent phase learners gain more experience and may find elements of the skill overwhelming, thus they adopt plans to fit each situation, focusing on decision making and goal orientation, (Dreyfus, 2004). Following the competent stage, the learner moves to the proficiency phase, where they become more emotionally connected to the skill, it is within this phase the individual learns to cope with the anxiety of the environment, seeking to understand the bigger picture of the skill,

using reflection on their present and past performances to correct errors, (Dreyfus, 2004). The final phase of the five-stage model is the expert phase, one could argue the term is self-explanatory as it is within this phase the learner has a wealth of experience, which allows them to be skilful in executing the skill or task, understanding what needs to be carried out and how that can be achieved, (Dreyfus, 2004).

Both Dreyfus and Fitts and Posner's models are similar where they view one's transformation from beginner to autonomous as a continuous progression, though not all learners will progress to each stage. However, Gentile's (1972) stages of motor learning takes a slightly different approach, observing skill acquisition as goal orientated. This paper aimed to illustrate the concept of skill acquisition and practical applications to teaching, categorising it into three units, motor patterns, the nature of skill acquisition in both the initial and later stages of motor learning and the application of skill acquisition to teaching strategies. The initial stage of learning is broken into two separate goals, the first the acquisition of movement patterns and the second the differentiation between regulatory and non-regulatory environments, while the later phase of learning focuses on fixation and diversification, the goal being adaptation and consistency, with both open and closed skills focusing on varying characteristics, (Gentile, 1972).

### *2.2c Open & Closed Skills*

A closed skill concentrates on fixation, where the environment is fixed and stable, unlikely to change, thus making the skill predictable for the learner, allowing them to practice and be consistent in execution. Whereas, an open skill is often performed in an unstable environment, making conditions unpredictable, thus the learner concentrates on diversification and adaptability, using the feedback-decision process to adapt their movement to execute the skill,

(Gentile, 1972). This piece of literature is an early model of skill acquisition which has flaws in making general statements without an abundance of research to assert the authors claims; with the author herself stating the lack of research at the time contributing to the model being unfinished and subject to change with further investigation, which through further study it has today. Within Gentile's (1972) model, it was not initially considered that their approach to skill acquisition could be used as a progression for learning skills, while Magill (1989), suggested that Gentile's model proposes a closed to open continuum, depending on level of difficulty, (Hautala & Conn, 1993). This proposed continuum allows learning to progress through several stages which enable the learner to progress from a closed skill, where athletes aim to move from a stable environment with no variability to a stable environment with variability, to an unstable environment with no variability to finally an open skill of an unstable environment with variability, allowing the learner to develop the skill through progressing the variability and difficulty of the task, (Magill, 1989). Gentile (1972) early research concluded that the environmental requirements influence both the skill acquisition of the learner and the application of strategies utilised by the teacher. It was argued that the complexity of the skill undertaken may affect the approach of teaching, suggesting that teaching requires analysis of both the environment and the skill being learned. This piece not only gives understanding into skill acquisition but also into its application through teaching, how teaching approaches may differ regarding the complexity of the skill.

## **2.3 Coaching**

### *2.3a Coaching*

Coaching is defined as a co-operative relationship, where both the learner and coach work alongside one another to set and achieve goals, through a process of development and promotion of self-directed learning, (Grant & Stober, 2006). However, the process and characteristics of coaching can differ, depending on the approach taken. Coaching from a humanistic standpoint, draws on self-actualisation from Maslow's hierarchy of needs, where the coach takes advantage of the learner's tendency to self-actualise and aims to foster the learner's growth potential. Within this approach, emphasis is placed on the relationship between the coach and learner, arguing that a holistic, positive relationship fosters growth and development through developing all aspects of the learner, (Yossi, 2008). In contrast the behaviourist approach aims to understand both the learner and their environment, focusing on not only developing the learner on a personal level but enabling the learner to adapt through an action-based approach and authentic experience, (Peterson, 2006). Auerbach (2006) argues that the art of coaching aims to develop the individual through understanding the varying characteristics of the learner, taking a cognitive approach, seeking to understand the learners' emotions, beliefs, and perceptions.

Many argue that coaching practices are founded on both cognitive and social constructivism. The concept of cognitive constructivism was brought to light by Piaget (1953) where it was argued one constructs personal meaning to new ideas, how one makes sense of their own personal experiences, (Powell & Kalina, 2009). While social constructivism though based on similar principles, suggests individuals construct their own knowledge through social interactions within the learning environment, using conversational dialogue and culture to enhance cognitive development, (Powell & Kalina, 2009).



Light a Wallian, (2008) argued that coaches utilise both cognitive and social constructivism with constructing meaning to a skill or task as important for a learners development, while the surrounding environment, social interaction among peers and coach athlete relationship is important in creating a positive learning environment and developing knowledge, (Roberts & Potrac, 2014)

However, when considering coaching adults several theories and coaching approaches can be adapted to suit the needs of the adult learner, with two approaches specifically coming to mind. The first being the adult learning approach which proposes promotion of deep meaningful learning, (Yoshi, 2008). This approach is founded on the principles on Kolb's (1984) experiential learning, Knowles (1977) 'andragogy' and Boud et al. (1994) reflective practice, suggesting adults learn through reflection of experience. The second approach is that of transformative learning, based on Mezirow (2003) theory of transformative learning within adult learners. Gray (2005) states that this approach aims to educate both the coach and the learner, using coaching as an instrument to promote self-directed learning, with the learner critically reflecting and questioning beliefs and norms. However, the question remains, on which approach may be more effective for learning, or whether different factors influence the choice of approach.

### *2.3b Effective Coaching*

Research has tried to define effective teaching and coaching; however, little is known what teaching methods are most effective. It is hard to conceptualise effective teaching and even more difficult to assess effective teaching, however for one to be an effective teacher they must possess specific attributes such as understanding and knowledge of the topic, enthusiasm, invested interest in their students and motivation to assist the learner in achieving their goals,

(Côté & Gilbert, 2009). Though the main purpose of a coach is to teach sport specific skills, an effective coach is described as one who can form and maintain interpersonal athlete relationships, while also using reflection as a tool to learn and improve their own practice, (Côté & Gilbert, 2009).

Effective coaches are influential in the development of an athlete both with regard to skill development and personal development, with Coté and Gilbert (2009) suggesting for coaching to be effective a holistic approach must be adopted, whereby coaches possess a high standard of professional knowledge, through both interpersonal and intrapersonal knowledge, athlete outcomes through instilling competence, confidence and connections among athletes and coaching context, the ability to adapt one's coaching depending on the athlete, environment or task.

Coaches play a pivotal role in skill acquisition and development, with their instruction, organisation, and inter-personal relationship with the learner vital components in both cognitive and physical development, (Smith, 2020). Odell (2011) has coined coaching as a separate process to mentoring and training, it is practice in which one helps another individual enhance their learning through development, guiding them to learn how to adapt. It is argued that to measure coaching effectiveness, several factors may be examined: those that influence effectiveness or success and measuring effectiveness in regard to performance outcomes, (Odell, 2011). Therefore, suggesting effectiveness must be examined through intrinsic and extrinsic measures of success.

### *2.3c Coaching Methods*

Firstly, before measuring coaching effectiveness, one must assess the coaching methods used and the benefits of each. A common theme which has arisen among coach perceptions of teaching is the lack of resources available on effective coaching methods, however Gilbert (2017) gives an in-depth overview of psychological techniques as useful tools to provide effective coaching, such as Proof it works- mental skills training, Films and Drills and imagery, all of which are said to be beneficial tools in skill development in learners. Whereas Darnis & Lafont (2015) carried out a study on cooperative learning in physical education, examining the role of verbal interaction among peers in team-sport aiming to examine the perspective of the teaching-learning process encompassing the concept of debate-of-idea. The study used an experimental approach carrying out two interventions; the first aiming to illustrate the positive effects of discussion within a team in an adapted game, observing collective game efficacy and individual skill development, the second observing the instructional setting within an adapted game of 2 vs 1. The findings from both interventions established that verbal discussion amongst peers regarding the goal and strategies within a game, enabled the development of motor and tactical skills within participants. It is concluded that cooperative learning, using verbal interaction amongst peers in a sporting context can enhance motor and tactical skill development within learners, a useful finding to explore the concept of cooperative learning as an effective teaching method in skill acquisition.

While Pritchard et al. (2008) assessed the effectiveness of whole person learning pedagogy in skill acquisition. An experimental intervention was used within this study, using two instructional approaches, the sport education model, and the traditional style of teaching in PE, aiming to examine how each intervention would affect skill development, knowledge, and game performance. Results found that participants within both interventions showed an increase in the skill test over a period, however it was not a significant improvement, therefore

no reliable significant difference was detected. However, a significant difference was recorded in game play the sports education model in comparison to that of the tradition style, suggesting that the sports education model may be more effective in game play. The paper gives an in-depth context into skill acquisition and its relationship with different learning approaches and teaching methods, which is useful in exploring different teaching approaches.

Conversely, Washburn et al., (2019) examined the efficacy of an intervention aimed at enhancing student learning in sport education through the manipulation of need-supportive instruction, utilising the self-determination theory as a foundation. This study carried out a quasi-experimental design, which examined students cognitive and psychometer sphere. The findings of this study state that while students showed an increase in both seasons, a rise in skill post-intervention was greater, suggesting in a physical activity context, students' learning may improve with the teacher's delivery of need supportive instruction.

Contrastingly, Williams & Hodges (2005) observed the popular beliefs that influence current practice in instruction in soccer, delving into current practice, suggesting that coaches currently coach from tradition rather than scientific evidence. A noteworthy finding from this piece suggests athletes' perceptual-cognitive skills are responsive to practice and instruction, therefore a key importance for coaches is to determine how best to construct, implement and appraise training programmes.

Smith (2020) reviewed the theoretical models and experimental results from recent coaching research, focusing on methods used to measure coaching behaviours and interventions. The author gives great insight into various theoretical models such as the social-cognitive learning theory, multidimensional model of sport leadership, achievement goal theory, coach effectiveness etc, which assist in the theoretical underpinnings of concepts within my own research. The author mentions a wealth of research regarding coach intervention programmes, however a limitation of many is the lack of evaluation of efficacy, leading to a

lack of credibility of coaching programmes. Though this study touches on coaching behaviours and effectiveness in sport, it is a review paper, therefore further research, and investigation into the effectiveness of coaching behaviours in a sporting context from the learner's perspective may give a greater insight.

Further research carried out by Pestano (2021) aimed to examine the style, behaviour, and abilities of coaches on the performance of their athletes, trying to examine variables which may predict athletic performance. The study was conducted using 59 purposively sampled coaches, the findings suggested that several styles and behaviours were used more favourably than others, these include command style, reciprocal style, problem-solving and guided discovery. While coaching behaviours such as mental, physical, and technical skill training, competition preparation and positive interpersonal relationships as positive contributors to athletic performance. The conclusive findings suggested that the use of guided discovery, competition preparation and motivation competency had been significant in athletic performance, (Pestano, 2021). Conversely a study carried out by Light (2013) aimed to identify quality teaching in physical education, with findings outlining a game-based approach as advantageous in student learning, with individual learning through interaction and developing their skills. However, similar to Pestano (2021), Light (2013) found that for successful coaching several principles must be in place, planning and delivering physical training through a game-based design, promoting peer interactions, inquiry, and questioning, stimulating inquiry through problem solving and a supportive environment with positive athlete and coach relationships.

Nonetheless, a scant of research is available investigating appropriate and effective coaching methods regarding adult learners, therefore further investigation must be done to understand the process of adult learning and its relation to coaching and skill acquisition.

## 2.4 **Adult Learning**

### *2.4a Andragogy*

According to Knowles (1977) the concept of adult learning, also known as andragogy, suggests adults learn differently to children, concentrating on student centred learning, where the learner progresses from dependent learning to self-directed learning, constructing knowledge from past experiences, with intrinsic motivation being a pivotal factor in the learning process. A study carried out by Law & Hall (2009) investigated the use of the functions of observational learning in beginners in adult sport, examining its relationship to their self-efficacy beliefs to learn skills and strategies, and to regulate mental states during the learning process. The findings demonstrated that observational learning and self-efficacy beliefs results fluctuated according to their specific sport. It was noted that adults participating within an individual sport, predicted higher self-efficacy to learn skills and strategies, while adults in team-sports predicted higher self-efficacy to regulate mental states within the learning process. Conversely, it was recorded among all sport types, that observational learning was a key component when learning a new skill. Though the concept of observational learning or visual learning is not new to coaching practices, it is intriguing that this is considered a key component among learners of varied sports, possibly allowing for future research on observational or visual learning regarding its relevance in skill acquisition.

### *2.4b Adult vs Child Learners*

Research carried out by Adi-Japha et al. (2019) also aimed to examine the difference among adult and child learners examining post training processes in motor skill learning, using a deductive experimental approach. Each participant practiced the task four times prior to

training and before each test, with performance time and accuracy used to assess learning. The findings within this study illustrated that within children, performance of a newly learned motor skill, increased within a short period of two hours post training, while it took longer to see similar performance development in adult learners.

