

CHAPTER 11: APPENDICES

Appendix 11.1: Focus group discussion guide.

<p>Stage 1 – Introduction</p> <p>Phase one will provide an introduction to the nature of the interview to the coaches.</p>	<p>Highlight the process and procedures of the interview. introduction to cognition, the nature of the interview to the coaches.</p>	
<p>Stage 2 – Coaching background</p> <p>Phase 2 will look to explore the coach's in coaching and experiences to date with broad questions.</p>	<p>How many years have you spent playing football? How many years have you spent coaching? How many hours do you coach a week? How long have you had your FA Level 2 for? Do you have any other coaching qualifications?</p>	<p>Playing level, other sports journey</p>
<p>Stage 3 – Main section tactical knowledge</p> <p>Phase 3 will at specific questions around the coaches' game understanding and tactical knowledge</p>	<p>What format(s) of the game have you coached? What is your understanding of the principles of play? What is your understanding of tactics and strategies? Define Tactical Knowledge How have you developed your tactical knowledge? What are the key moments of the game? Do you have a favourite formation? Can you show me what your formation would look like in a specific part of the pitch in possession? (Another coach) Can you set up your formation out of possession to counteract the attacking team? Coaches asked to reverse roles</p>	<p>Attacking and defending How do you employ them in practice? Do you employ this with your current team? Final third, defending third, midfield third Coaches asked to adjust based on how the opposition team was set up. Does your formation change if you're attacking or defending? Does it change? How do you employ this in your coaching?</p>
<p>Stage 4 Closing Question</p>	<p>The final question provides closure to the focus group discussion – with coaches asked if they wish to add any additional information.</p>	
Sections	Main Questions	Probing Question

Appendix 11.2: Copy of coding of transcripts

Primary Themes	Sub-Themes related to primary theme	Direct Quotes
1.0 Principles of Play	1.1 Moments of the game <i>guess of their roles that responsibility occasion, out of occasion and in transition</i>	<p>"The principles of play obviously attacking, transition to defend, defending, transition to attack, or equally as important if you're all have a break on effect on the other they have to be equally as sufficient or equally efficient rather in all areas." - Chris</p> <p>"I'd like to see the 4 phases of the game like Chris mentioned."</p> <p>"Again obviously it's all around the 4 principles as well as you're trying to stop their attack, you're trying to exploit them as quick as you can when you win the ball so that's all around what I'd be looking for." - Mike</p> <p>Wes: "Not to familiar with these it's something I would probably have to research I would say as a lot more detail and get to understand in a bit more detail."</p>
	1.2 Attacking Principles	<p>"I would say it's not my strongest point to be honest, creativity would be an attacking principle." - Wes</p> <p>"Principles of play attacking wise it creates space, stretch the play with some height width and also having a bit of security at the same time." - Darren</p> <p>Then attacking things, like exploiting space, creativity like he said I would probably have more but like I said there is different categories." - Tom</p>
	1.3 Defending Principles	<p>delaying I would say would be a defending principle as well." - Wes</p> <p>"Defending principles of the delay, defend and deny, deny the space and staff and delay like an opponent, deflect like a shot basically everything, everything you can to stop them scoring a goal." - Tom</p> <p>"Defining principles just try and get probably 4 or 7 players back behind the ball and just do that pressure and cover and hopefully get the ball back and start again going forward." - Damien</p> <p>"A defensive point of view you're looking to deny space, restrict space all the time giving the opposition less chance to play obviously that's going to give you a better chance to hopefully win the ball back and go and play how you want to play." - Mike</p> <p>And to versa how are you going to create opportunities to make it difficult for the opposition to create chances? Chris</p> <p>Basically play narrow, stay compact don't let anything come through easily centrally, always have an outlet option, don't give the push up there if the ball comes out." - Damien</p>
	1.4 Transition	<p>"If principles as well as you're trying to stop their attack, you're trying to exploit them as quick as you can when you win the ball so</p>

Appendix 11.3: UEFA B Pre-Course Task

Below are several questions for you to think about before starting block 1 of the UEFA B course. It is up to you how much you write and the level of detail you give for each question. Some of you will be aware of the terminology, whilst for others, this may be the first time you have looked at the game in this way. This knowledge will be developed as your progress through the blocks of learning on the course.

Who We Are

What is the club's or team's purpose?	
What are your key values?	
How do you bring your values to life in your coaching?	

How We Play

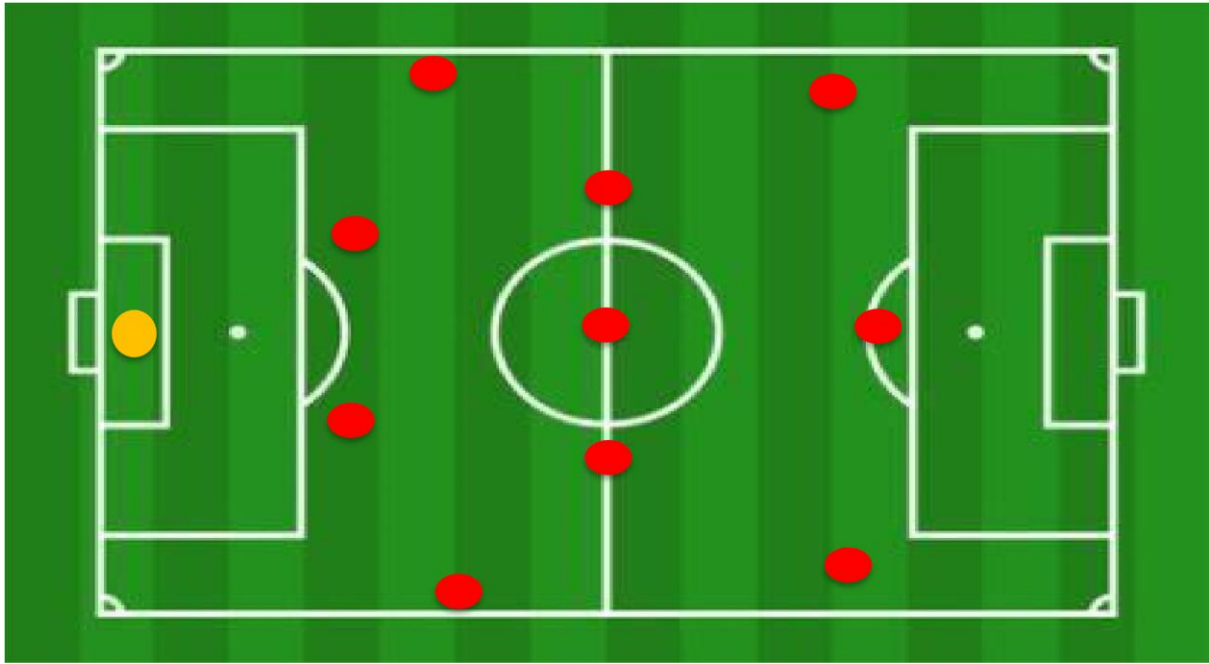
Principles of Play	What are the 4 moments of the game?	1. Transition from attack to defence
	What are the principles of play?	2.

