

***‘Professional Judgment and Decision Making in Elite Golf
Coaching: Exploring and Applying Key Principles’***

By
Mr Daniel Adams

Thesis submitted for the Professional Doctorate in Elite Performance



Awarded by the University of Central Lancashire
School of Sport and Well Being

April 2019

STUDENT DECLARATION FORM

Concurrent registration for two or more academic awards

- Either *I declare that while registered as a candidate for the research degree, I have not been a registered candidate or enrolled student for another award of the University or other academic or professional institution
- or *I declare that while registered for the research degree, I was with the University's specific permission, a *registered candidate/*enrolled student for the following award:
-

Material submitted for another award

- Either *I declare that no material contained in the thesis has been used in any other submission for an academic award and is solely my own work
- or *I declare that the following material contained in the thesis formed part of a submission for the award of
-

(state award and awarding body and list the material below):

** delete as appropriate*

Collaboration

Where a candidate's research programme is part of a collaborative project, the thesis must indicate in addition clearly the candidate's individual contribution and the extent of the collaboration. Please state below:



Signature of Candidate _____

Type of Award _____ Professional Doctorate in Elite Performance _____

School _____ School of Sport and Wellbeing _____

Abstract

Although the professional training programme for golf coaches in the UK provides education and support in a number of areas, Professional Judgement and Decision Making (PJDM) has been largely overlooked to date. The implication of the lack of training or support in PJDM is that coaches have to rely primarily on a trial and error approach for improving the decision-making skills that are extremely important to their golfers; especially those who are competing for their professional livelihoods. To further my own practice and generate insight for others, this thesis aimed to provide: a) a broad overview of the nature and parameters of PJDM in golf coaching, b) insight on the PJDM of elite-level golf coaches in home-based coaching sessions, and c) a tool that could support the application of PJDM principles in a tournament support context.

To achieve this, a survey was firstly designed around specific PJDM principles (e.g., issue conceptualisation, nature of the goal, nature of the relationship, evaluation of effectiveness) and then completed by golf coaches across multiple performance levels (e.g., club, county, national/international and tour level). Results revealed that, to effectively deliver their intentions for impact, coaches need to: 1) recognise and manage their players' tendency towards a short term outlook; 2) recognise and manage their players' relative power in the coaching relationship, and 3) continually framework against the players' longer term objectives to sell the message. As such, an observation and interview-based study was then undertaken to identify how coaches might effectively deliver their session intentions in the face of the challenges that were discovered following the survey. From the analysis, it was found that coaches worked to achieve their intentions by delivering: 1) chronic effects (i.e., coherent planning, coherent conversations and coherent expectations); 2) acute

effects (i.e., intellectual insight and kinaesthetic insight); and 3) emotion-focused regulatory effects (i.e. encouraging the moment and disrupting the moment). Finally, it was also found that coaches used time and space as a supporting mechanism when naturalistic decisions were required to be made. Reflecting the fact that many elite players receive much coaching support on the road, and my own interest in tour level golf, my focus in the final part of the thesis shifted to how chronic, acute and regulatory effects could be delivered in the unique environment of tournament golf through a ‘tournament support planner’. This self-designed planner was subsequently developed and validated within an action-research study.

Overall, this thesis has presented an insight into the broad nature and parameters of golf coach PJDM, identified specific principles that help elite golf coaches to successfully land their decisions with players, and provide a tournament support planner to assist in successfully landing coaching decisions at tournaments. This thesis is a meaningful catalyst for the awareness and future development of golf coach PJDM; a critical but significantly underdeveloped area of my own and others’ golf coaching.

Key Words: Expert Coaching, Professional Judgement and Decision Making

Table of Contents

<u>Chapter 1:</u>	<u>Introduction</u>	1
1.1.	Overview	1
1.2.	My Background and Current Role	3
1.3.	Adopting a Pragmatic Research Philosophy	5
1.4.	Objectives and Structure of this Thesis	7
<u>Chapter 2:</u>	<u>The Role of PJDM in Coaching Expertise: Building the Case for a Focus in Golf</u>	11
2.1.	Introduction	11
2.2.	Defining Expertise	11
2.3.	The Basis of Expertise: Declarative Knowledge	16
2.4.	The Role of Decision Making in Expert Coaching Practice	19
2.4.1.	Classical Decision Making: Pros and Cons	19
2.4.2.	Naturalistic Decision Making: Pros and Cons	21
2.4.3.	The “Nested Model” of Decision Making: A Scaffold for PJDM	23
2.5.	PJDM Factors in Nested Golf Coaching	27
2.5.1.	Issue Conceptualisation	28
2.5.2.	Nature of the Goal(s)	29
2.5.3.	Nature of the Relationship	31
2.5.4.	Intentions for Impact	32
2.5.5.	PJDM-Based Evaluation of Effectiveness	34
2.6.	Summary and The Next Step	35