A similar case study comparing adult and youth learning was carried out by MacLellan et al. (2019) suggesting coaching methods utilised with adult learners were predominately andragogical in approach, focusing on self-directed learning, intrinsic motivation, and inquiry-based learning. However, the approach utilised among youth learners predominantly focused on traditional pedagogy, where information was directed at the learners, limiting the student autonomy and decision making, focusing primarily on extrinsic motives. Findings thus suggesting Knowles (1977) theory of learning differences among adult and child learners to be true.

#### *2.4c Learning Styles*

However, Meriam et al. (2006) argues that a limitation of andragogy is that children and youths may benefit from andragogical teaching approaches and similarly, adults may benefit from traditional pedagogical approaches, thus paving way for the argument that learning preferences and styles, suggesting effective learning may be subjective to individual learning preferences.

Both Gardner's (2010) multiple intelligences model and Flemings (1995) VARK model are used within education to argue the concept of learning styles. Gardner (2010) suggests there are multiple intelligences, eight to be exact, ranging from verbal-linguistic, logical-mathematical, bodily-kinaesthetic, musical, interpersonal, intrapersonal, and naturalist intelligences. However, some argue that these are not specific intelligences or learning

preferences but characteristics and traits, while Gardner (2010) stated that the multiple intelligence model does not reference learning style's specifically but rather suggesting learning should not be a one size fits all approach. While Fleming's (1994) VARK model refers to student learning styles, suggesting students learn through visual, aural, reading and writing or kinaesthetic methods. However, the VARK model has several limitations and flaws, with key issues of rigour and validity at play. It does not take into consideration key learning criteria or student motivation, thus it is a poor indicator of identifying learning styles or preferences, while Gardner's model of multiple intelligences aims to evaluate and understand learners' characteristics and traits, (Pasher et. al. 2009).

A survey carried out by Bonwell (2001) found that learning preferences differed among students and teachers, arguing that these differences may add to miscommunication and misunderstandings between the teacher and learner, in turn affecting the learning process, (Dunn, 2009). It is suggested that coaches need to adjust their coaching to fit the needs of the learner, arguing that some coaches are not successful with one team as individual team members will differ in learning styles and a breakdown in translation in teaching may occur, (Dunn, 2009). Research has been carried out aiming to investigate coaching methods and provide coaches with approaches to develop a strong pedagogical coaching foundation, however it is important to note not all learners will be satisfied with the coaching approach taken, but it is important the coach strives to progress and develop each athlete where possible, adapting to the environment and the learners needs.

#### *2.5 d Communication, feedback & verbal cues*

Communication is of paramount importance within the coaching process, from communicating with fellow coaches, athletes and delivering verbal cues and feedback. The main objective when communicating during coaching is to enhance motor learning within skill



acquisition or to better athletic performance, this can be done through verbal instructions, verbal cues, augmented feedback, video feedback or visual demonstration, (Craig, 2013).

Landin (1994) aimed to discuss the theoretical underpinnings of verbal cues, recent research regarding verbal cues and offer a proposal for constructing and implementing verbal cues in physical education and sport settings. Landin's (1994) study narratively gives the reader an insight into the theory behind verbal cues and its connection with information processing within motor skill acquisition. The study reviews several pieces of recent research; however, the author does not give a critical evaluation of the research under review, therefore it leaves the reader questioning the credibility of the author and the research under review. However, it is noted that at the time this piece was written, little to no research was carried out regarding verbal cues in skill acquisition in relation to a practical sporting context. The process of using verbal cues to enhance skill development is an interesting concept and one which can add to teaching approaches in skill acquisition within my own research.

It is suggested that when delivering verbal cues, they should be short and sweet with Gallimore and Tharp (2004) reflecting on NBA coach John Wooden's verbal cues with his NBA athletes, with the cues consisting of instructions of what to do and how to do it, with none last longer than 20 seconds, arguing the instruction being of high importance. However verbal cues can both enhance and hinder performance with Wulf (2013) stating external focus can be a factor in enhancing performance while internal focus can cause a deterioration in athletic performance.

However, communication and verbal feedback or cues does not have a one size fits all approach, with coaches having to adapt their language, feedback and communication depending on individuals age, gender, level, and ability. With regards to children a study carried out by de Stefani et al. (2020) aimed to investigate the effects of teaching a new skill in children using the observational-imitative method and descriptive-directive method,

determining whether learning a new skill relies predominantly on verbal explanation or observation and execution of the task. It is argued that from the ages of 5-10 years motor control is linked with both visual and kinaesthetic learning, with a focus on visual demonstration of high importance up until age 9, with kinaesthetic learning being of high importance from age 9 upwards. However, it is suggested that the learning a new skill can be limited when prioritising visual and kinaesthetic demonstration means alone, without verbal cues from the coach, (de Stefani et al., 2020).

This study found that when a child is learning a new skill without prior experience or knowledge that the observational model of instruction is more effective than solely verbal instruction which was descriptive and direct. It is argued that observational learning is a key component in learning a new skill or behaviour, with four key components within the learning process, attention, retention, construction of meaning and motivation, (Bandura, 1986).

Conversely a study carried out by Giannousi et al (2017) examined the effects of feedback on learning in sixty novice adult swimmers, which aimed to identify any differences in findings in comparison to previous studies on the effect of verbal feedback among children such as results from previous research from Wiese-Bjornstal and Weise (1992). Results found that the use of visual observation and verbal instruction as a combination were more influential on performance than coaching which focuses solely on observation without verbal instruction. Yielding similar results to that of de Stefani et al (2020). Though findings of learning and feedback among adults and children presented similar results, it can still be argued that feedback, language, and communication may differ among groups or learners due to age, gender, level of difficulty and ability, with the coach having to be adaptable to suit the needs of each athlete.

## **2.6 Conclusion**

This review of literature aspired to gain understanding into effective coaching methods and the process of skill acquisition in sport with adult learners, aiming to recognise the link between the coaching method and skill learning process. The review shares insights into understanding, skill acquisition, the motor learning process, and theoretical underpinnings, while also looking at the fundamental principles of coaching, varying approaches to teaching, the concept of effective coaching, the principles of andragogy, the difference in learning among adults, children, and individuals regarding learning styles and the use of feedback, communication, and verbal cues. The review of literature has established several questions about the process of skill acquisition, adult learning, and coaching methods, giving food for thought on beneficial coaching methods of skill acquisition for adult learners.

Both Fitts & Posner (1967) 'Three stages of learning model' and Gentile's (1972) 'Two stage model' were both influential pieces of literature which inspired the concept behind this study. However, research by Mezirow (2003) on Transformative Learning, and research by Knowles (1977) and Merriam (2003) on adult learning theories were of paramount importance in underpinning the theoretical framework of this study.

With currently a gap in literature regarding adult skill learning, the findings of Adi-Japha et al., (2019) gives way to further research being carried out on the process of motor skill development in adults, while Law & Hall, (2009) gives insight into preferred learning methods of athletes, stating observational and visual learning is a preferred method among learners of varied sports, possibly allowing for future research on learning styles and their relevance in skill acquisition, a component which may be influential into understanding how athletes acquire new skills.

Research has yet to comprehensively explore the effectiveness of the coaching process of skill acquisition in relation to adult learners and from the perspective of the coach.

The rationale for this research stemmed from my undergraduate study of Sports Coaching & Performance, where I took a keen interest in the process of skill acquisition and varying coaching methods and styles. Similarly, my most recent position teaching was in sports coaching, where I taught students different coaching styles and techniques to use when coaching in their preferred sport. This led to my initial curiosity of the effectiveness of different teaching methods when attempting to teach students a new skill. While reviewing literature, it was noted that a large portion of studies carried out on skill acquisition were predominantly focused on pedagogy, researching skill development in children rather than that of adult learners, with a scant of research exploring the effectiveness of the coaching process of skill acquisition from the perspective of the coach. This led me to question the influence of different teaching methods and coaching styles on skill development in adult learners and whether there was a crucial difference between preference of teaching methods and possible learning styles on the positive outcome of learning a new skill. Therefore, the following research questions were proposed:

1. How do coaches define their coaching as effective?
2. What coaching methods do coaches utilize when coaching children and adults?
3. What are the similarities and/or differences defined by coaches in skill acquisition in adult and child learners?

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Introduction**

The purpose of this study was to explore ‘coaches’ experiences and perceptions of effective teaching methods in skill acquisition and development in relation to adult learners in sport. Previous studies (as indicated in the previous chapter) have aimed to explore skill acquisition in relation to children, however there is a scant of research in relation to skill acquisition with regards to adult learners in sport.

This study aims to explore coaches’ experiences and perceptions of skill development in relation to adult learners in sport, examining the differences and similarities among adults and children in skill acquisition, and exploring the coaching methods utilised, using qualitative research design, following a phenomenological approach and interpretivist design, aiming to understand the subjective meaning of social behaviours, (Bryman, 2012). Qualitative research is humanistic as it centres around personal experiences based on knowledge and practice, aiming to establish individuals’ perceptions and emotions, with the researcher focusing on the participants knowledge and understanding of the topic, therefore it was deemed the most appropriate research design for this study, (Dalal & Priya, 2016).

This chapter gives a defined description of the research process, with detailed information of the methodology being divided into sections, research sample, research design approach, data collection, data analysis, ethical considerations, issues of trustworthiness and limitations and a chapter summary. This chapter details the justification of the methods used within this research, the reliability and validity of the research, while also defining the role of the researcher.

### *3.2 Research Sample*

The research aimed to gather data from individuals who had experience coaching both children and adults in sport, to gain an insight into their experiences and perceptions of coaching a new skill and the differences or similarities of their coaching methods with both children and adult learners. Purposive, convenience and snowball sampling techniques were used to sample participants, with both emails and social media posts being displayed with the request for coaching volunteers for interview participation. Convenience sampling was chosen as the researcher has past experience and relationships in coaching, thus participants were conveniently available, however as stated by Bryman (2012) selecting convenient sampling alone can generalise findings, as participants may not represent the whole population. Snowball sampling was also used, whereby fellow coaches were initially contacted regarding the study before being put in contact with more coaches who were willing to participate. All participating coaches were involved within team sports, the researcher had a keen interest and background in coaching and playing various team sports, thus the use of convenience and snowball sampling identified coaches who were involved in team sports.

The study had a sample size of 7 participants, six of whom had a background in undergraduate level in Sports Coaching or Physical Education, and all of whom had experience coaching both children and adults. Initially only six participants were going to be included in the study, however from the pilot study, it was concluded to include the pilot interviewee as the depth of knowledge provided was beneficial to the study. As noted by Faber & Fonseca, (2014) too small or too large a sample size can have implications on research, with small sample sizes impacting internal and external validity and large sample sizes exaggerating difference recorded, thus it was concluded that a sample size of 7 was sufficient.

### *3.3 Research Design Approach*

This study aims to explore coaches' experiences and perceptions of skill development in relation to adult learners in sport, using qualitative research design, following a phenomenological approach and interpretivist design, aiming to understand the subjective meaning of social behaviours, (Bryman, 2012). Qualitative research aims to gain a greater understanding of phenomenon through the insight and experiences of individuals, acknowledging their unique perspectives, providing a greater understanding of the meaning individuals place on different occasions, actions, and relationships, (Castleberry & Nolen, 2018). Therefore, the chosen research design for this study follows an inductive approach, seeking to explore coaches' experiences and perceptions of skill development in relation to adult learners through semi-structured interviews, with the raw data collected being organised and transcribed inductively into themes, through thematic analysis, (Patton, 2005).

The preferred research design for this study as stated is that of qualitative research, which is often heavily associated with the social sciences. However, a limitation of qualitative findings can be equated to small sample size used, limiting the findings being extended to the wider population in the same fashion of confidence that quantitative research can, (Ochieng, 2009). However, if one wishes to learn from individuals within a particular environment or explore participants' experiences, the interpretivist approach of qualitative research allows the researcher to create meaning and explore themes and perceptions in a broader fashion than quantitative research, (Ochieng, 2009).

The researcher originally questioned whether the use of a mixed method approach would yield stronger results, allowing for a study on both coaches perceptions of skill acquisition in adult learners through qualitative means and a quantitative experimental intervention on effective coaching methods in skill acquisition in adult learners, however, due to the ongoing



circumstances of the COVID-19 pandemic, experimental research using face to face participants had been curtailed due to the safety concerns of both the researcher and participants, (Clay, 2020). Therefore, it was concluded that a qualitative research design was appropriate and would be a basis for exploring the topic of skill acquisition in adult learners, allowing for further research to be conducted on the proposed effective teaching methods of skill acquisition in adult learners further down the line.

Semi-structured interviews were selected as the favoured approach to gather qualitative data, as they aim to illustrate the meanings of key themes of the perceptions and viewpoints of participants, using standardised, open-ended questions, making them more comparable for analysis, (Kvale,1996). The use of semi-structured interviews allows the researcher to explore spontaneous topics which may arise during the interview, while also allowing the interviewee to control the interview, detailing their own story, exploring their individualised perspective, (Ryan et al., 2009).