	Can you name both sets of principles?	
	How do you apply them in your coaching?	

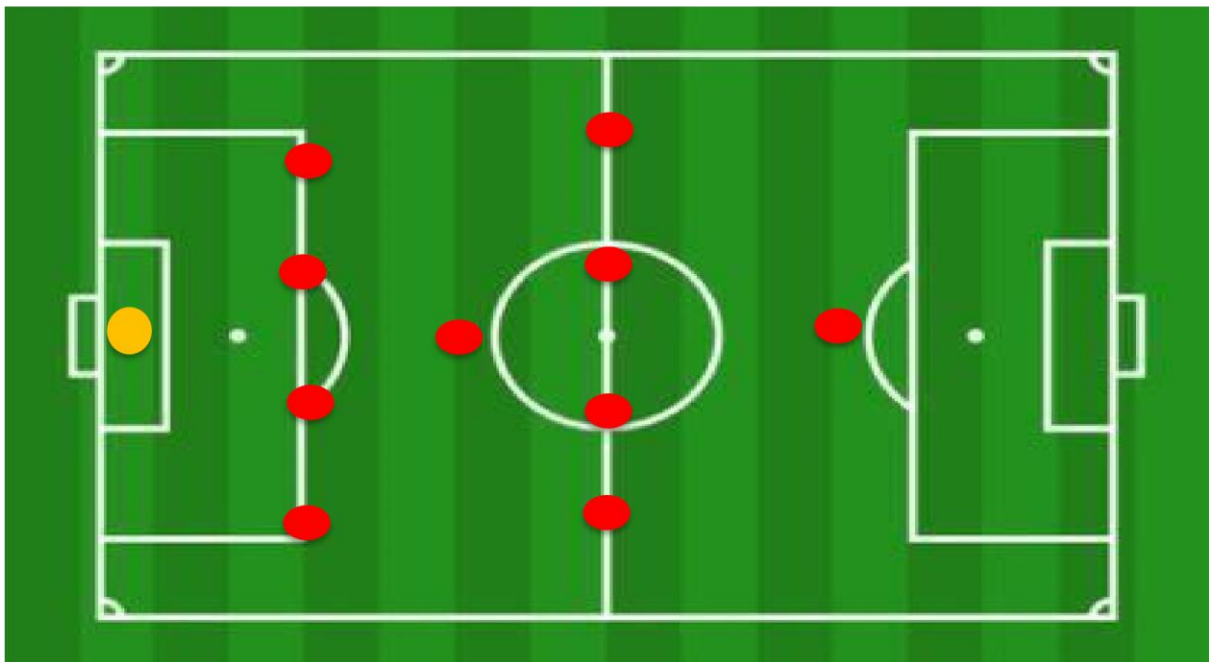
Playing styles & Strategies	Thinking about how you would like your team to play football...	
	What is your preferred style of play in possession? (Possession-based, counter-attacking etc.)	
	Do you employ this style of play with your current team?	
	What strategies and tactics do you use with your players in order to play this way?	
	What is your preferred style of play out of possession? (High Press, Defending deep etc.)	
	Do you employ this style of play with your current team?	
	What strategies and tactics do you use with your players in order to defend this way?	
Formations		
	Formation or system of play refers to the subsidiary units such as defence, midfield and attack, with a number of common formations employed within the Premier League which include: 1-4-4-2; 1-4-2-3-1; 1-3-5-2 and 1-4-3-3.	
	What is your preferred formation? <i>(*Use the templates below to explore your formation)</i>	
	Do you have the players to play this formation?	
	Does your formation change whether you are in possession or out of possession?	

See examples below and move players round into your preferred formation(s)

In Possession 1-4-3-3



Out of Possession 1-4-1-4-1



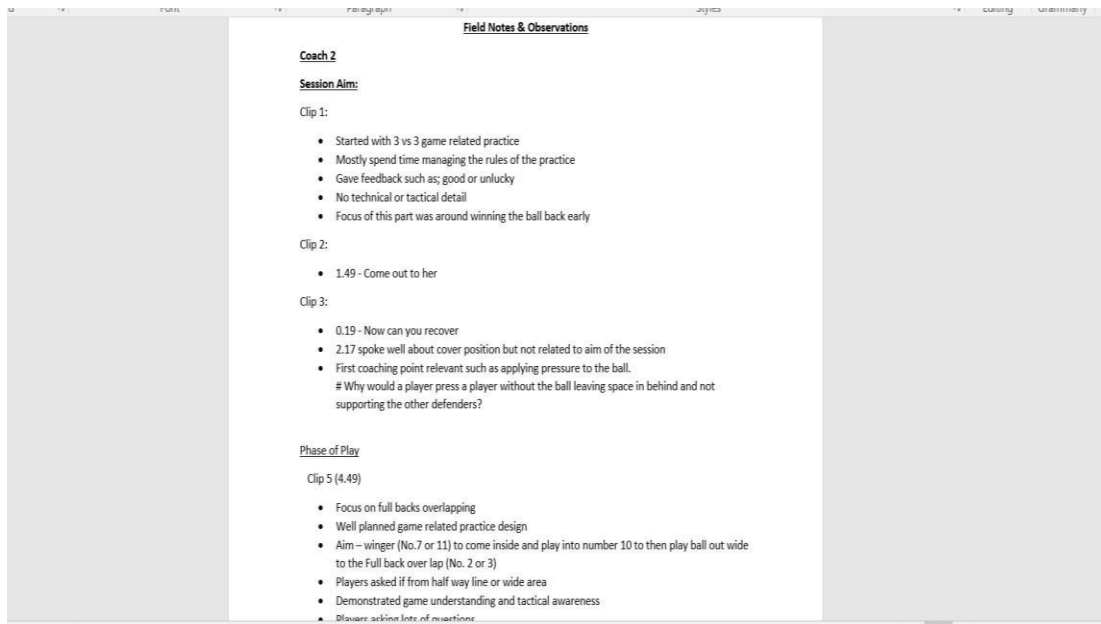
The Future Player

<p>What is your coaching context/level?</p>	
<p>Create profiles of the players in your team.</p>	
<p>Profile your players for the things that they are good at and the things they find difficult</p>	

(across the 4 corners) (*use the template below to help)	
What can the players currently do? (In relation to your preferred style of play or formation)	
Can the players implement your style or styles of play?	
How would you overcome this?	