<u>Chapter 3:</u>	<u>Exploring the Nature and Parameters of Golf Coaches’</u>	
	<u>PJDM</u>	37
3.1. Introduction		37
3.2. Method		40
3.2.1. Participants		40
3.2.2. Survey Design and Questions		41
3.3. Procedure		44
3.4. Results and Commentary		45
3.4.1. Issue Conceptualisation		45
3.4.2. Nature of the Goal		51
3.4.3. Nature of the Relationship		54
3.4.4. Decision-Based Evaluation of Coaching Effectiveness		62
3.5. General Discussion		64
3.5.1. Summary of Findings Across Coaching at All Levels		66
3.5.2. Considerations for Elite Level Coaching		68
3.6. Summary and the Next Step		74

<u>Chapter 4</u>	<u>Exploring the Delivery of Session-Level Intentions for</u>	
	<u>Impact in Elite-Level Golf Coaches</u>	76
4.1. Introduction		76
4.2. Method		77
4.2.1. Design		77
4.2.2. Participants		78
4.2.3. Recruitment		78
4.2.4. Data Collection		79

4.2.5. Analysis	81
4.2.6. Quality and Trustworthiness	82
4.3 Results	83
4.3.1. Chronic Effects	85
4.3.1.1. Coherent plans	85
4.3.1.2. Coherent expectations	91
4.3.1.3. Coherent conversations	94
4.3.2. Acute Effects	97
4.3.2.1. Intellectual insight	97
4.3.2.2. Kinaesthetic insight	99
4.3.3. Regulatory Effects	103
4.3.3.1. Disrupting the moment	104
4.3.3.2. Encouraging the moment	106
4.3.4. Creating Time and Space	108
4.4 Discussion	110
4.4.1 Integrating the Findings with Previous Literature: Why Might the Effects Help?	111
4.5 Strengths and Limitations of the Study	113
4.6 Summary and The Next Step	115
 <u>Chapter 5</u>	
Elite Tournament Support: Outlining the Challenge and What This Means for the Coach	117
5.1. Introduction	117
5.2. The Challenges of Coaching at Tournaments	119
5.2.1. The Tournament Player	120

5.2.2. The Tournament Coach	123
5.2.3. The Tournament Format and Environment	124
5.3. What This All Means for the Coach: Preparing and Performing as a Coach at Tournaments	126
5.4. Summary and The Next Step	129
 <u>Chapter 6</u>	
Applying and Refining PJDM Principles at Tournaments	130
6.1. Introduction	130
6.2. The Tournament Support Planner	131
6.3. Method	135
6.3.1. Design	135
6.3.2. Participants	136
6.3.3. Data Collection	137
6.3.4. Data Analysis	140
6.3.5. Quality and Trustworthiness	141
6.4. Results	142
6.4.1. Tournament One	143
6.4.1.1. Refinement of Planner	147
6.4.1.1.1. Refinement 1 – Increase checklist of potential disruptions	147
6.4.1.1.2. Refinement 2 – Greater consideration of player’s needs/requests from previous event.	148
6.4.2. Tournament Two	149
6.4.2.1. Refinement of Planner	155