Semi-structured interviews were designed with a mixture of both open and closed ended questions, covering several themes. For the semi-structured interviews within this study the researcher used a topic guide, of themes which were to be covered on the coach's background and experience, perceptions of coaching effectiveness, coaching methods utilised with regards to children and adults and the topic of learning styles. As per guidance from Dalal & Priya (2016) the researcher used both structured and less structured questions with probes to gather further information from participants, initially beginning the interview with general questions on participants background and experience before moving to more specific questioning. However, the researcher was prepared and switched the order of questioning depending on the answers provided from the participants, this was done to create a logical flow in questioning, while also ensuring pauses and silence were not filled by the research, allowing the participant

to add more information where possible. (Refer to Appendix C for the topic guide & interview questions)

Bridges et al. (2008) suggested that semi-structured interviews allow the researcher to provide several themes as a foundation for research and act as a guide during the interview to reflect on the participants personal experiences. With further themes arising throughout the interview as a result of the information provided from participants.

It was determined that 'Thematic Analysis' was the most suitable method of analysis within this study as it is argued to be the most appropriate method utilised within studies using an interpretivist approach, providing a systematic element to analysis, allowing the researcher to establish the connections between several concepts and opinions, (Alhojailan & Ibrahim, 2012). According to Braun and Clarke (2006) thematic analysis has many benefits within qualitative research, including its flexibility, however it is the lack of clear concise guidelines that can lead to broad data, making it difficult on the research to decide what areas of their research to prioritise. Therefore, it is important to state and set guidelines within the research process, while ensuring quality and rigour of the study and the analysis undertaken, by being critically mindful of the methodological and epistemological issues at play, (Finlay, 2006).

With regard to thematic analysis Braun and Clark (2006) identified six phases of analysis, familiarisation of the data, coding, identifying initial themes, revising themes, and defining and refining themes. While Castleberry and Nolen (2018), identified five stages, compiling, disassembling, reassembling, interpreting, and concluding the data. Though both approaches of thematic analysis are almost identical, Braun and Clark's (2006) approach to thematic analysis was followed, where the researcher initially became familiar with the data through the transcription process, then initially began coding the data through identifying initial themes, before revising themes into sub-categories and then defining and refining them to be more

specific. This process was done through the use of MAXQDA, which allowed the data to be easily broken into colour coded themes. The findings from the process of thematic analysis were then gathered and organised accordingly, all of which are discussed in Chapter Four Findings & Discussions.

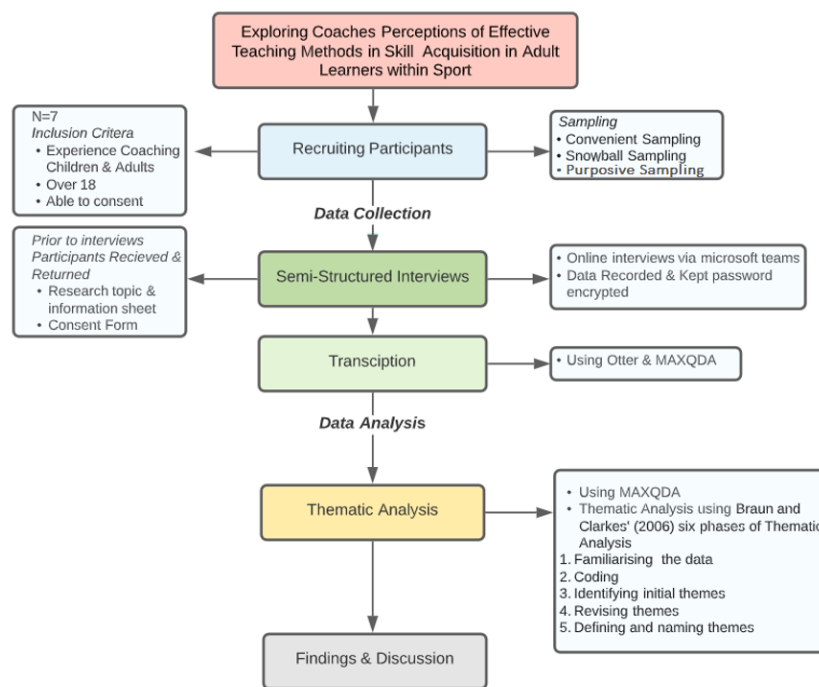


Figure 1: Research Design

### 3.4 Data Collection

Once the research questions were defined, the process of forming questions for the semi-structured interviews began, with the researcher focusing on a logical flow to questioning, beginning with general questions on participants' coaching background before moving onto specific themed questions which aimed to answer the proposed research questions.

As stated previously semi-structured interviews were the preferred method of data collection as they enabled the researcher to explore coaches' individual perspectives, allowing them to control the interview and to explore any topics which may arise during the interview process, (Ryan et al., 2009).

Due to the Covid-19 pandemic, physical social distancing measures, travel restrictions and lockdowns were put in place in several countries, including Ireland, (Chu et al., 2020). As a result of face-to-face restrictions, many studies, including this one, had to carry out qualitative data collection remotely, using online virtual platforms with participants to maintain social and physical distancing. Depending on the level of technology available to participants and their own technological skills, remote data collection through virtual interviews can cause some challenges, such as internet connection, laptop battery issues, noise disturbances or lack of privacy and or issues signing into the virtual platform, (Hensen et al., 2021). Thankfully, all of which were not an issue during this study within the interview data collection process.

A limitation of remote data collection can be the lack of rapport built among the researcher and participant with Sietz (2019) suggesting connectivity issues can result in negative rapport among the parties involved, conversely Archibald et al. (2019) suggested that the resolution and teamwork among participant and researcher during lost connectivity can in fact enhance rapport. Within this study convenience sampling was used therefore the researcher had some rapport with participants prior to data collection, however the use of emails prior to the interview process enabled the researcher to build positive rapport with participants, as suggested by Sietz (2019). According to Lobe et al. (2020) emails are the most prominent form of consent when using remote data collection, one in which was used within this study. However Roberts et al. (2021) suggested the use of email does not allow for a two way conversation and cannot truly negate whether participants fully understand the consent process, however within this study all participants were informed in detail through email of the consent

process, attaching consent forms, topic guides and information sheets along with both the researcher and supervisors contact information to follow up with any further queries, therefore participants were fully informed of the study and what their consent entailed, thus email was the preferred method of contact.

Many advantages can arise using virtual data collection techniques, it enables the researcher to probe questions, gauge understanding of questions, tailor data collection to participants experiences and enables both the participant to interview at a time and place which is suitable around their schedule without the expense or effort of travel and the researcher (Hensen et al., 2021). Within this study it was advantageous to the researcher to conduct remote online interviews through Microsoft teams as all participants were familiar with the virtual platform from their own coaching and it allowed the researcher to access participants who were from different regions around the country, a task which would have been difficult if interviews were conducted face to face.

Initially the proposed topic guide and questions were analysed and piloted with the research supervisor before testing the proposed questions within a pilot interview. However, due to the positive contribution of data received in the pilot interview the participant and information gathered was included within the study as it proved beneficial.

Prior to conducting the interview, the researcher begins recording both video and audio data from the interview while simultaneously explaining procedures to the participant, once again ensuring consent prior to commencing questioning and ensuring the participant feels comfortable and safe. The interview then commenced asking general questions before moving onto more specific themed questioning, aiming to answer the research questions. Once the interview was over, the researcher stopped the recording and thanked the participant for their

time and contribution. All seven interviews were conducted in the same manner, with all files then being encrypted and stored under password protection.

Each interview was then transcribed using the software 'Otter.ai' (2021), an artificial intelligence software, which transcribes data in a matter of minutes, however it was then double checked and verified to ensure accuracy as dialect and accents caused the software to alter words. Once this process was done the data was then coded thematically using the software MAXQDA. Once the data was coded and refined and re-coded the findings were disseminated and discussed, which can be seen in chapter 4.

### *3.5 Data Analysis*

As with the theme of this research, the data analysis process followed a qualitative approach, whereby as stated in the previous section data was collected through virtual semi-structured interviews, where it was recorded and transcribed using the artificial intelligence software, 'Otter.ai' (2021). Once the data was initially transcribed, it was then scrutinised and analysed to ensure the wording was correct, as some dialect and accent differences caused some words to be transcribed incorrectly, this process ensured any errors in transcription were rectified. The data collected was then analysed using thematic analysis with the aid of the software MAXQDA, this was done through the use of coding, whereby themes were colour coded and where reoccurring themes from each participant were identified and analysed. Coding involves two elements, a code or category which is then assigned to a piece of text, (Rädiker & Kuckartz, 2020). Initially data was broken into several categories before being subdivided into subcategories, all of which aim to identify themes which propose to answer the research questions.

According to Miles and Huberman (1994) thematic analysis allows for data to be categorised into themes, enabling one to analyse the perceptions of participants, classifying the

data gathered according to differences or similarities. Braun and Clarke (2006) identified six phases of thematic analysis, familiarisation with the data, coding, forming initial themes, reviewing themes, refining, and categorising themes and writing the findings. Miles and Huberman (1994) argue that data reduction is a key phase of data analysis, allowing the researcher to sort, organise and disregard irrelevant data in order to form final conclusion, while Braun and Clarke's (2006) six phase guide also aims to remove irrelevant data by forming key themes through a nonlinear process, where the researcher can move through the difference phases of data analysis to define themes which aim to answer the proposed research questions.

Within the data analysis process, the research followed Braun and Clarke's (2006) guide to thematic analysis, initially reading through each transcript trying to identify initial themes, before funnelling the data into more refined themes and categories, before once again creating more defined themes and sub themes to form results and findings which can be seen in chapter four.

### *3.6 Ethical Considerations*

Prior to commencing research, one must reflect on any ethical considerations, to ensure moral standards are upheld. Several key components are of paramount importance in ensuring ethical standards are met, these include:

1. Informed Consent
2. Voluntary participation
3. Confidentiality
4. Anonymity

(BERA, 2018)

Both informed consent and voluntary participation, is vital as the participant must be fully informed of what the study entails, their role within the study, how their data will be used, freedom of participation or withdrawal from the study and an understanding any implications of the study, (Fleming & Zegwaard, 2018). It is vital that participants identity remains anonymous and confidential, with assertion that both their names and self-identifying statements are protected, (Fleming & Zegwaard, 2018).

This study required ethical approval therefore an ethical application was submitted to the National College of Ireland for approval before the research process commenced. Once ethical approval was granted the participant recruitment process began. As stated previously both convenience and snowball sampling were used to recruit participants, however each participants identity was kept confidential and anonymous and it was ensured their participation was voluntary, with the researcher ensuring participants were informed they could withdraw from the study at any stage up until data analysis. It is important to note that no Vulnerable groups participated within this study. Participants were contacted individually via email, where they received a consent form, a research information sheet, and a topic guide informing them of the nature of the study. Prior to interviews commencing all participants consent forms were received and reviewed to ensure they were eligible to consent to the study.

Participants were emailed individually and sent a private link via email to an online Microsoft team meeting where due to Covid-19 restrictions a virtual semi-structured interview took place. Before commencing the interview, participants were informed of the interview process and how both audio and visual data was recorded and kept confidential via password protection and encryption. It was also noted that any written documents were kept private and confidential, being stored under lock and key. Before the interview session was completed, all participants were asked if they were happy to include all the data gathered, or if they wished to exclude or remove any information provided. Participants were notified that if they wished to



be informed of the dissemination and reporting of research through email or view the findings, they could do so by contacting the researcher through email.

### *3.7 Issues of Trustworthiness & Limitations*

As with any research issues of limitations, quality, rigour, and trustworthiness arise. This section will discuss the criteria used within this study to evaluate the trustworthiness of the qualitative research undertaken and the limitations of both qualitative research as a whole and this particular study.

Qualitative analysis aims to rationalise participants' perceptions, experiences through patterns, themes, categories and similarities and differences, Cohen, Manion, & Morrison, 2011). Qualitative inquiry has become prominent within social science, however unlike quantitative research it can be more difficult to define rigour and validity, nonetheless it is of paramount importance to establish trustworthiness and rigour. According to Lincoln and Guba (1985) trustworthiness is reputable when findings reflect the meanings illustrated by participants. Trustworthiness in research does not occur naturally, but rather the outcome of clear measures, which aim to reduce bias, (Padgett, 1998). This can be done through ensuring one's research is credible, dependable, confirmable, transferable, and authentic, (Lincoln & Guba, 1985).

Within this study the researcher aimed to enhance the rigour of the qualitative research carried out through ensuring credibility, in data collection and data analysis through using methods of audio and visual recordings, transcriptions with detailed notes and the use of reflexivity throughout the study, using a reflective journal. Reflexivity is often described as a method whereby the researcher can reflect throughout the research process, allowing the researcher to consider how their personal experiences may hinder or assist the research process in constructing meaning to data collected, (Guillemin & Gillam, 2004; Macbeth, 2001). As this

study followed an interpretivist paradigm and qualitative approach, the key instrument of data collection is heavily dependent on the researcher, therefore it is possible unconscious bias may be present, however through the use of reflexivity and acknowledging one's prior knowledge and experiences, informed the researcher of threats of trustworthiness while also furthering the research self-awareness to minimise bias.