Players initials	Characteristics	Strengths	Requires Development	Position(s) you play them in

Appendix 11.4: Example of field and analysis of study 2



Appendix 11.5: Participant Information Sheet for Interviews and Participant observation



LIVERPOOL JOHN MOORES UNIVERSITY

Participant Information Sheet for Interviews and Participant observation

LJMU's Research Ethics Committee Approval Reference:

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

Title of Study: *“The development and application of a conceptual framework;
Implementing a new game model which, will aid the development of tactical knowledge
and
game understanding of 11 vs 11 football for coaches, performance analysts and players”.*

You are being invited to take part in a research study. Before you decide it is important for you to understand why the study is being done and what participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

1. Who will conduct the study?

Study Team

Principal Investigator: Professional Doctorate in Applied Sport & Exercise Sciences student Michael Walsh, SPSMWALS@ljmu.ac.uk

Co-investigator: Allistair McRobert A.P.McRobert@ljmu.ac.uk

School/Faculty within LJMU: School of Sport and Exercise Sciences

2. What is the purpose of the study?

This study hopes to explore your current understanding of tactical knowledge and game understanding through the use of a stimulated recall. The study will consist of the recording of your team playing an 11 vs 11 game and you wearing a microphone to record the verbal information you give to your players and coaching behaviours. The footage will be coded in different moments of the game for you to review. The second part will include an interview with the researcher exploring some key moments of the game and reviewing your explanations of the situations and the behaviours that have taken place from the coded game. Topics to be explored in the study are; coaching philosophy, values and beliefs, coaching style, formations, style of play and moments of the game. To help you explain and demonstrate this a Subbuteo set with 11 vs 11 players will be used.

3. Why have I been invited to participate?

You have been invited because you are coaching in either the Youth development phase, Professional development phase or open age football. The level you coach is either grassroots football, semi-professional youth football or within the woman's professional game academies. You will be aged between 18–30 years. Furthermore, you have been selected based on the following criteria. First, a minimum of 5 years of coaching experience. Second, currently working with minimum the Youth development phase 12-16 and coaching 11 vs 11 association football for at least two years. Third, you hold a current national governing body Football Association Level 2 coaching football qualification and either applying to study the UEFA B course for the 2018/19 season or currently passed the UEFA B course during the 2017/18 season.

4. Do I have to take part?

No. It is up to you to decide whether or not to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. You can withdraw at any time by informing the investigators without giving a reason and without it affecting your rights/any future treatment/service you receive.

5. What will happen to me if I take part?

We will talk you through the study procedures and give you the chance to ask any questions.

- *The game will be at your chosen fixture and will last the full 90 minutes of the game.*
- *The researcher will come the game and record the game alongside attached a microphone to you for the duration of the game.*
- *The second part of the study will take place when you are on campus at UCFB and a convenient time for yourself when you are not in lessons.*
- *You will be asked question around the coded game analysed and game situation that occurred during the game and around your game understanding and tactical knowledge.*
- *After the current study is complete you may be contacted for future research studies related to the investigator professional doctorate.*

6. Will I be recorded and how will the recorded media be used?

The video recordings of your activities made during this study will be used only for analysis and for illustration in the current thesis. No other use will be made of them without your written permission, and no one outside the project will be allowed access to the original recordings. Game footage that has been video recorded will be recorded on a password protected video recording device and as soon as possible the recording will be transferred to secure storage and deleted from the recording device.

7. Are there any possible disadvantages or risks from taking part?

There are no disadvantages or risks in taking part. During the interviews if any of the questions asked cause you distress you can *skip the questions, although the questions asked will all be around your coaching practice.*

8. What are the possible benefits of taking part?

Whilst there will be no direct benefits to you for taking part in the study, but it is hoped that this work will help your understanding of the coaching process and game understanding.

9. What will happen to the data provided and how will my taking part in this project be kept confidential?

If necessary, personal data will be stored confidentially for 5 years after the study has finished [OR] as long as it is necessary to verify and defend, when required, the process and outcomes of research. The time period may be a number of years. Personal data will be accessible to *research team only*. Personal data collected from you will be recorded using a linked code – the link from the code to your identity will be stored securely and separately from the coded data We will not tell anyone or share that you have taken part in the study. We will also not name you in any of our reports or publications. You will not be identifiable in any ensuing reports or publications. We will use pseudonyms in transcripts and reports to help protect the identity of individuals and organisations unless you tell us that you would like to be attributed to information/direct quotes etc.

10. Limits to confidentiality

Please note that confidentiality may not be guaranteed; for example, due to the limited size of the participant sample, the position of the participant or information included in reports, participants might be indirectly identifiable in transcripts and reports. The investigator will work with the participant in an attempt to minimise and manage the potential for indirect identification of participants.

The Investigator will keep confidential anything they learn or observe related to illegal activity unless related to the abuse of children or vulnerable adults, money laundering or acts of terrorism.

In certain exceptional circumstances where you or others may be at significant risk of harm, the investigator may need to report this to an appropriate authority. This would usually be discussed with you first. Examples of those exceptional circumstances when confidential information may have to be disclosed are:

- The investigator believes you are at serious risk of harm, either from yourself or others
- The investigator suspects a child may be at risk of harm
- You pose a serious risk of harm to, or threaten or abuse others
- As a statutory requirement e.g. reporting certain infectious diseases
- Under a court order requiring the University to divulge information
- We are passed information relating to an act of terrorism

11. What will happen to the results of the study?

The investigator intends to *complete a dissertation to satisfy their degree programme / publish the results in a DProf thesis.*

12. Who is organising and /the study?

This study is organised by Liverpool John Moores University

13. Who has reviewed this study?

This study has been reviewed by, and received ethics clearance through, the Liverpool John Moores University Research Ethics Committee (Reference number: **19/SPS/021 and 19/SPS/003**).

14. What if something goes wrong?

If you have a concern about any aspect of this study, please contact the relevant investigator who will do their best to answer your query. The researcher should acknowledge your concern within 10 working days and give you an indication of how they intend to deal with it. If you wish to make a complaint, please contact the chair of the Liverpool John Moores University Research Ethics Committee (researchethics@ljmu.ac.uk) and your communication will be re-directed to an independent person as appropriate.

15. Data Protection Notice

The data controller for this study will be Liverpool John Moores University (LJMU). The LJMU Data Protection Office provides oversight of LJMU activities involving the processing of personal data, and can be contacted at secretariat@ljmu.ac.uk. This means that we are responsible for looking after your information and using it properly. [LJMU's Data Protection Officer can also be contacted at secretariat@ljmu.ac.uk](#). The University will process your personal data for the purpose of research. Research is a task that we perform in the public interest.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained.

You can find out more about how we use your information by contacting secretariat@ljmu.ac.uk.

If you are concerned about how your personal data is being processed, please contact LJMU in the first instance at secretariat@ljmu.ac.uk. [If you remain unsatisfied](#), you may wish to contact the Information Commissioner's Office (ICO). Contact details, and details of data subject rights, are available on the ICO website at: <https://ico.org.uk/for-organisations/dataprotectionreform/overview-of-the-gdpr/individuals-rights/>

16. Contact for further information

Michael Walsh, SPSMWALS@ljmu.ac.uk

Thank you for reading this information sheet and for considering to take part in this study.

Note: A copy of the participant information sheet should be retained by the participant with a copy of the signed consent form.

Appendix 11.6: 8004S POSCI Professional planning and training in applied Sports and Exercise Science

Professional planning and training in applied Sports and Exercise Science.