6.4.2.1.1. Refinement 1 – Cues/Quotes/Analogies to prioritise process thinking	155
6.4.2.1.2. Refinement 2 – Increase list/strategies to help create time and space	156
6.4.3. Tournament Three	158
6.4.3.1 Refinement of Planner	164
6.4.3.1.1. Refinement 1 – Consultation Section	164
6.4. Overall Reflections	169
6.4.1. Future Refinements of the Tournament Support Planner	171
6.4.2. Study Strengths and Limitations	172
<u>Chapter 7: Summary of Findings, Implications and Conclusions</u>	174
7.1. Summary of Findings	174
7.2. Implications	176
7.2.1. Implications for Golf Coaches	176
7.2.2. Implications for Golf Coach Education	179
7.2.3. Implications for Golf Coach Research	182
7.3. Final Reflections and Moving Forward	183
References	185
Appendix	209
<u>Appendix Table of Contents</u>	209
<u>Appendix A:</u> Golf Coach PJDM Survey	210
<u>Appendix B:</u> Chapter 4	
B (i) Pre-Observation Interview with Coach	215
B (ii) Post-Session Interview with Coach	216

B (iii)	Post-Session Interview with Player	217
B (iv)	Participation Information Sheet	218
B (v)	Informed Consent Form	220
<u>Appendix C:</u> Chapter 5		
C (i)	Post-Session Interview with Player	221
C (ii)	Participation Information Sheet	222
C (iii)	Informed Consent Form	224
<u>List of Figures:</u>		
Figure 2.1.	The Interaction Model of Coaching Knowledge	17
Figure 2.2.	The Nested Model	24
Figure 3.1.	Average time spent deciding what to work on and in what way	46
Figure 3.2.	Average time spent deciding the best way to work on a new goal(s) when requested to do so by the player	48
Figure 3.3.	Prevalence of different main goals in all coaching relationships	50
Figure 3.4.	Prevalence of different main goals in all coaching relationships	51
Figure 3.5.	Coaches' preferred main goal with current players	52
Figure 3.6.	Coaches' perceptions of their players' preferred main goal	53
Figure 3.7.	Type of main goal both the participant and their player end up working towards	54
Figure 3.8.	Relative contribution of coach and player towards the decision on the goal timescale	55
Figure 3.9.	Extent of coach adherence to requested change in focus from player	57
Figure 3.10.	Average length of coaching relationship	58

Figure 3.11.	Percentage of players with a ‘quick fix’ mentality as perceived by coaches	59
Figure 3.12.	Coaches’ perceptions of who normally decides when, where and how often coaching occurs.	60
Figure 3.13.	Level of face-to-face contact between coach and player	61
Figure 3.14.	Level of contact between coach and player beyond face-to-face	61
Figure 3.15.	Location where coaches normally see their players	62
Figure 3.16.	Markers of effectiveness used by coaches to evaluate their decisions	63
Figure 3.17.	Markers of effectiveness used by players to evaluate their coaches’ decisions	63
Figure 3.18.	Most significant marker for coaching effectiveness as perceived by the coaches	64
Figure 6.1.	The Tournament Support Planner	135
Figure 6.3.	Tournament one completed planner	145
Figure 6.4.	Tournament two completed support planner	153
Figure 6.5.	Tournament three completed support planner	160
Figure 6.6.	Final refinement of Tournament Support Planner	167

List of Tables:

Table 4.1.	Participant demographics	79
Table 6.2.	Participant demographics	137
Table 6.3.	Tournament one deductive summary table	146
Table 6.4.	Tournament two deductive summary table	141
Table 6.5.	Tournament three deductive summary table	162

Acknowledgments

Firstly, and most importantly, I am forever grateful for the support and guidance from my lead supervisor Andrew Cruickshank. Without Andrew's invaluable supervision, I can honestly say this thesis would never have been completed. His patience and support helped ensure the thesis was complete whilst balancing my heavy workload as a full time golf coach. Ultimately, Andrew provided the eye-opener that was required to not only complete the thesis but to also see coaching on the front line in a new light, one that I believe has positively enhanced my own coaching practice.

I would like to thank Aine MacNamara for her initial contribution and support during the PG Cert and PG Dip stages of the D.Prof. Some of the insights provided through her guidance are reflected in the thesis work, whilst also providing food for thought moving forward as a researcher and coach. Grateful acknowledgments also go to Dave Collins who helped with formation of ideas early on in the thesis.

With regards to social support, Howie Carson has given countless hours on the phone providing support and discussing coaching practice in general. His professional conduct ensured his support was one that did not interfere with the specifics of the doctorate, but one that provided encouragement and support to complete it as a whole.

Finally, I would like to thank my family and friends who have supported me across this journey, providing support and encouragement across the doctorate course.