Dependability is referred to as the reliability of qualitative research, whether the data gathered within the study is replicable with similar participant's or in a similar context, credibility cannot occur without dependability, (Lincoln & Guba, 1985). Within this study dependability was established through careful documentation throughout the research and through the saturation of data within the data analysis process. Confirmability which can be described as ensuring objectivity was established through documentation of data from the process of documenting the interview process with both audio and visual recording and through rigour in transcription, ensuring participants perceptions were reflected within the findings.

Validity and reliability of replicability is of paramount importance in quantitative research, the same applies to qualitative research whereby trustworthiness can be established through transferability, ensuring ample descriptive data is available in order for the study to be replicated with other participants or within a similar context, (Lincoln & Guba, 1985). This was done through data saturation, within data analysis and descriptive documentation of the research carried out. Finally, authenticity is vital for qualitative research to ensure the researcher accurately portrays participants' reality, through the findings depicting their experiences, views, and emotions, (Lincoln & Guba, 1985). This was done through the use of audio and visual recordings, rigorous transcription and the use of reflexivity. It is suggested that by referring back to a reflexive journal post analysis, allows the researcher to gain further insight into their findings and conclusions, interpreting data credibly and reflecting on previous research to support the findings, (Nowell et al., 2017).

However, within research imitations are inevitable, and by identifying limitations within research, not only establishes rigour but also allows the researcher to recognise areas for further research, (Greener, 2018). Within this piece there is several limitations, one of which may be the use of thematic analysis as the sole method of data analysis, rather than a combination with grounded theory or phenomenology, as there is a lack of substantial literature on thematic analysis, which may limit the process of in-depth analysis, while the flexibility of thematic analysis can cause inconsistency when forming themes, (Braun & Clarke, 2006; Holloway & Todres, 2003). Correspondingly, though efforts were made to ensure trustworthiness and quality, the use of data triangulation would have allowed for greater reliability with regards to findings, however time and manpower were a limitation therefore it was not possible but would strengthen findings if further study were undertaken.

As aforementioned time was a limitation both in data analysis, but also in conducting the study, if a longer time period were available for interviewing and transcription, it would have been possible to recruit more participants to yield stronger results from the coaching population, Similarly, it is noted that the small sample size was a limitation as it cannot truly generalise the findings of the population, thus further research would be required with a larger sample size to determine conclusive results. However, a small sample size was chosen for its feasibility due to timing, the COVID-19 pandemic and to portray quality of participants over quantity.

### *3.8 Conclusion*

This chapter aspired to give the reader insight into the research process, with detailed information of the methodology being described within sections, initially discussing the research sample of seven experienced coaches, a majority of whom had a third level education in Sports Coaching, Physical Education or Sports Science and all of whom who had experience

coaching both children and adults. This section also discussed the rationale of choosing both convenience and snowball sampling and the justification of sample size. The subsequent section discussed the research design approach, detailing the researcher's rationale for a qualitative approach over mixed-method due to face-to face restrictions because of the COVID-19 pandemic and the rationale for choosing an interpretive research design utilising semi-structured interviews and thematic analysis. The following two sections of data collection and data analysis aimed to justify the rationale for choosing virtual semi-structured interviews, artificial intelligence interview transcription using Otter and thematic analysis using MAXQDA over other preferred methods of data collection and data analysis. This chapter discussed the ethical considerations of this study while also detailing the ethical process carried out to ensure ethics were upheld. The final section of the chapter discussed both limitations and the rigour and trustworthiness of the current study and how quality of trustworthiness was justified, following the guidance of Lincoln and Guba (1985), ensuring trustworthiness through credibility, dependability, confirmability, transferability, and authenticity. Finally, research limitations were discussed with suggestions presented to strengthen the study if further research was undertaken, while also justifying the rationale of some methods chosen which posed as a possible limitation.

## **CHAPTER FIVE: FINDINGS & DISCUSSION**

## 4.1 Introduction

The objective of this study was to explore coaches' experiences and perceptions of effective coaching methods in skill acquisition of adult learners in sport, exploring the differences and similarities among adults and children in skill acquisition, and investigating the coaching methods utilised, using qualitative research design, following a phenomenological approach and interpretivist design. Seven coaches were selected through purposive, convenience and snowball sampling, six of whom who had a background in third level education in sports coaching, physical education, or sports science and one of whom who has been coaching within the industry for twenty-four years and all of whom who have several years' experience coaching both children and adults. All participants were interviewed through a virtual semi-structured interview process due to the ongoing risk of Covid-19. The questioning throughout the interview process aimed to answer three key research questions as seen below in table 1.

*Table 1: Research Questions*

<b>Research Questions</b>
1. How do coaches define their coaching as effective?
2. What coaching methods do coaches utilize when coaching children and adults?
3. What are the similarities and/or differences defined by coaches in skill acquisition in adult and child learners?

Following the data collection process, interview transcriptions were analysed using the software MAXQDA, using thematic analysis where data was coded and categorised into themes, with 215 identifiable codes emerging. These overarching themes were then further broken into sub-themes all of which aimed to answer the proposed research questions. Results from data analysis of interviews showed key themes emerging, with themes from participants' data overlapping one another. For instance, an initial question asked on the description of effective coaching, resulted in answers which correlated with the theme of effective coaching, coaching behaviour, and communication, with participants' answers relating to all three themes. However, it is important to note that to be an effective coach one must possess specific coaching behaviours and have the ability to communicate effectively with their athletes, thus some answers were destined to coincide with several themes.

The first overarching theme which was identified was Effective Coaching, with sub themes of progression, enjoyment and meaning emerging. The second overarching theme identified was Coaching methods with sub themes of questioning & guided discovery, problem based learning and experiential and game based learning emerging as the most prominent themes in relation to coaching methods. Coaching Behaviours was another overarching theme which was identified with sub themes of adaptability, knowledge and understanding and positive relationships being prominent within the data collected. Finally, the last overarching theme which aims to answer key elements of the proposed research questions is the theme of Children vs Adult Learners with sub themes of acquisition vs development, direct vs collaborative coaching and simple vs complex being identified, all of which are displayed below in table 2.

Table 2: Themes

Overarching themes	Sub theme 1	Sub-theme 2	Sub-theme 3
<b>Effective Coaching</b>	<i>Progression</i>	<i>Enjoyment</i>	<i>Meaning</i>
<b>Coaching Methods</b>	<i>Questioning &amp; Guided Discovery</i>	<i>Problem based learning</i>	<i>Experiential &amp; Game based learning</i>
<b>Coaching Behaviours</b>	<i>Adaptability</i>	<i>Knowledge &amp; understanding</i>	<i>Positive Relationships</i>
<b>Communication</b>	<i>Language</i>	<i>Positive Feedback &amp; Verbal Cues</i>	<i>Video Feedback</i>
<b>Children vs Adult Learners</b>	<i>Acquisition vs Development</i>	<i>Direct vs Collaborative Coaching</i>	<i>Simple vs Complex</i>

This chapter gives a defined description of the findings from this study, with a detailed discussion in relation to the findings and literature. This chapter will discuss each overarching theme and the sub-themes identified, with verbatim quotations and discussions for each.

## 4.2 Effective Coaching

It is evident that effective coaching was bound to be an emerging theme within findings as it is a central theme and topic within this research with the study aiming to identify effective coaching methods of skill acquisition in relation to adult learners. However, three sub-themes were identified within Effective Coaching, progression, enjoyment and meaning, a visual representation and sample of these themes can be seen below in figure 2.



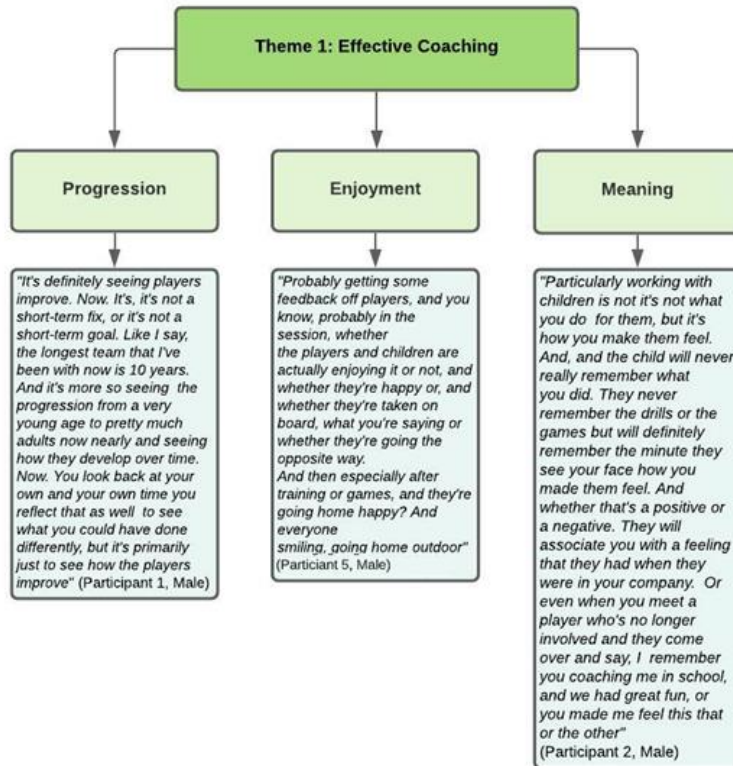


Figure 2: Theme 1 Effective Coaching

#### 4.2a Progression

Majority of coaches who participated within this study when asked to describe their coaching as effective illustrated that seeing progression in an individual was a key indicator of knowing their coaching has been effective. However, coaches not only saw physical skill progression as a key indicator of effective coaching but also personal progression of individuals' growth in confidence and self-esteem. Naturally when one thinks of the term progression, one thinks of moving on to the next phase, therefore with regard to skill acquisition, progression indicates an individual advancing their skill set and knowledge, for example some coaches within this study used skill testing as a way of measuring progression and measuring coaching effectiveness. Observations by Stratton (2005) coincide with insights within this research, that progression is an indication of successful skill acquisition and

development, arguing that the process of learning a new skill does not happen immediately but rather happens in incremental phases. Below are transcription quotations from several participants expressing their view on physical skill progression and personal progression as key components of effective coaching:

*“Just making people or seeing improvements in some young players trying to grow confidence in some players as well when they are at a young age and trying to get them to believe in themselves as well. And then seeing improvements in each session. They do and then putting it onto the pitch and when to play games and stuff”*

(Participant 7, Female Soccer/GAA Youth Coach & Personal Trainer)

*“Probably to see where the kids are out of the start or I would do a lot of skills testing as well just to kind of see where they're at the start, and then maybe test them every six eight weeks just on basic skills or basic movement skills, and then see are they actually getting the message”*

(Participant 3, Female GAA GDO)

*“I'd rate them six out of 10, in their dribbling. And if I come back in six weeks, or eight or 10 weeks from now, and they're still at a six out of 10, in dribbling., I know that I haven't made them a better basketball ball handler. Now, it may be that I'm working on some other skill sets, it may be that I'm working on their shooting, and maybe I'm working primarily on their rebounding or defence, and therefore I'd be okay with that. But then I should have seen an increase in their dribbling and rebound, or the rebound*

*and their shooting so. So, for me, yeah, there has to be a unit of measure. That's how you know you've made them better”*

(Participant 5, Male Basketball DO & Coach experience in multiple sports)

Intriguingly when all coaches were asked to describe or measure their coaching as effective or successful, not one coach mentioned extrinsic factors of success such as silver wear as the main element of success but rather suggested that though it is a factor it is not of paramount importance, stating their coaching could be measured as effective or successful through other means such as athletic and personal development. According to Horn (2011), coaching can be described as effective through successful extrinsic measures such as win-loss or of development in individual performance abilities, or intrinsic measures through an increase in one's self-confidence or self-esteem or enjoyment, corresponding with statements made by coaching participants:

*“How do you know your coaching is successful? Well, I suppose you look at a number of things, you look at the individual development within the group, you look at the group dynamics, the spirit, and the togetherness in the group. And you look at the progress that the group has made. And I suppose there's a number of ways in which you're going to make you can measure whether your coaching has been effective or not, but for me, you know, obviously, you can see progress, you know, based upon results and data and the likes of that, but, but for me, you know, progress can be can be seeing the development within a couple of individuals within the group, bringing them on seeing the group developer as well, you know, seeing the spirit grow. And obviously, then if that happens, then results probably will follow. Some of the greatest successes I had, were without trophies, you know, without winning, some of the greatest successes we*

*had was, you know, making progress with a group that maybe, you know, we're very low ability group in school, and you can see great gains in them, and you can see great progress in them. And then you can obviously see quite a few of them going on and playing for their senior clubs as well. And, and some of them can also play for their county as well. And seeing that development and growth in a player is huge, you know, was absolutely huge”*

(Participant 6, PE Teacher & Intercounty GAA Coach)

#### *4.2b Enjoyment*

The most notable emerging sub theme for effective coaching within this study was enjoyment, where coaches stated that they feel their coaching is effective when individuals are enjoying the sport, smiling, laughing, or giving positive feedback to coaches. Coaching has moved from an authoritarian style to a more holistic developmental approach which aims to focus on development growth, fun, and collaborative engagement, (Fenoglio & Taylor, 2014). It was noted that coaches also gained a rewarding sense of joy themselves when they knew their athletes were enjoying themselves and having fun. According to Cherubini (2019) when athletes have a positive attitude toward their coach, it leads to a positive environment, greater team cohesion and results in increased positive outcomes such as passion, enjoyment and increased motivation and interest.