1.0 Self-Audit

1.1 Introduction

Self-knowledge and self-awareness have been highlighted as two significant factors in order for personal growth and self-development (Taylor, Werthner, Culver, & Callary, 2015; Whetten and Cameron 2007). An integral part of self-awareness and self-knowledge for professional practitioners lies in the form of self-assessment. Through assessing capabilities and skills against specific criteria, or set key performance indicators, practitioners are allowed to review and analyse to identify opportunities for further growth and development. A fundamental part of this process is reflective practice, as it allows practitioners to enhance their professional and craft knowledge through linking theory to practice and prompting critical thinking. Reflective practice allows practitioners to learn from and make sense of their knowledge-in-action from daily working practices and develop a greater understanding of the complexity of practice. Critical reflection leads us to develop a great understanding of our capabilities, our self-knowledge and develop a greater self-awareness (Knowles, Tyler, Gilbourne, & Eubank, 2006; Culver & Trudel, 2006; Douglas & Carless, 2008; Cropley & Hanton, 2011; Knowles, Katz & Gilbourne, 2012).

The self-audit section will critically examine three distinct areas: my own personal skills, my competency as an academic lecturer and as a researcher. The self-audit started off being a challenging process, as in order to move forward it required me to contextualise my main roles and responsibilities as a practitioner and define which discipline the majority of my time sits in. As a practitioner my role falls across three categories: academic, coaching and management. My current role is Assistant Head of Academics at UCFB Etihad Campus; it involves a number of roles and responsibilities including managing academic staff, curricular development, quality assurance, programme design, recruitment and managing budgets. Furthermore, it includes lecturing across the football and sports coaching programmes level 4 to level 7, coaching the university team and delivering coach education. The role also entails working with staff at our Partner institution, Bucks New University, and liaising with external examiners to ensure and maintain the quality of teaching and learning, academic processes and documentation. Through exploring roles and responsibilities in more depth, it became apparent that I would define my main role as an academic within a higher education institute.

1.2 Competency Frameworks

The first framework assessed my personal characteristics, utilising 'The Behavioural Profile' report developed by PDA International (2004) commonly used within the professional practice field. The report is a recognised method of assessing behavioural characteristics for the selection, management and development of talent, which can give a greater understanding of how an individual operates in their professional context. Critically reflecting upon the report, at times I felt it highlighted a number of accurate reflections of my characteristics within the behaviour profile section. However, within 'my management' style section alongside 'how to lead Mike effectively' section, I felt neither section gave a true reflection of some of my strengths nor areas I suggest require development.

The report highlighted a number of key strengths which can be built on to support my growth and development as a practitioner and during the professional doctorate. Moreover, the report highlighted a number of strengths that could be over-used and consequently be an area of development. One in particular I felt required exploring further suggested "*In an attempt to be complete and accurate, he may provide more information than is actually required*". Reflecting upon the report, I do spend a lot of time planning and thinking problems and situations through in detail, gathering as much information as possible before starting to work on projects. This quest for perfection can often be an area of weakness, as it can slow the process down and waste time on less meaningful tasks (this was also highlighted within the report). In an attempt to be accurate, at times I provide more information than is actually required and can also be too descriptive and not analytical enough. Throughout the duration of the professional doctorate, I feel I need to develop an effective writing style and the writing skills that allow me to construct an affective argument through being more specific and only addressing the key points.

The second framework applied for the self-audit assessed my skills as an academic. Exploring a number of competency frameworks for academic lecturing roles within Higher Education institutions two key areas were identified: teaching and learning, and research, with both areas associated with effective academic performance. To evaluate my knowledge, experiences and competencies, I decided to use

"The UK Professional Standards Framework for teaching and supporting learning in higher education". The framework is split into three categories: fellow, senior fellow and principle fellow. For the purpose of the audit, I chose to analyse myself against the competencies for senior fellow as it is the level I plan to apply for next.

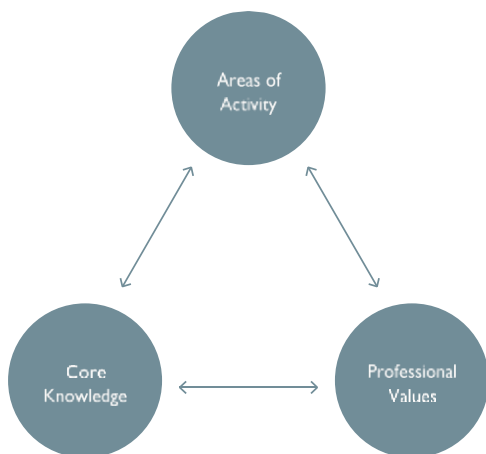


Figure 1. Dimensions of the Framework

The framework in higher education is split into three dimensions shown in **figure 1** with each dimension categorised with set criteria Areas of Activity (A1-A5), Core Knowledge (K1-K6) and Professional values (P1-P4). Reviewing my skill set against the three dimensions in the professional standards framework, I employed a qualitative approach and decided to rate each area against my skills and experiences within Higher Education. The ratings applied fell under three ratings: green (excellence), amber (competent) or red (requires improvement), shown below in **Figures 2, 3 and 4.**

Core Knowledge	
K1	The subject material
K2	Appropriate methods for teaching, learning and assessing in the subject area and at the level of the academic programme
K3	How students learn, both generally and within their subject/ disciplinary area(s)
K4	The use and value of appropriate learning technologies
K5	Methods for evaluating the effectiveness of teaching
K6	The implications of quality assurance and quality enhancement for academic and professional practice with a particular focus on teaching

Figure 2. Dimensions of Framework, Core Knowledge: The UK Professional Standards Framework for teaching and supporting learning in higher education (2011).

Critically reflecting on my roles and responsibilities as an academic over the last 10 years and evaluating my strengths and areas of development against the competency framework, a number of areas can be identified as key strengths (**Figure 2, 3 & 4**). Module leadership across levels 4 to 6 has provided me with a wider perspective on teaching, learning and quality assurance and greater understanding of subject benchmark statements. The Programme Leader roles have developed my knowledge and understanding of programmes of study, curriculum design and re-validation process

alongside my knowledge around the quality code. While the Assistant Head of Academics role has developed skills such as mentoring other academic staff, leading on internal quality provision and writing policies and procedures. As an academic lecturer, I would suggest I am working towards excellence as an academic in teaching and learning, having experience across many of the competencies within the framework (**Figures 2, 3 & 4**). This is further supported through achieving a grade 1 lesson observation in my last three observations and receiving good student feedback in module reviews with subject knowledge and experience around coaching, coach education and player development being highlighted as a strength. Through exploring the dimensions of the framework, a key area identified which requires further development is academic research highlighted in **figures 3 and 4**.