Key Abbreviations

CDM Classical Decision Making

NDM Naturalistic Decision Making

PGA Professional Golfers Association

PJDM Professional Judgment and Decision Making

Chapter 1:

Introduction

1.1. Overview

As a golf coach, arguably your main role is to provide best practice services to enhance a golfer's performance levels. To meet this challenge, those individuals in coaching and governance (e.g., the PGA) have, by and large, prioritised an understanding of the techniques of the game and how they can be learned, improved, or embedded. In line with this, most if not all professional training platforms for coaches, such as the PGA, strongly reside in the technical realm, with some moderate training in the fields of psychology, physiology and biomechanics (Professional Golf Studies, 2017). Indeed, one of the key skills that golf coaches are encouraged to 'master' is the ability to not only identify a performance issue in a short period of time, but to also implement a solution to help improve the golfer's performance levels. This is evidenced through the PGA's final year golf coaching examination, where a trainee golf coach will meet a golfer for the first time; from there they are required to deliver a 30minute golf lesson where they will be required to identify the performance issue but also adjust a *technical* aspect that will immediately solve it (Professional Golf Studies, 2017).

Given this focus, it is perhaps no surprise that golf coaching literature has predominantly placed its attention towards performers and the study and application of science that can support the process of skill acquisition, skill change, skill establishment or skill execution. For example, such work has been undertaken in areas such as biomechanics (Brown, Selbie & Wallace, 2013; Meister, Ladd, Butler, Zhao, Rogers, Conrad & Rose, 2011; Nesbit & McGinnis, 2011, Nesbit, 2005), psychology (Fisher & Etnier, 2014; Hemmings, 2011; Finn, 2008; Jenkins, 2007) and

physiology (Callister & Lubans, 2011; Smith, 2010; Smith; Fletcher & Hartwell, 2004). Of course, these works have provided an important opportunity to enhance the declarative and procedural knowledge base of coaches (and other practitioners) in terms of technical aspects of golf performance (i.e., what coaches might do when working with a player and why). However, the actual coaching process in golf seems to have been considered in significantly less detail, on both an applied and research level. In other words, coaching courses and golf literature have done much to build and share knowledge on *what* a coach can do, especially when it comes to technique, but relatively little on *how* they might deliver this.

In particular, there is currently little empirical understanding of decision-making in golf coaching; a problematic situation given that the coaching process (in any sport) requires a continual series of goal-based decisions (Abraham & Collins, 2011). For example, there seems to have been little work done – either by researchers or the leaders of coaching courses – on the conditions under which golf coaches have to make decisions, how they then decide what to work on and against what timescale, why they decide to work on specific areas instead of others, and how they assess the relevance and impact of their judgments and decisions. Moreover, little evidence-based information is available on how golf coaches work to *deliver* their decisions on what is to be worked on, when, and how; in other words, evidence on how they get their decisions ‘to land’ with players. Indeed, despite the recent study and application of professional judgement and decision making (hereafter PJDM) in other domains of coaching (Abraham & Collins, 2011), I am not aware of any research that has explored how professional judgment and chains of decision-making are best formed and delivered by those operating in the specific context of golf. Additionally, PJDM also doesn’t seem to be a current, or at least explicit focus in golf coaching pathways

around the world. Therefore, upcoming coaches are having to approach the coaching process mainly through a process of trial and error. Accordingly, my thesis aimed to explore the crucial but underexplored and underdeveloped area of PJDM in coaching practice in golf.

1.2 My Background and Current Role

My first engagement with golf was at the young age of 8 years when I started hitting shots with my dad on the beach with an old cut down hickory (wooden shaft) golf club. From there I then progressed onto the municipal/public golf courses and eventually joined my first private golf club. Having not been able to fund private golf tuition myself, my golfing skills were not as high as some others in a similar age bracket. However, I was fortunate enough to have a mentor, who was also a member of the same golf club, pay for private lessons with the ‘best coach’ in the area, Alan Thompson. My handicap at the time was 7, and after just 6 months of working with Alan my handicap plummeted to +1. Despite the coaching being tailored towards my own personal skill development, my interest quickly shifted to understanding coaching in general. At this point I had just finished my BA (Hons) degree with the University of Central Lancashire, receiving a 1st class and the Gilberston Excellence Scholarship to continue my studies further. Consequently, I decided to turn professional and complete the professional training programme, the PGA’s foundation degree in professional golf through the University of Birmingham whilst also completing my professional doctorate degree at the University of Central Lancashire. It is during this latter phase of study where my applied coaching experience also began.