*“With children it's enjoyment it's the sense of achievement, and is the joy of hearing them, telling everybody they're successful in what you're asking them to do. And the sense of achievement for the child is totally different than that of an adult. And I suppose one of the big things for us, when we coached children or for me personally is when*

*your session is over. If a child comes over and thanks, you for what you've done, that's a huge reward for us"*

(Participant 2, Male GAA GDA & Adult Coach)

*"As effective ehm I suppose maybe that there are like enjoying it too, I suppose that's nearly something that are enjoying the training session that they're coming up, they're giving up their time that you want to have it being worthwhile"*

(Participant 4, Female GAA GDO)

*"It's certainly down. It's going to sound like a bit of a cliché, but certainly down to enjoyment. If the players aren't enjoying it, if the coaches aren't enjoying it, it becomes very, very mundane, and almost like a chore. So, to see that, see that it's successful. It's and again, it depends on the level but that the numbers are still competitive. Not to sound archaic about it. But if you don't have the numbers in the field, there must be a reason for that. If you're coaching a successful number should maintain enjoyment should be at a very high level, regardless of the age grade. Enjoyment is number one, and then obviously, learning it will be quite high on the agenda as well"*

(Participant 1, Male GAA Youth & Adult coach)

#### *4.2c Meaning*

Though not as prominent a sub-theme as progression and enjoyment, the sub-theme of meaning arose during data analysis. Noteworthy were several statements from coaching participants expressing how with underage players in particular it is important to be careful in

how you make them feel, suggesting a negative encounter could impact their personal experience and meaning related to that sport or skill. It is acknowledged that coaching and teaching coincide, with both requiring similar attributes, however when referring to coaching it is often viewed through a behaviourist lens, however Tobias and Duffy (2009) argue it has a constructivist element in that both coaches' and athletes construct meaning of past and present experiences to construct knowledge. Mayer (2004) suggests meaningful learning transpires when the athlete is able to associate meaning to the task being learned and process and understand the information, relating it to previous knowledge.

Examples below show two separate examples of how coaches believe constructing meaning is a key element within coaching, the first whereby learners' positive or negative emotions could influence their sense of meaning in relation to that sport or skill. The second example is how constructing positive meaning with sport can have a positive impact on not only their sporting experience but their personal life also. Barker (2008) suggests that social gatherings within sport, such as team communication, can influence the construction of meanings that influence one's behaviour. If athletes feel connected to their teammate's and feel a sense of belonging within the group dynamic and with their coach, they in turn construct positive meaning to their sporting experience, (Berntsen & Kristiansen, 2020)

*“When you're when you're dealing with underage players, I always remember being told a great quote from someone he says, a young player will not always remember what you tell them, but they'll always remember how your words made them feel. So, I think it's vitally important that you use that use good language.*

(Participant 6, Male PE Teacher & Intercounty GAA Coach)

*“I think, really like that a coach can really change your life, I suppose like and you're trying to like really instil confidence. And, yes, you're coming from a GAA background, but you're trying to really instil the love of sport and physical activity. And I suppose maybe I know, the difference sport has made to my life so you'd like to think that if you can instil that love of sport and physical activity that it could change a child's life for the better and it can go down a different pathway so”*

(Participant 4, Female GAA GDO).

As participant 4, makes an interesting comment of the meaning of sport in her own life and the impact it can have on a learner, it is important to note that though the sport or activity is the same for each individual, not all learners will attach the same meaning to the sport or activity in question, particularly when referring to adults, as each individual will attach different meanings and pertain individual goals, whether it be for fun, physical activity or a competitive element, (Seippel, 2006).

### **4.3 Coaching Methods**

A key aim within this study is to examine effective coaching methods within skill acquisition in adult learners, therefore it was foreseeable that coaching methods were going to feature as a central theme. However, what was unclear was which coaching methods would emerge as sub themes within data analysis. Following the interview process several sub-themes emerged, some of which seem to coincide with one another, nonetheless they've been broken into three categories, questioning and guided discovery, problem based learning and experiential and game based learning, an example of which can be seen below in figure 3.

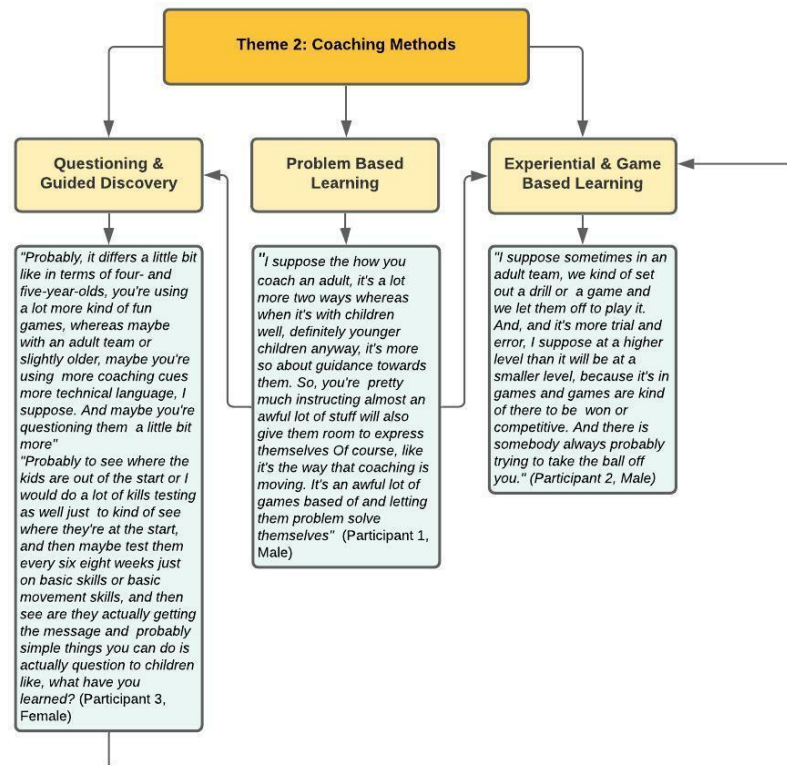


Figure 3: Theme 2 Coaching Methods

#### 4.3a Questioning & Guided Discovery

Questions are often asked by learners to acquire new knowledge, however both questioning and guided discovery are beneficial practices by coaches to promote an athlete-centred approach. Guided discovery is a method in which coaches utilise questioning to direct athletes to a specific learning outcome through their own self-directed learning, reducing coach support while increasing learner-autonomy, (Kirschner et al. 2006). Within findings from interviews, it was recorded that all coaches utilise questioning and a form of guided discovery within their coaching practice. However, as identified below from examples of statements by participant 3 and 2, questioning differs among children and adults, yet the concept behind it is the same, with both coaches aiming to gauge their athletes' understanding and knowledge of a task and



try to guide them to a specific learning outcome. Light and Harvey (2017) also identified questioning as a vital tool in contributing to athletes becoming autonomous thinkers.

*“Yeah, I would say just like, more kind of painting the picture for a child in terms of visual or getting them to, to maybe learn from each other to or like, learn from errors or like, even ask them questions like, how do you feel that job went? Or how do you feel that kick when so ask them how they felt?”*

(Participant 3, Female GAA GDO)

*“Adults, it's more sowing a seed or questioning what they did. And sometimes you just walk away and leave them there, you don't even wait for an answer. Sometimes you leave them thinking about it, because they're much more capable of understanding, particularly at a game level, what you're talking about. And now sometimes we do have to point things out to adults. But sometimes you might just say, if you kick the ball in there, and there's nobody in there, what do you think the outcome is going to be? And you might even wait for an answer, because then the player is thinking to themselves, about what you want to tell them. One of the things I work on with adults is through questioning, I get them to tell me what I want to tell them.”*

(Participant 2, Male GAA GDA & Adult Coach)

Coinciding with findings above Bowles and O'Dwyer (2020) found that when using questioning as a coaching method it provides opportunities for discussion which promotes athletes to become independent thinkers and build self-confidence, being responsible for their own development through discovery and problem solving, (William & Hodges, 2005).

#### 4.3b Problem Based Learning

Problem Based Learning often coincides with both experiential learning and guided discovery with all three methods being formed to rival traditional teacher-centred methods. The aim of problem-based learning is to assist the learner to deal with problem-based scenarios or dilemmas, aiming to promote self-directed learning, (Wood, 2003). Below participant 1, gives an example of how coaching methods have shifted toward athlete centred methods, suggesting that problem-based learning is linked with guided discovery and experiential learning through their own expressions. Within the statement below participant 1 refers to all three methods as interlinked.

*“Whereas when it's with children well, definitely younger children anyway, it's more so about guidance towards them. So, you're pretty much instructing almost an awful lot of stuff will also give them room to express themselves Of course, like it's the way that coaching is moving. It's an awful lot of games based off and letting them problem solve themselves”*

(Participant 1, Male GAA Youth & Adult Coach)

However, it is important to note that problem-based learning is effective in skill acquisition, by practicing skills in an unstable environment which encourages the athlete to alter their knowledge and learn to perform the skill under new conditions, developing critical thinking and problem solving, (Konstantaki, 2015).

#### *4.3c Experiential & Game Based Learning*

As suggested previously experiential and game-based learning positively coincide with guided discovery and problem-based learning with all coaches within the study stating they used some form of game-based learning to create authentic game-based experiences. Experiential learning is a method that argues knowledge is not fixed but it is interchangeable with one building on their knowledge through experience, (Konstantaki, 2015). Mosston and Ashworth (2008) have suggested that coaches may use a multi-method approach whereby they utilise guided discovery, questioning and game tactics using small-sided games, enabling the learner to be actively engaged within the learning process, with games enhancing their tactical, technical, and problem-solving abilities. An interesting finding which can be seen below in a statement from participant 6, is that several coaches alluded that the use of experiential and game-based learning not only allowed athletes to actively explore learning, but it has a positive impact on learners social, communication and cognitive skills.

*“I think that's the important thing they have to they have to make mistakes themselves, they have to discover, I think, more probably more effective way of developing skills, skills in young people is that development phase, that exploratory phase where they're actually exploring the game, or the skills for themselves, before you actually break thing down”.*

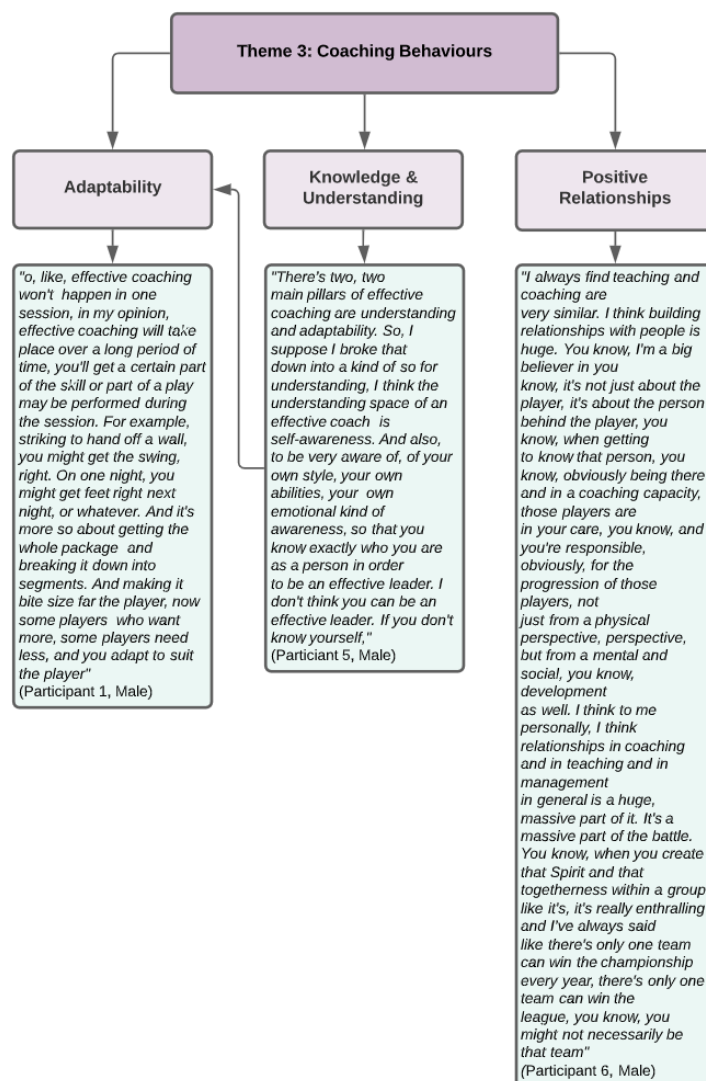
(Participant 6, Male PE Teacher & Intercounty GAA Coach)

*“And I do feel that a games-based approach to coaching is, is hugely important. The impact that games have from, from a life skills perspective, you know, so you're encouraging social skills, you're encouraging and communication, you know, you're encouraging the early onset of leadership skills, So, when you're, when you're actually trying to gauge and discover them through a games-based approach to coaching, it makes them think it makes them communicate makes the talk that brings them out of that social shell”*

(Participant 6, Male PE Teacher & Intercounty GAA Coach)

#### *4.4 Coaching Behaviours*

When referring to literature on coaching behaviour, a mixture of definitions is depicted, with some coining behaviour as one's coaching style, such as democratic, authoritarian, relaxed etc and others referring to it as coaching characteristics or traits, such as being adaptable, empathetic, compassionate etc. Findings within this study suggested that coaching behaviour is a combination of both one's coaching style and their characteristics as a coach, however the key sub-themes emerging is coach's ability to be adaptable, possess knowledge and show understanding and build positive rapport and relationships with their athletes. An example of emerging theme's is visually represented in figure 4 below.