Areas of Activity

A1	Design and plan learning activities and/or programmes of study
A2	Teach and/or support learning
A3	Assess and give feedback to learners
A4	Develop effective learning environments and approaches to student support and guidance
A5	Engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices

Figure 3. *Dimensions of framework, Areas of Activity: The UK Professional Standards Framework for teaching and supporting learning in higher education (2011).*

Analysing ‘Area of Activity’ shown in **figure 3** area A5 – “Engage in continuing professional development in subjects/disciplines and their pedagogy, incorporating research, scholarship and the evaluation of professional practices” is a key area requiring development. Although within A5 I have rated myself amber, I am very active in terms of professional practice and carry out regular continued professional development in my subject discipline through attending coaching CPD run by the Football Association and coaching conferences at academic institutions and being an active coach. The area requiring development is the research and scholarship activity which can inform and develop my professional practice and carry more credibility as an academic.

The final dimension ‘Professional Values’ shown in **figure 4** highlighted another area which requires further development is V3 “Use evidence-informed approaches and the outcomes from research, scholarship and continuing professional development.

Professional Values

V1	Respect individual learners and diverse learning communities
V2	Promote participation in higher education and equality of opportunity for learners

V3	Use evidence-informed approaches and the outcomes from research, scholarship and continuing professional development
V4	Acknowledge the wider context in which higher education operates recognising the implications for professional practice

Figure 4. *Dimensions of Framework, Professional Values: The UK Professional Standards Framework for teaching and supporting learning in higher education (2011).*

Although I have over twenty years of coaching experience across academy football and coach education and currently deliver on the UEFA B licence, from an academic perspective I have a lack of experience in research and scholarly activity in the research world. For my development as a Higher Education academic, it is important to be able to use evidence-informed research to support my professional practical background and a significant reason why I decided to carry out the professional doctorate.

Building on the areas highlighted from the academic framework, the final framework assessed my research skills using Vitae Researcher Development Framework (2010). Vitae is structured in four domains and twelve sub-domains, encompassing a range of skills, qualities and techniques. The critical part with this framework came in distinguishing which sections were most relevant to assess my capabilities and research skills which will need to be developed while carrying out the professional doctorate and help me in the future as an academic.

Reviewing the four domains, I felt the most applicable section for my own development as a researcher fell in Domain A: Knowledge and intellectual abilities shown in **Figure 5**. Again I employed a qualitative approach and decided to rate each area based upon my research skills and experiences.

Domain A: Knowledge and intellectual abilities		
A1.1	Subject Knowledge	Has at least, core knowledge and basic understanding of key concepts, issues and history of thought. Knows of recent advances within own research area and in related areas.
A1.2	Research methods: theoretical knowledge	Understands relevant research methodologies and techniques and their appropriate application within own research area.

A1.3	Research methods: practical application	A range of research methods linked to study area; documents own activity .Shows growing competence in own subject area and is developing awareness of alternative methods and analysis techniques.
A1.4	Information Seeking	Acquires and develops search and discovery skills and techniques. Identifies and accesses appropriate bibliographical resources, archives and other sources of relevant information, including web-based resources, primary sources and repositories.
A1.5	Information literacy and management	Designs and executes systems for the acquisition and collation of information using information technology appropriately.
A1.6	Language	Has excellent knowledge of language(s) appropriate for research, including technical language.
A1.7	Academic literacy and numeracy	Ability to understand, interpret, create and communicate appropriately within an academic context. Prepares grammatically and syntactically correct content for presentations. Writes in a style appropriate to purpose and context for specialist and non-specialist audiences

Figure 5. Domain A: Knowledge and intellectual abilities, Vitae Researcher Development Framework (2010).

The first area I feel requires development from Domain A1.3. which I rated amber is “*The practical application of carrying out academic research and employing a range of appropriate methods and techniques with confidence*”. My experience of research to date has been solely through my own education, firstly through my undergraduate dissertation in 2005, an action research project during studying a PGCE in 2009 and, most recently, a dissertation during the study of a Masters in Sports Coaching in 2013. The research carried out thus far has used an interpretive or a qualitative approach carrying out subjective and opinion based studies. The research carried out involved observing, interpreting and analysing data recorded from viewing subjects in their natural setting in the form of interviews, focus groups and participant observation (Smith, 2003; Gratton & Jones, 2004). Although I want to continue during my professional doctorate to develop my application of interpretive approaches further, two of the studies will involve applying a positivist approach requiring me to upskill and develop my understanding of quantitative approaches. In order to apply a quantitative approach within two of the studies, I will need to design and scientifically validate a systematic observation tool for coaching behaviour in order to gather valid and reliable data (Veal, 1997; Gratton *et al.*, 2004).

The second area of development which I feel warrants attention and rated as amber, can be drawn out under A1.6 and A1.7 (**Figure 5**). I need to develop a writing style appropriate for level 8, using appropriate language for research at this level and applying the correct technical or scientific writing. I am aware, as highlighted earlier in the personal development section, that I am required to be more critical and specific when making relevant points. Developing my academic literacy skills will be a

continuous process throughout the duration of the professional doctorate. I feel I will be able to develop these skills through reading a wide range of academic journals and published studies, through designing and writing up the four studies and also through receiving constructive feedback and guidance from supervisors.

I feel a major strength identified from Vitae B3.2 is my continuous engagement in continuing professional development each year within subject matter but also relevant academic topics. Moreover, the ability to identify my own career development needs as an academic has led me to seek to gain a level 8 qualification in the form of the Professional Doctorate. This was raised during my appraisal at the end of the last academic with my line manager who supported and approved my CPD request.

In summary, to further develop as an academic, it is essential to contribute to the body of knowledge in my area of coaching and coach education. In order to do this, I need to carry out and publish my own high quality research, network and collaborate with others (both internally and externally), and to optimise the value and relevance of the research being produced to build my reputation in the field. One of the challenges I have faced and continue to face in this is that I have always worked in post-1992 institutions whose primary focus is on teaching and learning outputs rather than research. Drawing on this, the main reason I wanted to study a level 8 qualification was to carry out research, scholarly activity and write academic papers to support my development and inform coaching practice.

2.0 Research Proposal

2.1 Aim

The aim of the study is to analyse coaches' tactical knowledge and game understanding when coaching in game situations exploring how novice football coaches (FA Level 2) develop their tactical

knowledge and game understanding when moving towards becoming a developmental coach (UEFA B).

2.2 Objectives

1. Explore the tactical knowledge and game understanding of a group of FA Level 2 coaches studying on the UEFA B course during the 2018/19 football season.
2. Analysis of coaches' coaching behaviour, tactical knowledge and game understanding within a game situation.
3. An Investigation into how a coaching intervention strategy can develop coaches' tactical knowledge and game understanding within game situations.
4. Analysis of a coaching intervention strategy and the impact on the development of tactical knowledge and game understanding.

3.0 Literature Review

3.1 Principles of Play in Football

Within team invasion games, a number of fundamental principles of play have been identified. Moreover, in football, the principles of play have been split into three main moments of the game; attacking, defending and transition. Principles of play are the fundamental components of game understanding and are initially introduced during the FA Level 1 coaching award and further developed during each subsequent awards (e.g., Level 2, UEFA B, UEFA A) (Wade; 1996; Lago-Ballesteros & Lago-Penas, 2010; Tenga & Sigmundstad, 2011; The Football Association, 2016).