Over the last decade I have coached golf across many performance levels, from beginner golfers first engaging with the game to professional golfers competing

for major championships. Fortunately, my first engagement with golf coaching was in the context of elite performance. This was due to my first real employment as an assistant golf professional being under the watchful eye of England Golf and European Tour coach Alan Thompson. During this time I spent countless hours debating coaching theories along with shadowing Alan's coaching sessions with England Golf and European Tour golfers. To compliment this, at the age of 21 I was fortunate enough to shadow Sean Foley at the Men's Open Championship, who at the time was coach to Tiger Woods and Justin Rose. This opportunity for observation was available for myself on multiple occasions and these priceless experiences have helped towards planting the seed for my passion of elite performance coaching. Through these experiences and further networking, I quickly found myself providing coaching support on the Ladies European Tour to players who were contenders for major championships. To date I have coached at over 30 professional events and at 9 major championships.

In terms of other aspects of my education in coaching, I have completed a number of formal and informal qualifications and certifications across the past decade. As noted above, I have completed a BA (Hons) degree in golf management (with a high emphasis on coaching) through the University of Central Lancashire; shortly followed by successfully completing the PGA's professional training programme. To compliment these more formal qualifications, I have also a number of informal certifications some of which were in the field of biomechanics (e.g., Forces and Motion, Swing Catalyst), general golf coaching (e.g., Scott Cowx Certification) and performance psychology (e.g., Robbins-Madan certification). While these informal programmes may have limited credibility, they have helped towards increasing my declarative knowledge base, critical thinking and overall philosophy.

At present, I am currently the academy director and head coach at a golf performance centre on the Wirral where I support golfers of all ages and abilities. In particular, in the last 6 months I have grown the junior academy from 6 members to 50 with 17 juniors competing at county level with ambitions to progress onto national and international stages. I also provide coaching support for a number of professional level golfers competing largely in European based events. The majority of my support at this level involves being the player's primary coach, working on technical, biomechanical, tactical and lifestyle management aspects of performance. However, some coaching with players involves providing support solely at tournaments and that which is focused towards technical aspects only.

Looking forward, my primary aspiration as a golf coach is to continue working with both male and female players at the elite level of golf performance; either directly or indirectly by acting as a consultant for others working with players at the elite golf performance level. As a secondary role, I would also like to provide coaching support/development for those currently in training or looking to further their coaching skills.

1.3 Adopting a Pragmatic Research Philosophy

As the primary goal of this thesis is to generate knowledge that is practically meaningful for my own and others' golf coaching, my work was driven by a pragmatic research philosophy (Brough, 2018; Schmidt-Felzmann, 2003; Tashakkori & Teddie, 2010). Indeed, often the bridge between golf coaches delivering practice on the front line and academics uncovering the latest scientific/coaching breakthroughs has not been built; at least not strong enough so that the mass front line of golf coaches consistently receive such information and perceive it as valuable for use in their actual work. In this sense, the academic and practical worlds are often working

in a non-symbiotic relationship (Jones and Turner, 2006). A pragmatic research philosophy functions from the position that academic research should, most importantly, make a difference to the specific group it studies (Brough, 2018; Schmidt-Felzmann, 2003; Cruickshank & Collins, 2017; Cruickshank, Collins & Mitten, 2014); in this instance, golf coaches.

In this sense, Klenke (2008) suggests that pragmatism relates to a real-world and applied research philosophy, whereby researchers experiment with and seek new ways of living and acting at the applied level in order to find new ways of human action (Rorty, 1989). Typically, the researcher's focus is directed towards questions and methods that ought to present the greatest practical impression (Bryant, 2009). In addition to this, the results (i.e., tools, mechanisms, etc.) that arise from pragmatic studies are at all times directly concerned with the specific focus area in which they are developed (Corbin & Strauss, 2008). In light of my primary goal being to generate knowledge that is practical and applicable on the front line of golf coaching, a pragmatic research philosophy was therefore coherent and appropriate.