*Figure 4: Theme 3 Coaching Behaviours*

#### 4.4a Adaptability

Adaptability was identified by coaches as a key trait to possess in order to be an effective coach, with participants illustrating that a coach has to change their coaching style, methods, and manner to adapt to suit the specific needs of their athletes, as what suits one athlete may not fit the needs of another. It was noted by Carlsson and Lundqvist (2016) that a positive increase in performance was observed when a coach altered their behaviour to suit the needs

of the athlete. Several coaches illustrated that within certain environments they would have to alter their approach to satisfy the needs of their athletes, examples of which can be seen below:

*“Yeah, I would say it probably would change between groups, like, even between the age group of children, but even maybe in some other schools as well with normally sporty schools in comparison to be an educate together or some schools though, again, maybe your approach would change then slightly, but your fundamentals would be the same, but you might just pitch it at a different level.*

(Participant 4, Female GAA GDO)

*“So adaptable to the situation is the situation requirements there is a different situation. In practice, there's a different situation of preseason games as a different situation in a competitive end of season championship game, there's a different situation midseason, there's all those different situations out of the season, like situations arise all the time. And as a coach, I have to adapt to the situation massively. You know, and that's, that's a huge part of being an effective leader, in my opinion. And then the final piece to being an effective leader or effective coach is a balanced approach of leadership. And I kind of tipped in that a second ago, when it came to adapting to the athlete, you have to be like, obviously, the three major leadership styles, the autocratic, democratic and laissez faire, I have to have a balanced approach of all three of those styles to be effective leader”*

(Participant 5, Male Basketball DO & Coach Experience in Multiple Sports)

*“Adaptability, you have to be adaptable to the athlete. So, what the athlete needs in a moment, but on also what an athlete needs over time, you have to be able to adapt as a coach”*

(Participant 5, Male Basketball DO & Coach Experience in Multiple Sports)

Literature from Pestano (2021) and Chelladurai and Carron (2016) found that athletes that have a coach who understands their need and coaching behaviour preferences have a higher level of motivation and satisfaction and can in turn enhance their performance outcomes. Therefore, one’s ability to adapt as a coach is beneficial for both psychological and physical improvements within athletic development.

#### *4.4b Knowledge & Understanding*

The terms knowledge and understanding with regard to coaching can be viewed as the coaches sports specific and interpersonal knowledge and the coaches understanding of the demands of their specific sport or their athletes. Frost (2009) defines coaching knowledge as the knowledge one possesses to communicate effectively, enhance athletic development, increase motivation, alter tactics, or game scenarios and deliver quality coaching sessions, suggesting that coaching knowledge can be endless but that it is built through experience. Findings within data analysis illustrated that coaches should have a knowledge and understanding of their sport in order to understand and coach the demands of the game. Findings also suggested that coaching knowledge and understanding is not just about the sport or the athlete but about knowing yourself as a coach and being self-aware of your coaching, examples of statements from participants can be seen below:

*“Well, effective coaching, I suppose. I suppose if they look at coaching and what you know, what is effective coaching and I suppose knowledge and understanding of the game, very first and foremost, I think you have to have a knowledge and understanding of the game”*

(Participant 6, Male PE Teacher & Intercounty GAA Coach)

*“There’s two, two main pillars of effective coaching are understanding and adaptability. So, I suppose I broke that down into a kind of so for understanding, I think the understanding space of an effective coach is self-awareness. And also, to be very aware of, of your own style, your own abilities, your own emotional kind of awareness, so that you know exactly who you are as a person in order to be an effective leader. I don't think you can be an effective leader. If you don't know yourself, your kind of just throwing crap at a wall and seeing what sticks”*

(Participant 5, Male Basketball DO & Coach Experience in Multiple Sports)

According to the International Olympic committee (2016) in order for coaches to be effective teachers they must possess a deep understanding of their sport and their athletes, while always being willing to develop and build on the knowledge they possess through continuous coach education and share their knowledge with others. Meanwhile literature from Côté & Gilbert (2009) agree with findings above suggesting to be an effective coach one must have both in depth professional, intrapersonal, and personal knowledge.



#### *4.4c Positive Relationships*

As a coach or teacher positive relationships are key in developing rapport, trust and building good communication with your athletes. However, with regard to the findings within this study when referring to positive relationships, this piece will refer to the coach-athlete dynamic where the coach focuses on personal development outside of sport specific skills, positive communication and understanding between the coach and athlete, showing care and interest. Johnson et al. (2011) details how positive relationships between the coach and athlete occur when positive communication is present, whereby the coach aims to assist the athlete with their own personal development, which in turn can lead to enhanced performance in skill development. An example of participants' statements of positive relationships can be seen below, where focus is emphasised on the coach being people orientated, understanding their athletes, and aiming to develop them both from a personal and physical aspect.

*“If you want to be a good coach, you really have to be people oriented. So having a focus on the person rather than the sport, I think if you're people orientated, you can as effective leadership really has to be people oriented”*

(Participant 5, Male Basketball DO & Coach Experience in Multiple Sports)

*“Well, I suppose Yeah, you have to, you have to gauge the room. As I always say, you know, you look at from a man management perspective, like how you would handle one individual may be different and in you handle the other individual” I suppose it comes with experience, you know, through teaching through coaching, you, you understand*

*what makes people tick, you know, and like, I think sometimes it's really like the good cop, bad cop thing where, you know, some players will need an arm around the shoulder, other players need to kick in the ass as such, in order to make it, you know, Because in coaching, the one cap fits all doesn't work. It doesn't work, you know, the one cap fits all approach certainly doesn't work. It's important that when we coach, we let young people in particular express themselves, you know, and, and, and really enjoy their football and make the environment an expressive environment where it's not robotic, it's not everybody's not just caged in with the same, you know, tarred with the same brush and let individuals be individuals, you know, because I think it's important that we do let young people grow and develop in their own unique way”*

(Participant 6, Male PE Teacher & Intercountry Coach)

Findings coincide with literature suggesting that coaching is an interactive approach, where one tries to form positive relationships with their athletes, aiming to enhance learning and performance by understanding their athlete’s needs, goals and stage within development, (Callary et al., 2017).

#### **4.5 Communication**

Communication is a key element within any role or relationship, with it being of paramount importance in producing positive results in coaching. According to Frost (2009) without positive communication, coaches would not be able to get their point across to athletes, and in turn a breakdown in communication occurs, minimising coach athlete relations and inhibiting performance. The main aim of communication within coaching is to develop skill acquisition and athletic performance, through means of verbal instructions, verbal cues, augmented feedback, video feedback or visual demonstration, (Craig, 2013). Within the findings

communication was a key theme identified, with positive communication and feedback being identified as significant factors that influence coach effectiveness and skill acquisition, with sub-themes correlating with literature by Craig (2013) emerging. A visual representation of sub-themes can be seen below in figure 5.

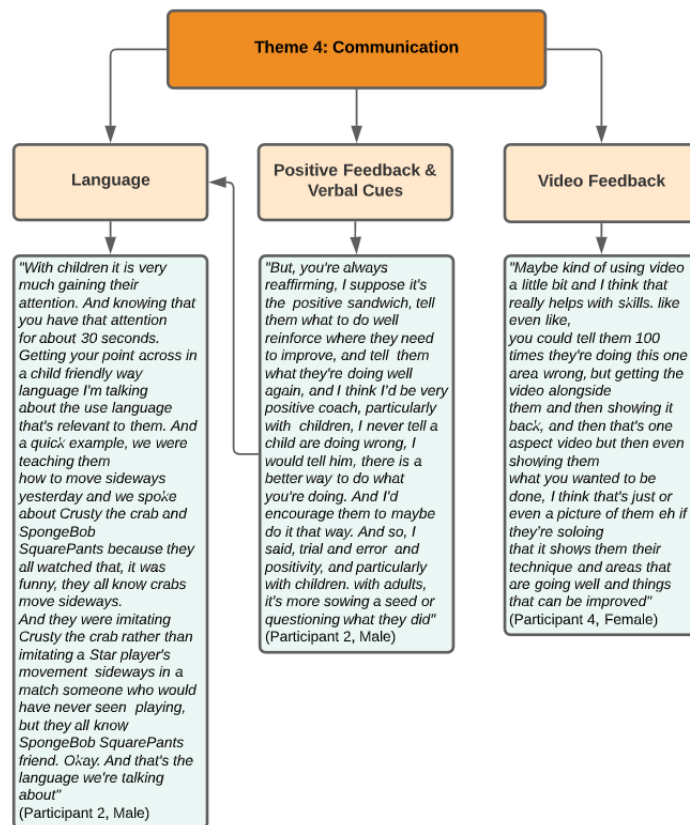


Figure 5: Theme 4 Communication

#### 4.5a Language

The term language emerged as a sub-theme as coaches identified the difference and similarities within language used, with their communication between children and adults. Though research has been carried out on communication and verbal instruction in sport, coaching participants suggested they used language, which was relatable to children such as tv characters, cartoons superheroes etc. An interesting and unique way of relating key elements

of skills for children to understand, using their imagination, and promoting enjoyment at the same time. However minimal research has been explored in relation to using this technique in skill acquisition within children, therefore it could be interesting to explore further down the line. Conversely, Johnson et al. (2011) argued that a coach and an athlete speak a shared language, suggesting that by making communication relatable it allows the athlete to not only hear feedback but also understand it.

*“Whereas maybe children, you just kind of, you're just breaking it down a little bit more and maybe using language that maybe they can understand or maybe it's cartoons, maybe it's Spider Man, or Superwoman or something like that, that you're relating the skill to something that they can relate to be at a character and on the TV”*

(Participant 3, Female GAA GDO)

#### *4.5b Positive Feedback & Verbal Cues*

Both positive feedback and verbal cues were identified as key factors which influence skill development in learners. Providing verbal cues and feedback to athletes is a vital part of a coach's role, with positive feedback and verbal cues providing the necessary information for individuals to improve their skill development and can enhance learner motivation through building confidence and self-esteem, (Van Mullem et al., 2017). Findings from this study found that coaches utilise positive feedback and verbal cues throughout their coaching process from initial introduction of the skill to later phases of skill development. However, it was noted that feedback differs between children and adults with the language and amount of feedback provided being different. While some coaches emphasised the use of verbal cues as a short snappy approach to get the necessary information across to the learner. Examples of these findings can be seen below in both statements by participant 1 and 6.

*“I think it's more so what differentiates between coach and children, or adults is the type of feedback the type of language you use the volume of feedback”*

(Participant 1, Male GAA Youth & Adult Coach)

*“Then verbal, you know, I think the verbal guidance has to be, the guidance has to be sort of very, very instructions. And the coaching points have to be very clear, they have to be very precise. And they have to be, you know, short and understandable. So, for example, if you're coaching the pickup, you know, right non pick up foot alongside the ball, get your hands in front of the ball, bend your back, you know, get the Get your toe, under the ball at the chip, Chip the ball in your hands, pull the ball up into your chest, give them four or five key coaching points, keep it very simplistic, very basic, give them that visual guidance, give them that verbal guidance, you know, and then let them explore”*

(Participant 6, Male PE Teacher & Intercounty GAA Coach)

It is proposed that short specific verbal cues, help learners to process the information needed to execute a skill or task in a profound manner, with the cues specifically focussing on key elements of the skill, (Van Mullem et al., 2017)

#### *4.5c Video Feedback*

Interestingly the sub-theme of augmented feedback such as video feedback emerged within data analysis. This was quite an interesting surprise, as the researcher has a background in relation to video and performance analysis with regard to coaching but did not consider it to appear as a prominent theme when gathering research. This finding can be linked to several coaches also having a keen interest and background within performance analysis and the

increasing use of performance analysis in amateur coaching contexts. There were several extracts from transcripts which depicted participant coaches using video feedback to improve performance or skills with both children and adults while in contrast the statement below from participant 6, utilises visual and video feedback to demonstrate a skill initially at the highest level, to instil motivation in learners to then be able to achieve that skill themselves

*“Well, look, there's, there's a number of different ways in which a child can learn, obviously, visually, and verbally, you know, if you're, if you're given if you're showing visual feedback, like if you're showing a chain of skill, like I always believe like you maybe even show them a clip of Senior inter county player performing. So, for example, we're coaching the pickup in Gaelic football, you know, show a pickup in at the highest level. Give them a visual picture in their heads of the pickup”*

(Participant 6, Male PE Teacher & Intercountry GAA Coach).