Attacking principles of play are established when a team attempts to form an attacking play through the maintenance of possession with the objective of creating a goal scoring opportunity (Wade, 1996; Hewitt, Greenham & Norton, 2016; Fernandez-Navarro, Fradua, Zubillaga, Ford & McRobert, 2016). Within coach education programmes, five significant attacking principles of play are taught; Creativity, Support, Movement, Create-space and Penetration. Through these attacking principles, coaches are looking for their players to position themselves strategically around the pitch in order to create space through creating and maintaining height, width and depth in order to increase the surface area of the pitch that the attacking team covers. Teams aim to dis-organise and unbalance the opposition in critical areas of the pitch in order to exploit the created space created and produce a goal scoring opportunity

(Wade, 1996; Bangsbo, 2000; Costa et al., 2009; Piltz & Launder, 2013; Hewitt et al., 2016; The Football Association, 2016; Fernandez-Navarro et al., 2016).

In contrast, defensive principles of play are established when a team is without possession of the ball.

The defensive principles taught on coach education include; Press, Delay, Cover and Balance, Compactness and Control, and Restraint (Wade, 1996; Hewitt et al., 2016; The Football Association, 2016; Fernandez-Navarro et al., 2016). Defending teams aim to achieve a balanced defence through an organised structure designed to reduce space and time by restricting the opposition to certain parts of the pitch, and ultimately regaining possession. The team without possession are required to delay the attacking team from moving forward into what are considered dangerous areas of the pitch, while at the same time looking to take up effective strategic positions. Once the team are in an organised position, the aim is to restrict the attacking team's time on the ball through applying defensive pressure and limiting the attacking team's passing options through increasing the numerical advantage in key parts of the pitch in order to force the attacking team away from goal and play in less critical areas of the pitch to prevent goal scoring opportunities and to regain possession (Wade, 1996; Bangsbo & Peitersen, 2002; Costa et al., 2009; Piltz & Launder, 2013; Clemente et al., 2014; Fernandez-Navarro et al., 2016).

Transition is the final integral principle of play and describes how teams alternate from attacking to defensive or defensive to attacking state (Hewitt et al., 2016; The Football Association, 2016).

3.2 Tactics and Strategies

Space, time and organisation have been highlighted as challenges posed by invasion games such as football. Tactics and strategies help coaches devise a plan of action in order to combat the challenges presented (Gréhaigne, Bouthier, David, 1997). The term 'dynamical system' is used to refer to a system whose behaviours are the result of self-organising properties (McGarry & Perl 2004). Football can be described as a dynamical system as it involves two opposing teams competing and directly interacting against each other, both trying to achieve the same objectives, which is to score goals whilst at the same time preventing the opposition scoring in order to win the game (O'Donoghue, 2008; Garganta, 2009). Dynamical systems theory has been used to describe the interaction between the two teams and how perturbations within games change the rhythmic flow of attacking and defending (Gréhaigne et al., 1997; McGarry, Anderson, Wallace, Hughes, & Franks, 2002). The main difficulty for scientific research is that dynamic systems cannot be predicted using static description tools as the outcome of the game may be affected by many different variables, such as home advantage, refereeing decision, and player injury, and early goal, player sent off, weather or the type of match (Gréhaigne et al., 1997; Garganta, 2009).

Tactics and strategies employed by coaches prior to and during games have a significant impact on a team's performance and subsequently can influence the outcome of the game. The predetermined tactics and strategies impact how the whole team, primary units, secondary units and individual players all interact to form tactical decisions (Yiannakos & Armatas, 2006; Carling et al., 2007; Hewitt et al., 2016; Mendonça, 2014; Tamarit, 2015; Delgado-Bordonau, & Mendez-Villanueva, 2012;

Fernandez-Navarro et al., 2016). The team's strategy and specific playing styles inform the team's functional organisation, often described as either formation or system of play and will be built around the principles of play. Formation or system of play refers to the subsidiary units such as defence, midfield and attack, with a number of common formations employed within the Premier League which include: 1-4-4-2; 1-4-2-3-1; 1-3-5-2 and 1-4-3-3. Exploring the 1-4-3-3 formation, this would include, in principle, a defending unit back four, a midfield unit of three and an attacking unit of three. The individual player position roles and responsibilities will be adapted by the coach's strategy, playing style and coaching philosophy.

Furthermore, strategies are influenced by the coach's coaching philosophy, which will have a significant impact and influence upon a team's playing style and behaviour to attacking and defending principles. Academic literature and common coaching terminology define specific playing styles when attacking or defending. Some examples of attacking playing styles include playing out from the back, playing through the thirds, playing direct, playing in wide areas, and counter attacking. Some examples of defending playing styles include high press, mid press, low press defending deep and forcing play (Garganta et al., 1997; Tamarit, 2014; Hewitt et al., 2016; Delgado-Bordonau, & Mendez-Villanueva, 2012; The FA, 2016; Fernandez-Navarro et al., 2016;).

Tactics are the instructions provided by coaches in order to influence their team's strategy and playing style. How coaches employ tactics will determine how the individual players, units and team will manage the factors of space and time (Fernandez-Navarro et al., 2016; Garganta, 2009). The specific tactics employed by coaches during games can be described as voluntary actions to be executed when a team is either in or out of possession however, these actions will be significantly influenced by the opposition alongside the state of the game such as; home or away advantage, score line, time left in the game, numerical advantage. Coaches will often change or amend tactics during a game to try and gain an advantage though looking to exploit a specific situation or cause a perturbation, changing the flow of the game (Rein & Memmert, 2016). Moreover, tactics play a vital role to inform the team, subsidiary units and individual player tactical decision-making prior to and during games (Gréhaigne et al., 1997; McGarry, Anderson, Wallace, Hughes, & Franks, 2002).

3.3 Tactical Periodization

More recently, a number of top coaches across Europe apply a more methodological and pedagogical approach to their coaching and training methods within football. Early research has been shaped by academics across Portugal and Spain, with one of the more contemporary methods of training defined as Tactical Periodization (Vitór Frade, 2004). Tactical Periodization has been identified by coaches and academics as a favourable approach to address the complex process of coaching match play. The holistic approach encompasses the idea that sessions need to be specific to the game and the coach's style of play while considering elements of the game such as technical, tactical, psychological,

physical and social (Frade, 2004; Gaitero, 2006; Tamarit, 2014; Delgado-Bordonau, & Mendez-Villanueva, 2012).

Tactical Periodization theory suggest that football tactics and strategy have to be learned and built around a logical structure of the game that can be broken down into four specific moment states of play. Frade (2004) and Oliveira (2004; 2014) define four key moments of a game: Offensive Organisation, Defensive Organisation, Transition from defence to attack, and Transition from attack to defence (**figure 6**). A coach must clearly define their game model or style of play and identify how they want their team to apply themselves in each of the four moments of the game based around the principles of play. The key part of Tactical Periodization theory is the inclusion of at least one moment of the game within every training session and include all other key elements of the game (Frade, 2004; Oliveria, 2004; Tamarit, 2014 Delgado-Bordonau, & Mendez-Villanueva, 2012).