In line with my pragmatic philosophy, a mixed methods design was also used across the three studies that constitute this thesis, with each particular method based on what would appropriately answer my evolving research questions (Sparkes, 2015). More specifically, Chapter 3 adopted a survey that was analysed quantitatively to show what trends existed across a range of golf coach participants in relation to a range of PJDM principles. Conversely, Chapters 4 and 6 adopted a more qualitative approach given that the rationale for these studies was to identify *how* coaches landed their intentions for impact in home-based coaching and tournament scenarios. In sum, the approach to use either quantitative or qualitative methods was decided through the rationale of each individual study; quantitative measures were used for comparing

trends, while qualitative methods were used for more descriptive and detailed analysis (Brannen, 2017; Giacobbi, Poczwadowski & Hager, 2005; Robson, 2002).

Reflecting my pragmatic stance, several different approaches to the collection and analysis of data were consequently used throughout this thesis, determined by the specific objectives of each case study. In Chapter 3 for example, where the goal was to explore the broad contexts of golf coaches PJDM, a survey was used to ascertain a *breadth* of understanding across a range of coaches. Chapter 4 aimed to identify how coaches could manage the challenges identified in Chapter 3 in a practical sense and so subsequently included live observations, field notes and pre-and post-session interviews. Finally, as Chapter 6 was concerned with applying and refining the lessons Chapter 4 in tournament conditions, action research was used. Overall, therefore, I selected methods that I felt could effectively answer my applied questions and support gains in applied knowledge (Tashakkori & Teddie, 2010).

In terms of my role as a researcher, pragmatism also recognises that the researcher does not merely observe the area being studied but instead is actively involved in the analysis and interpretation of data (Schmidt-Felzmann, 2003). In this respect, it was considered that my experience and current role as a coach could be a positive factor in gathering, assessing and interpreting data (and so something that should be ‘managed’ rather than ‘neutralised’). In sum, my pragmatic approach aimed to deliver practically-useful outputs that could not only further my own coaching practice but also provide insight for golf coaching more broadly.

1.4 Objectives and Structure of the Thesis

As alluded to above, the overall objective of this thesis was to shed light on PJDM in coaching practice in golf. In particular, I wanted to develop knowledge on (a) the conditions under which golf coaches typically have to make decisions; and (b)

how golf coaches work to *deliver* their decisions on what is to be worked on, when, where, and how; in other words, evidence on how they get their decisions “to land” with players. Even more specifically, I approached this thesis with the following objectives:

1. To evaluate the scope and relevance of PJDM in golf coaching, as framed against current understanding of coaching expertise;
2. To shed some initial light on the nature of the PJDM challenge for golf coaches, current PJDM practices in golf, and the extent to which different PJDM factors are associated with perceived coaching effectiveness in golf;
3. To explore how coaches work within ‘home coaching’ sessions to deliver (or ‘land’) their decisions with the player in the unique context of golf;
4. To consider how these approaches to delivering (or landing) coaching decisions in home practice might apply in a tournament context;
5. To apply and refine principles that could help coaches to deliver (or land) their coaching decisions in a *tournament* context.
6. To present a summary of the findings, implications and conclusions found throughout the thesis.

In order to meet the first objective and lay the foundations of this thesis, Chapter 2 provides an overview of the evolution of ‘expertise’ as a construct in coaching literature up to a present day definition. Following this, the fundamental role of decision-making in expert coaching practice is considered as well as the scope and relevance of PJDM for golf coaching. Building on this base, and to meet the second objective of this thesis, Chapter 3 presents a survey of golf coaches across multiple performance levels (e.g., club level, county level, international/national level and tour

level) and provides a wide-ranging overview of the parameters of golf coach decision-making and issues golf coaches face when forming and delivering coaching/decisions.

Leading onto the third thesis objective, Chapter 4, explores how coaches work within 'home coaching' sessions to deliver (or 'land') their decisions with their player in the unique context of golf, as established in Chapter 3. In order to do this, four golf coaches working with elite (national level) golfers were observed and their actions analysed to identify how they deliver their coaching intentions in the face of the presenting issues identified in Chapter 3. As a result, a number of mechanisms were found to be useful for coaches to implement their decisions throughout their coaching sessions.