Williams and Hodges (2005) argued that coaches need to understand how the use of augmented feedback such as video has an impact on performance in conjunction with other feedback and coaching methods, suggesting that video can be influential in providing information on skill acquisition both in demonstration and to fix and correct errors in development.

#### **4.6 Children vs Adult Learners**

With relation to the proposed research questions the theme of child vs adult learners was bound to appear as an overarching theme as it is a key concept behind the study itself. The purpose of this study was to identify similarities or differences in skill acquisition and coaching methods utilised in relation to adults and children, with findings from this study not being as

black and white as the researcher anticipated. Several notable sub-themes emerged with the discussion of acquisition vs development being significant, direct coaching vs collaborative coaching and finally with regard to demonstration and information given to learners, the sub-theme of simple vs complex. A visual representation of example statements from participants which coincide with each sub-theme can be seen below in figure 6, while transcript extracts of differences between adult’s vs children are exhibited below.

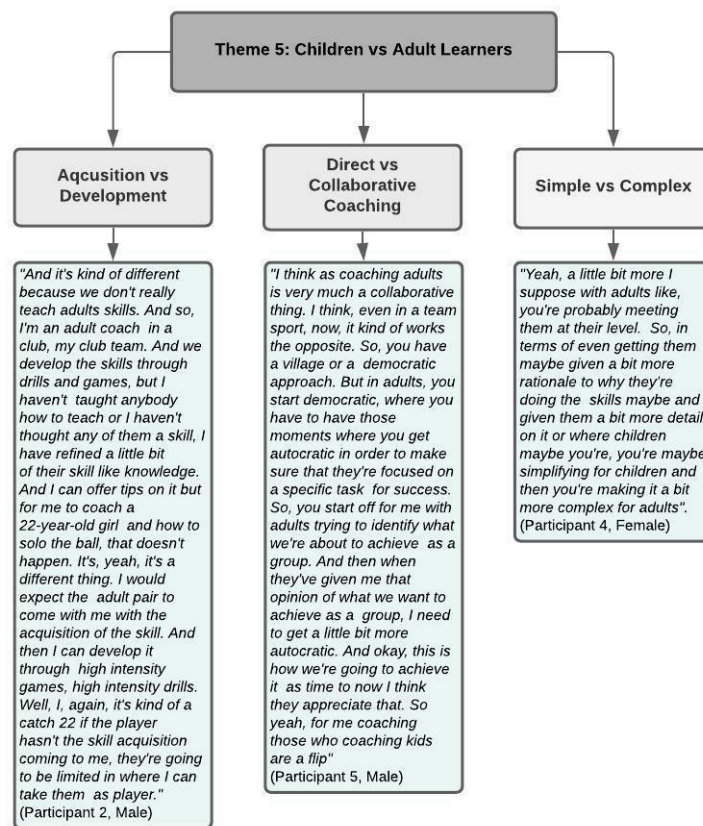


Figure 6: Theme 5 Children vs Adult Learners

*“Yeah, I think children learn very quick, very quickly, by doing it in terms of the actual physical act and doing the skill. Now, in terms of coaching the kids or children, it would be obviously the coach has to be aware of how children learn and how adults learn.”*

(Participant 1, Male GAA Youth & Adult Coach)

*“I suppose the fundamentals might be the same so maybe your approach is different. Ehm which builds on I suppose maybe with children its maybe more about their social skills and a lot more things, whereas adults are there for a reason, it's probably a little bit more specific for adults”*

(Participant 4, Female GAA GDO)

Adi-Japha et al. (2019) findings from their study agree with the statement presented by participant 1, suggesting that children learn skills in a shorter period of time than adults. While participant 4, mentioned how adults are involved in sport or learning a new skill for a specific reason, touching on sentiments from Mezirow (2003), Knowles (1977) and Merriam (2003) that adults want to be active in the learning process, directing their own learning and are there because they want to learn and achieve their own personal goals.

#### *4.6a Acquisition vs Development*

Noteworthy, conformity among almost all coaches which was very surprising, was when coaching skills with children, both skill acquisition and development is at play, however when coaching adults, they stated that as a coach they don't teach adults new skills but simply develop the skill, disputing that if an athlete has not picked up a skill by a certain age their ability to achieve a skill will be inhibited. This suggestion does not conform with literature on adult skill



acquisition by Dreyfus (2004) and has little to no mention in fundamental literature in relation to skill acquisition such as work by Fitts and Posner (1967) and Gentile (1972) in reference to both old and new literature. However, this finding could be as a result to the coaching cohort selected, with nearly all coaches, coaching at a competitive level with no new athletes emerging just for participation and to learn new skills, therefore their view could be skewed in relation to their situational context. Extracts of the transcription can be seen below from participant 2:

*“It's much the same, but how you how you coach it is totally different. And I would say that, obviously, you're coaching at different levels, and the level of application from an adult is way higher than that of a child, the intensity. And adult coaching is not coaching them how to solo or how to kick the ball, it's developing on those and is developing, those skills through games and it's developing them through high intensity drills and decision making. Whereas children are more structured as in a ball each or in lines or in circles and that sort of stuff. But there is a huge difference. With adults, it's more questioning their decisions, and why they do things, and trying to get them even to make better decisions for their team first and foremost, and then for themselves”*

(Participant 2, Male GAA GDA & Adult Coach)

#### *4.6b Direct vs Collaborative Coaching*

This sub-theme is in reference to the different coaching methods/ styles coaches suggest having taken with both adults and children. The term direct coaching being a structured coaching environment with the coach taking lead, while collaborative coaching allows for an athlete lead environment with coach and athlete collaboration through communication and allowing the learner to explore and self-direct their own learning. Findings within this study

with regard to direct vs collaborative learning showed mixed results with some coaches suggesting a direct approach must be taken with children and the majority of coaches suggesting a collaborative two-way communicative approach must be taken with adults. However, some coaches also suggested that a collaborative approach should also be taken for children, and some suggested a direct approach with adult learners. Thus, it poses the question not whether the approach taken is dependent on children vs adults but depending on the group in question and the approach that may suit the needs of the present learners. Miller and Kerr (2002) found that a coaching environment which allows for collaborative communication provides athletes the opportunity to be involved in the decision-making process and be autonomous within their own learning. While it has been argued that direct instruction and coaching approaches may be more beneficial than other interactive approaches, there has been no significant results to suggest this, but rather direct instruction may be more beneficial when used appropriately to support learning, (Lyle and Cushion, 2017). Conversely, collaborative communication allows for both the coach and athlete to have a symbiotic relationship where they can learn from one another, (Frost, 2009). The findings suggest the majority of participant coaches utilise a player-centred collaborative approach, examples of extracts from transcriptions which can be seen below:

*“Obviously when you're coaching adults, it's a lot more technical to in terms of tactics. So, there is an awful lot of communication and two ways in that side of things. I would see the main difference between coaching adults and children would be definitely the language used. I suppose the one on ones will be a lot more intense, I suppose for want of a better word with adults”*

(Participant 1, Male GAA Youth & Adult Coach)

*“I tend I suppose it's allowing the players to guide themselves onto how the session or how the game should go, or the drills should go and whether I'm right or wrong, my belief is that the coaches are there to provide the environment for the players to learn. And then the players take that, and they try and drive it on then for themselves, with the feedback to the coaches to try and make them better....., so, a two-way, two-way street as well, at the same time, if that makes sense”*

(Participant 1, Male GAA Youth & Adult Coach)

#### *4.6c Simple vs Complex*

Finally, the last sub-theme which emerged from data analysis is in relation to demonstration and communication with adult's vs children, using the term simple vs complex. All coaches were unanimous in suggesting that during demonstration and communication with children both verbal and skill instructional information must be broken down piece by piece into a simple form in order for players to understand. While some coaches expressed this approach should also be used with adult learners, the majority stated that with adults it is more complex as you are giving them a rational, and more complex feedback on technical and tactical components of a skill. Below are extracts from coaching participants which outline the discussion of simple vs complex demonstration and feedback approaches.

*“Yeah. So, if it's a new skill actually, you know, you kind of have to break it down a lot more for Kids, sometimes it'll be more just action rather than talking. But then when it's when it comes to adults, and you probably have to talk through it more .....adults actually want to learn and why they're doing the skill. And so can you just talk through the exercise”*

(Participant 7, Female Youth Soccer/GAA Coach & PT)

*“Probably the same principles apply in some ways what I suppose your that you have a different approach. So maybe when you're coaching four- and five-year-old, you're a lot more energetic? If you're trying to relate to different stories, whereas maybe when you're coaching adults, it's more kind of what's the rationale behind and maybe giving them a reason why you're doing a specific drill or specific skill. But there is difference there. There're definitely similarities. And there's definitely differences also”*

(Participant 3, Female GAA GDO)

*“Yeah, like, I suppose like, I there's two ways I tend to, coach players and forgive me, lack of the theoretical side of things, but the way I describe it would be compartmentalising skills. So, breaking it down into parts. Then leaving, I think, we describe is whole part whole”*

(Participant 1, Male GAA Youth & Adult Coach)

*And then obviously, if you're going into the, the acquisition of skill element of things, if you're looking at the way you practice, you know, whole practice, then whole part whole practice, you know where you maybe practice the skill as a whole. And then you break the skill down into parts. So right, just concentrate now on getting your non pickup foot alongside the ball, forget about picking the ball up. So just approach the ball, put your foot alongside the ball. So really, really breaking that skill down and the whole part whole practice, I think it's important to remember as well, you have a window of opportunity.*

*(Participant 6, PE Teacher & Intercounty GAA Coach)*

## **4.7 Conclusion**

This chapter gave a defined description of the findings from this study, with a detailed discussion in relation to the findings and literature. The findings from the current study were discussed in detail debating both overarching and sub-themes which were identified and relating the findings to relevant literature. Within this study the findings suggested that not one method is perceived as solely effective within coaching, that rather a holistic approach of a multitude of methods pertains to the best results. Though several key themes emerged, the most prominent themes from coaches were enjoyment, progression, building positive relationships and communication with coaches attributing several themes to their success.

## **CHAPTER SIX: CONCLUSION**

## **5.1 Introduction**

This chapter elucidates the findings from the current study in detail discussing both the findings and their aim in answering the proposed research questions. Within this study the findings suggested that not one method is perceived as solely effective within coaching, that rather a holistic approach of a multitude of methods pertains to the best results. Though several key themes emerged, the most prominent themes from coaches were enjoyment, progression, building positive relationships and communication with coaches attributing several themes to their success.

## **5.2 Summary of Research**

This study aimed to explore the effective coaching methods on skill acquisition in adult learners in sport from the coach's perspective. The objective of this study was to explore the similarities or differences between skill acquisition within adults and children and explore effective coaching methods of skill acquisition in relation to adult learners. The study followed an interpretivist paradigm using a qualitative inductive approach, seeking to explore coaches' experiences and perceptions of skill development in relation to adult learners through semi-structured interviews, with the raw data collected being organised and transcribed inductively into themes, through thematic analysis. Within this study the findings suggested that no single method of coaching is deemed most effective, that rather a holistic approach of multiple coaching methods offer the best results. Though several key themes emerged, the most prominent themes from coaches were enjoyment, progression, building positive relationships and communication with coaches attributing several themes to their success. This was quite intriguing as it correlates with research by Light & Wallian, (2008) whereby coaches utilise both cognitive and social constructivism with learners constructing meaning to the new skill

being learned, while also suggesting positive relationship and communication is important in learning and developing a new skill.

An interesting point which wasn't highlighted in the key emerging themes was the aspect of learning styles. It was asked within the interview process whether coaches believed in learning styles or preferences and though many asserted they did; it was not a prominent emerging theme which was intriguing. This could be down to the fact participating coaches were involved within team sports and it is difficult to focus on each individual's learning preference. However, coaches did reveal that during demonstrations or sessions they try to incorporate key learning preferences of visual, verbal, and kinaesthetic into their session, suggesting that by incorporating all three allows for an inclusive environment.