Figure 6: *Moments of the Game*

Further research into the moments of the game in football has highlighted that set pieces form a significant part of match play with approximately 30% of goal scoring opportunities created through set pieces and has added an additional fifth moment of the game by other researchers whom devised a more updated model demonstrated in **Figure 7** (Hewitt et al., 2016; Delgado-Bordonau & MendezVillanueva, 2012; Fernandez-Navarro et al., 2016).

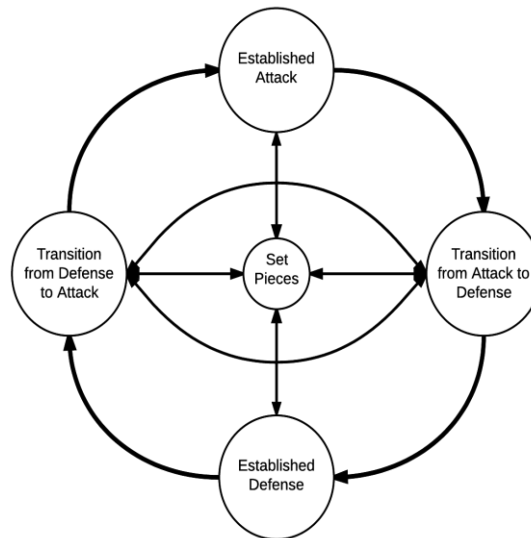


Figure 7. *Five moments of play*

In order to employ these significant moments of a game into training, a coach needs to devise what is called a ‘game model’ (Frade, 2004; Oliveria, 2004; Tamarit, 2014 Fernandez-Navarro et al., 2016). A coach’s game model is simply the operationalising of the coach’s style of play through breaking down the five moments of the game into sub-principles and sub-sub principles working with the team, units and individuals to develop their understanding in each of the moments (Mallo, 2015; Oliveria, 2014).

3.4 Coach Education

In 2016 The Football Association re-launched The FA Level 1 and 2 coaching courses after a strategic review and recruitment of a new tutor work force to take the qualification forward (FA Education, 2016). Furthermore, in 2017 The FA launched the new FA level 3 (UEFA B) in coaching football. The course allows learners to build on what they have learned on previous qualification with a focus on the player, the team and coach development (McCallum, 2017). The course includes 9 days of face-to-face theoretical and practical workshops delivered over a 9-month period as four distinct blocks of learning. The course is built around the England DNA; How We Play, The Future Player, How We Coach and How We Support (FA Education, 2016). The new UEFA B course also includes three support visits from the tutors between the blocks so that the coach’s development can be observed and developed in their own environment. The FA designed the new coaching pathway based upon on a constructivism approach that places coaches at the centre of the learning process. Coaches construct knowledge and meaning from their experiences and relate to them to their coaching context as research suggests that the development of knowledge is more effectively achieved when learners engage and are involved in the learning process (Light & Wallian, 2007). The course aims to refine and develop their coaching philosophy, develop an understanding of effective planning design,

reflective practice to meet the holistic needs of their players, and the development of tactical awareness and game understanding.

Tactical awareness, game understanding and decision making have been identified as a fundamental element of dynamic team sports such as football. Decision making is one of the key attributes that define expert coaching, although the coach's decisions are often evaluated based on the outcome of the decision rather than on the intention of their choice (Kaya, 2014). Research suggests that coaches require a skill set that allows them to make instructive choices and tactical decisions in dynamical changing situations (Gréhaigne et al, 1999; Nash & Collins, 2006; Kaya, 2014). Although there is limited evidence to support how coaches develop tactical awareness, game understanding and decisionmaking skills, several studies suggest that coaches develop coaching skills and knowledge through their own actual coaching experiences (Gilbert & Trudel, 2004; Côté, 2006; Nash & Collins; 2006; Vergeer & Lyle, 2009; Kaya, 2014). Moreover, once a coach completes a block of learning on the coaching course, their main source of knowledge within this period of development until the next block depends mostly on their own individual experience alongside observing and working with other coaches (Nash & Collins, 2006).

3.5 Coaching Analysis

Over the past 30 years, the systematic study of coaching behaviour has been examined across a range of sports (Gilbert & Trudel, 2004; Kahan, 1999; Bloom, Crumpton, & Anderson, 1999; Cushion & Jones, 2001). Systematic observational tools such as Coach Analysis Instruction (CAI), Computerized Coaching Analysis System (CCAS), Coaching Behaviour Assessment System (CBAS) and Coach Analysis and Intervention System (CAIS) have been used to provide objective and descriptive data on coaching behaviours, styles and methods of coaching, and the identification of instructional strategies (Potrac, Jones, & Armour, 2002; Smith, Smoll, Barnett & Everett, 1993; Cushion, Harvey, Muir & Nelson, 2012). Quantitative systematic observations have provided valuable knowledge regarding coaching styles and methods of instruction. However, they do not give insight into the social or contextual factors which underpin coaching behaviour (Potrac, Jones & Armour, 2010). Behavioural measures alone have been criticised for being too simplistic and not providing insight into the context of the coaching environment and due to its failure to capture both coaching behaviours and the cognitive thought process behind the coach's actions and behaviours (Ford et al., 2009; Partington & Cushion, 2011; Partington & Cushion, 2012).

In order to gain a greater understanding of the dynamical and complex nature of coaching, researchers suggest using a triangulation of methods to give a more detailed and deeper understanding of coaching behaviour (Potrac et al., 2002; 2008 Gilbert & Trudel, 2004; Potrac, Brewer, Jones, Armour, & Hoff, 2000; Cushion et al., 2012). Moreover, more recent studies into coaching behaviour have looked to employ a range of mixed-methods approaches encompassing systematic observations, semi-structured interviews and different forms of video feedback (Partington & Cushion, 2013, Cushion &

Townsend, 2018). Adding coaches' interpretations of their behaviours and explanations of their actions to observations provides an opportunity to learn about the context coaches work in. Furthermore, it can develop a greater understanding into the holistic nature and complex realities of the coaching process and provide insights on the disconnect between coaches' behaviour and rational justification for the behaviour demonstrated in practice (Cushions et al., 2012; Partington & Cushion, 2013).

3.6 Coaching Behaviour

Previous research suggests that instruction, feedback, technique correction, questioning and managing the environment are the most frequently used behaviours by sport coaches (Gilbert & Trudel, 2004; Gallimore & Tharpe, 2004). Majority of studies have observed coaching behaviours in practice with a few studies attempting to explore these behaviours in both practice and game settings (Smith & Cushion, 2006). These studies highlighted that coaches engaged in less instruction and the overall coach-athlete interaction in the game settings offered less opportunities for coaches to impact coaching, compared to practice (Smith & Cushion, 2006; Cushion et al., 2012). Coaches training sessions are often planned based on observations from the last game, therefore game day situations are a critical part of the coaching process and the coach has numerous opportunities to interact with players during the 90minute game. Pre-match preparation allows coaches to run through technical tactical information and the game model for the match, incorporating in possession, out of possession, transition play and set plays. During the game, stoppages in play and substitutions allow coaches to get key information to the players. Furthermore, half-time also gives coaches the opportunity to review the game plan and deliver tactical information to the players (Smith & Cushion, 2006; Cushion et al., 2012; Mendonça, 2014; Tamarit, 2015).