When conducting this research, it was pondered by the researcher whether there are any similarities or differences between adult and child learners with regard to skill acquisition. The findings were quite interesting, with all coaches stating that the fundamental principles of coaching for both are the same but the vernacular, level of feedback, training structure and demonstration methods used differed. With regards to children the findings from coaches suggested that when demonstrating a skill to children the IDEA principles is used, introduce, demonstrate, explain, and action. With many using simple breakdown and verbal cues for children with coaches compartmentalising and breaking skills into a whole-part-whole teaching methods, with positive reinforcement being a key motivation factor to develop their skills. While adults are slightly different and some coaches vary in opinion, some utilising similar methods as children with whole-part-whole teaching and some using little instruction, allowing athletes to explore through experiencing the skill or through authentic game based learner. A notable difference in opinion on adults and children is the coach's perception on their rate of learning. Some coaches suggested children were like sponges and pick up information quicker



than adults with some suggesting the opposite that adults pick up skills very quickly due to their prior experience and knowledge, coinciding with research on adult learning by Mezirow (2003), Knowles (1977) and Merriam (2003). However a key agreement among all coaches left the researcher slightly perplexed with coaches suggesting that when coaching skills with children, both acquisition and development is at play, however when coaching adults they argued that as a coach they don't teach adults new skills but simply develop and hone on their current skill set, arguing that if an athlete has not picked up a skill by a certain age their ability to achieve a skill will be inhibited.

Perhaps this finding was down to the cohort of coaches as the majority of their experience coaching adults was at a competitive level within team sports, with little to no new learners aiming to participate within a new sport at a later stage in life. Similarly, the use of coaches involved in individual sports may have yielded different results than the coaches participating within this study. It is argued that athlete motivation and coaching behaviours differ significantly among individual and team-based sports, (Aleksic-Veljkovic et al., 2016). Therefore, a more comprehensive study with regard to adult learners aiming to learn a new sports skill, with both team-based and individual sports coaches may yield more defining results on skill acquisition within adult learners. Similarly, this study did not find significant results in relation to coaches' perception of the most effective coaching methods for skill acquisition, but rather they found a holistic integrated approach more beneficial, therefore a more comprehensive longitudinal study carrying out mixed methods on adult skill acquisition could be more beneficial in answering the research questions further.

Nonetheless participants provided a wide range of rich answers which not only assisted with aiming to answer the research questions within this study but also opened the researchers' eyes

to coaching practices and how this can be utilised into practice both coaching in a sporting context and teaching within a classroom.

### **5.3 Limitations**

Limitations within research are unavoidable, and by identifying limitations within research, allows the researcher to critically evaluate areas of research which could be improved or studied further. Within this study there is some limitations evident, within data the use of thematic analysis alone rather than using it in combination with grounded theory or phenomenology is a possible limitation as there is a lack of substantial literature on thematic analysis, which may limit the process of in-depth analysis, conversely, the use of data triangulation would have strengthened the reliability of findings, however timing and manpower were a limitation therefore it was not possible, but would be a consideration for future research. As previously mentioned, time was a limitation both in data analysis, but also in conducting the study, if the researcher had more time for interviewing and transcription, it would have been possible to recruit more participants to attain stronger results from the coaching population. The small sample size was also a limitation as it cannot truly generalise the findings of the population as can be seen within the findings within this study. Therefore, further research would be required with a larger sample size to determine conclusive results, gathering coaches who coach participatory and competitive athletes. The COVID-19 pandemic had inhibited the researchers original aim for the study and in turn limited the possibility of face-to-face data collection which could have impacted the richness of participants' response.

The final limitation would be the unconscious bias of the researcher. Though the use of reflexivity etc aimed to inhibit researcher bias, human error can occur therefore it must be noted

as a possible limitation. Though several limitations have been outlined, the researcher does not see them as negatives with regard to the current study but rather learning opportunities for further research in this topic. However, qualitative research was chosen as it allows one to learn from individuals within a particular environment or explore participants' experiences, the interpretivist approach of qualitative research allowed the researcher to gain an insight into the coach's perceptions and experiences, giving rich information into the psyche of the coach. While quantitative data allows one to quantify and measure specific variables, qualitative research allows the researcher to create meaning and explore themes and perceptions in a broader fashion than quantitative research, thus allowing for richer findings and discussion on the research questions within this study.

1. How do coaches define their coaching as effective?
2. What coaching methods do coaches utilize when coaching children and adults?
3. What are the similarities and/or differences defined by coaches in skill acquisition in adult and child learners?

#### **5.4 Implications & Recommendations**

The review of literature gave a detailed insight into skill acquisition, the concept of andragogy and preferred learning methods of players, suggesting players preferred to learn through observation and visual methods of learning. However, though the findings and discussion did not specifically identify learning styles as a key theme, it was noted that to be an effective coach one must adapt their coaching methods, styles, behaviours, and communication to suit the needs of the athlete, while also noting that all participant coaches

use visual, verbal, and kinaesthetic methods of demonstration to teach a skill. Though not specifically mentioning learning preferences, the findings hint at learner specific needs. Similarly, the study mentions several coaching methods used within coaching, with no sole coaching method being perceived as the most effective but rather coaches use an integrative holistic approach. Therefore, it would be beneficial for further study to be carried out using a mixed methods longitudinal approach, whereby research can be carried out an array of coach's perceptions of skill acquisition and effective coaching methods in adults, while also exploring athletes' perceptions before undertaking an experimental intervention which aims to identify the most effective coaching methods in skill acquisition of adults. As little is known in relation to skill acquisition with respect to adult learners, this study is merely a steppingstone in aiming to gain an understanding, however further research could delve deeper into the process of motor skill learning in adults and how coaching aspects may influence the learning process.

## **5.5 Conclusion**

This study aimed to answer the three research questions of:

1. How do coaches define their coaching as effective?
2. What coaching methods do coaches utilize when coaching children and adults?
3. What are the similarities and/or differences defined by coaches in skill acquisition in adult and child learners?

The emerging themes of effective coaching, coaching behaviour, coaching methods, communication, and adult vs children aimed to answer these research questions. With regards to the second research question, a sole effective coaching method was not outlined within findings but rather a multitude of coaching methods from questioning and guided discovery,

problem-based learning, and experiential and game-based learning, all of which are methods of athlete-centred active learning, aiming to promote self-directed learning and learner autonomy. Though findings did not signify a difference between effective coaching methods among children and adults, it is evident that coaches found an integrative holistic approach as the most effective approach to coaching. Findings with regard to the second and third question overlap and correlate with one another. With findings alluding to both differences and similarities with regard to adult vs child learning, coaches suggested though children seem to learn new skills at a quicker pace, they required simplistic, positive communication. While coaches suggested that the adults, they coach generally do not acquire new skills but develop them, suggesting that short concise verbal cues, and complex technical and tactical information enhances performance, but suggested that adults develop skills at a slower pace. A possible indication of this which could be examined through further research, is the concept that adult learners want to internalise and understand the learning occurring, therefore take longer to process information. The concept of skill acquisition and adult learning is a highly interesting topic and could be scrutinised even further, as there are a multitude of pathways and opportunities to explore the topic further. This study yielded interesting and surprising results, where coaches provided a wide range of rich answers which not only assisted with aiming to answer the research questions within this study but also opened the researchers' eyes to coaching practices and how this can be utilised into practice both coaching in a sporting context and teaching within a classroom.

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## **APPENDICES**



## **APPENDIX A: RESEARCH INFORMATION SHEET**



*Exploring Coaches Perceptions of Effective Teaching Methods in Skill Acquisition in Adult Learners within Sport*

MA in Educational Practice

Informed Consent Documentation

## **Information Sheet**

Dear participant, I would like to invite you to participate in this research study, which is undertaken as part of my completion of the MA in Educational Practice in the National College of Ireland. Please take your time carefully reading this information leaflet provided, as it aims to provide you with all the necessary information regarding the aim of this study and what is involved as a participant. I am working under the supervision of Dr. Meera Oke, if you have any queries, please do not hesitate to contact me, all contact information can be found at the bottom of this sheet.

### **Who am I and What is the aim of this study?**

My name is Casey Tobin, I have an undergraduate background in BSc (Hons) in Sports Coaching and Performance and a Postgraduate Diploma in Arts in Teaching and Learning in Further Education. I have always had a keen passion and interest within sport both as a volunteer and a participant, where my initial enthusiasm of coaching inspired my love of teaching. Within my undergraduate studies and my experience coaching, I grew a keen interest in motor learning and behaviour, particularly in relation to teaching and learning new skills. It was this interest combined with my love for sport that sparked my curiosity in exploring skill acquisition in adult learners but through the eyes of the coach. Therefore, the aim of this study is to explore coaches' perceptions and experiences of teaching new skills to adult learners within a sporting context. Within this study the objective is to gain an insight into coaches' experience coaching both adults and children, noting the similarities, differences and most effective teaching method or methods used.

### **What will taking part involve?**

Your participation within this study is entirely voluntary. If you agree to participate you will be requested to read the information sheet provided, sign the consent form, and complete a one-on-one online interview with the researcher, which will be recorded for analytic and data purposes. You can change your mind and withdraw consent at any stage of the study without any repercussions. If required a topic guide can be requested prior to the interview and participants have the option to abstain from answering specific questions if they choose or to stop the interview at any time.

### **Confidentiality:**

All data and information collected as part of the study will remain confidential to the researcher and supervisor and will be password encrypted. If you wish to withdraw your data from this study, this can be undertaken up until the point of data analysis. All hard data will be kept for the duration of the project and then destroyed and soft copies of the raw data will be password encrypted on a computer. This data will be destroyed immediately after the completion of this study.

### **Contact Details**

If you have any further queries in relation to this research, you can contact:

Researcher: Casey Tobin (*x19128428@student.ncirl.ie*)

Supervisor: Dr Meera Oke (*Meera.Oke@ncirl.ie*)

**PLEASE KEEP THIS PAGE FOR YOUR INFORMATION**

## APPENDIX B: CONSENT FORM

### INFORMED CONSENT FORM

This is an informed consent form dealing with educational research, Exploring Coaches Perceptions of Effective Teaching Methods in Skill Acquisition in Adult Learners within Sport.

I, \_\_\_\_\_, confirm that (please check box as appropriate):

1.	I have read and understood the information about the project, as provided in the Information Sheet dated _____.	<input type="checkbox"/>
2.	I have been given the opportunity to ask questions about the project and my participation.	<input type="checkbox"/>
3.	I voluntarily agree to participate in the research.	<input type="checkbox"/>
4.	I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn.	<input type="checkbox"/>
5.	The procedures regarding confidentiality have been clearly explained (e.g., use of names, pseudonyms, anonymization of data, etc.) to me.	<input type="checkbox"/>
6.	If applicable, separate terms of consent for interviews, audio, video, or other forms of data collection have been explained and provided to me.	<input type="checkbox"/>
7.	The use of the data in research, publications, sharing and archiving has been explained to me.	<input type="checkbox"/>
8.	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.	<input type="checkbox"/>
9.	Select only <b>one</b> of the following: <ul style="list-style-type: none"> <li>● I would like my name used and understand what I have said or written as part of this study will be used in reports, publications, and other research outputs so that anything I have contributed to this research can be recognised.</li> <li>● I do not want my name used in this research.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>
10.	I, along with the Researcher, agree to sign and date this informed consent form.	<input type="checkbox"/>

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Print Name

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Date

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**Researcher's Signature**

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Print Name

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Date

## **APPENDIX C: TOPIC GUIDE & INTERVIEW QUESTIONS**

The interview which will take place, follows a semi-structured approach. This allows you as the participant to lead the conversation. If there is a specific question you do not wish to answer, that is your choice, and we can move onto another question. The list of questions can be seen below, and I may ask all or some of these questions, depending on the information you have provided. The questions are open to your own interpretation and your answers will be broken into themes for further analysis within this research process. If you are uncomfortable answering or elaborating on any questions, we can move on to another or stop the interview at any stage if you wish.

This interview process will be more of a discussion on your own perceptions and experiences as a coach and will approximately last 30 minutes. If you have any further queries or questions, please do not hesitate to ask.

1. Q. Could you describe your background and the sport you coach?
2. Q. How long have you been involved in Coaching?
3. Q. How and why did you get involved in coaching?
4. Q. What age or level have you coached at?
5. Q. What do you like most about coaching?
6. Q. Are coaching children the same as coaching adults?

7. Q. In what way do you think children learn skills, in contrast, in what way do you think adults learn new skills?
8. Q. What would you describe as effective coaching? Or how would you measure your coaching as effective?
9. Q. What does skill acquisition/development mean to you?
10. Q. How do you know if your coaching is successful or not?
11. Q. Is your coaching the same for each person or group you coach? If yes, why, if no, why?
12. Q. Do you believe in individual learning preferences? If so, does this influence your method of coaching a new skill?
13. Q. So you stated there are different teaching methods for adult's vs children, can you expand more on that?
14. Q. Can you share an example of this experience?
15. Q. Can you share some examples of coaching methods you use the most when coaching a new skill and why?
16. Q. Would you link any learning theory to your coaching methods of skill development?  
If so, which one and why?