Current research suggests that in order to gain a better understanding of coaches' in game behaviours, further research is required with the use of Technology-Enhanced Learning (TEL). TEL is becoming increasingly widespread within the coaching world as it can aid coaches' development through supporting reflective practice and metacognition in order to bridge the cognitive dissonance (Cushion & Townsend, 2018). A method employed within recent studies has been in the form of stimulated recall. Through using video-clips of observed behaviours and coaching practice, simulated recall has given some insight into the interpretations behind the observed coaching behaviours, giving a meaning and context to the situation (Bloom, Allain & Gillbert, 2017). However, within the literature, although some studies have given an insight into the benefits of TEL, the implementation of technology such as videofeedback is still at an early stage and still an undeveloped researched area which requires further investigation (Cushion & Townsend, 2018; Wright et al., 2014; Butterworth et al., 2014; Groom et al., 2011).

4.0 Studies

4.1 Study 1

A qualitative approach will be employed for the research in the form of semi-structured interviews. For data collection, a digital video camera will be used to record the interview and a football tactics board with 22 magnetic players will also be available to support the subjects and allow them demonstrate their explanations. Interviewing will be influential in assessing individual coaches' perceptions of the game and analyse their current tactical knowledge and game understanding prior to starting on the UEFA B course. The semi-structured interviews will start with questions around the coaches' background and development before progressing onto the main section around the coaches' understanding of the principles of play, styles of play, tactics, strategies, coaching in games, decision making and coaching philosophy (Wade, 1996; Tamarit, 2015; Hewitt et al., 2016). For the participant selection, the sample size will be 6 coaches who have applied for UEFA B course for the 2018/19 season.

4.2 Study 2

The second study will involve observing and recording 6 coaches during a 90-minute game of 11 vs 11 Association football. The camera will be positioned in order to see the field of play while the coach will have a microphone on to record the coaches' verbal information given during the game. A qualitative approach will be employed for the research, through participant observation and secondly supported by video feedback interviews (Gratton & Jones, 2004; Cushion et al., 2012).

The use of technology will allow the observer to view the coaching session again and, using sportscodex analysis software tool, a) to code behaviours and b) to clip scenarios for video feedback interviews to review with coach in the post session interviews through stimulated recall (Bloom, Allain & Gillbert, 2017). Adding the coaches' interpretations of their behaviours observed or asking questions around tactical elements of the game observed will help to gain a greater understanding of the complex process of coaching in game situations (Partington & Cushion 2013; Cushion & Townsend, 2018).

Before the analysis can take place, an appropriate systematic observation instrument will be required to be designed that will accurately measure the coaching behaviour categories during the game. The systematic observation instrument produced will be adapted from the Coach Analysis and Intervention system (CAIS) suggested by Cushion, Harvey, Muir and Nelson, (2012). For the video-feedback interviews, coaches will review edited clips and look to identify and analyse tactical elements in relation to the principles of the game. A tactics board will be present to allow the coach or the interviewer to demonstrate solutions or set scenarios for the coach to demonstrate their knowledge (Partington and Cushion 2013; Cushion & Townsend, 2018).

4.3 Study 3

The third study will have two parts, firstly it will involve coach mentoring during a 6-month period with one group of coaches, while the second group would follow the normal UEFA B pathway. The second part of the study involves implementing an intervention strategy which will involve: observing, recording and interviewing the coaches during the 6-month intervention followed by a final interview with coaches. The intervention strategy will involve introducing the coaches to 'Tactical Periodization' theory in order to help them further develop their game understanding and tactical awareness (Frade, 2004; Oliverira; 2014). The intervention hopes to deconstruct the moments of the game to help coaches develop their game understanding through developing their own game model (Oliveria, 2014). Coaches will be observed within games and also within game related practices within training in order to allow the observer the opportunity to work with the coach, observe their game model and help them develop in-game coaching, and aid the development of understanding of the game. The feedback mechanism will involve the coach being attached with a two-way microphone to be able to talk but also receive questions from the observer.

The second part of the study will mirror study two. It will involve observing and recording the 6 coaches during a 90-minute game of 11 vs 11 Association football. The participants selected will fall into two groups; Group (1) Coaches who have gone through the informal coaching mentoring support over a 6month period. Group (2) Will have not had any additional coach mentoring and will have only been studying on the UEFA B course.

4.4 Study 4

The final study will bring the three previous studies together to analyse the impact of the intervention strategy through comparing each of the coaches' tactical knowledge and game understanding across the studies. Comparisons will be drawn on the development of the coaches on UEFA B course alongside being mentored vs coaches solely following the normal UEFA B programme of study.

5.0 Project Management & Delivery

In order for a research project to be successful, it is vital to understand project management cycles and be able to draw on a range of project management techniques and tools to help me achieve this. Due to the larger scale of the research project and the short time frame of nine- months to complete three of the studies, a range of project management strategies is critical for success. To support this, the use of a Gantt chart **figure 8** provides a visual representation of how the various stages of research will be structured through the 18-months of the project. The key strength of the Gantt chart is it can be reconfigured and updated to accommodate any changes within the study data collection process.

		2018						2019						2020							
Stage of Research		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Pre-study	Literature Review																				
	Design of systematic observation tool																				
	UEFA B Course																				
	Ethics																				
Study 1	Data Collection - Interviews																				
	Analysis of Results																				
	Write up																				
Study 2	Data Collection- Observation & Recording																				
	Analysis of Results - Coding of behaviours																				
	Post observation Interview																				
	Write up																				
Study 3	Intervention & Mentor support																				
	Data Collection - observations																				
	Data Collection - observation & Interview																				
	Analysis of results																				
	Write up																				
Study 4	Data Analysis																				
	Review of the studies																				
	Analysis of findings and write up																				

Figure 8. Gantt chart demonstrating time line to complete studies.

The proposed timescales presented in **figure 8** are constructed around the current structure of the football season and the delivery of the UEFA B Level 3 football coaching qualification. The qualification runs in line with the football season from September to May and is split into four blocks which run in September, December, March and May, which are critical points within the study.

A key part of the Gantt chart falls in the early stages before study one with design and validation of the systematic observation tool to be used in study 2. As can be seen from the Gantt chart in **figure 8** there will be overlap across studies 1, 2 and 3 due to the nature of data collection and the time frame in order to implement an intervention strategy following the delivery of block 2 on the UEFA B course in December. The Gantt chart will help clarify key priorities, set clear expectations and keep projects on track.