With my major interest in the field of golf coaching swaying towards elite performance levels, Chapter 5 addressed objective 4 and critically considered how the coaches' approaches to delivering (or landing) their decisions in home practice (as per Chapter 4) might apply in a tournament context. Subsequently, chapter 6 then aimed to apply and refine the PJDM principles identified in Chapter 3 and 4 in a tournament coaching context. More specifically, and taking an action-research approach that focussed on my own practice, a tournament support planner was created, applied and refined over four tournaments and assessed with regards to its' role in landing my coaching decisions.

Finally, Chapter 7 provides a summary of the findings identified throughout the studies completed, whilst also raising some final thoughts relating to further developing the professional practice and training of golf coaches working across all performance levels, but in particularly in elite performance levels.

To conclude, this thesis looks to answer four PJDM related questions that seek to provide a unique contribution to the golf coaching practice. First, what are some current trends in golf coach decision-making across all levels of performance and what impacts on these trends? Secondly, how do elite level golf coaches manage any challenges identified through the first research question to deliver sessions that remain nested within medium and long-term agendas? The third research question asks what features of tournament coaching are different to home based coaching? The final question seeks to answer how effective is a tool that a coach can use at tournament conditions to deliver tools identified through the second research question.

Chapter 2:

The Role of PJDM in Coaching Expertise: Building the Case for a Focus in Golf

2.1 Introduction

As outlined in Chapter 1, the purpose of this chapter is to set the scene and lay the foundations for the whole thesis. Specifically, this chapter will firstly outline the evolution of ‘expertise’ as a construct in coaching literature up to a present day definition, on which the thesis is built. Secondly, the crucial role of decision-making in coaching expertise will be considered. In particular, the pros and cons of classical and naturalistic decision making will be summarised before considering how Abraham and Collins’ (2011) nested model integrates and exploits the benefits / minimises the flaws of both for practice. Having established the key role of decision-making and the need for an integrated and balanced approach in practice, the third main section will then describe PJDM factors in nested coaching through constructs already established in parallel literature. Finally, the relevance of targeting PJDM constructs for the development of golf coaching will be evaluated by highlighting the gaps that such a focus would fill on applied and research levels.

2.2. Defining Expertise

Due to the various criteria that have been used to distinguish the expert coach from the non-expert coach, *coaching expertise* has been a difficult term to define. As outlined by Nash, Martindale, Collins and Martindale (2012), coaching literature has historically taken a behaviourist lens when defining expertise, with many seeking to identify what expert coaching objectively looks like; a situation that has arguably led, or at least significantly contributed to the competency-based models that dominate coach development and evaluation (cf. Collins, Burke, Martindale, & Cruickshank,

2015). For example, Nash et al. highlighted that expert coaching has previously been defined by markers such as a coach's ability to provide information that is divided between praise and advice (Cote & Sedgwick, 2003; Franks, Johnson, & Sinclair, 1988; Potrac, Jones, & Armour, 2002). Furthermore, others have defined coaching expertise by one's ability to manage the training environment and provide instruction to improve performance (Bloom, Crumpton & Anderson, 1999; Claxton, 1988; Gordon & Durand-Bush, 1997). In addition to these and other behavioural markers, many researchers have also defined expertise by outcome markers, such as the number of years' experience in a coaching role, while others have defined expertise or "coaching success" as a direct correlation of their athletes' levels of success e.g., their win/loss records (Bloom, Crumpton & Anderson, 1999; Cote & Gilbert, 2009; Vallee & Bloom, 2005). In summary, the accumulation of the "right" behaviours, qualifications, time spent coaching plus a record of wins/success has often been used to define a coach as more expert than another.

Clearly, however, having an (apparently) ideal set of behaviours, time on the job, working with better athletes, or achieving the best results are not guarantees of expert coaching (Nash et al., 2012). For an example in golf, one fortunate coach may find himself or herself coaching a player who, through lots of good work by another coach earlier in their development, is transitioning into the professional tour level. The current coach may not be required to provide much in the way of actual direct coaching and might in fact sit back and enjoy the ride and reap the benefits of the player's anticipated successes. If this coach is then fortunate enough to accumulate a significant period of time with this athlete and be associated with their success then he/she may tick the result/outcome criteria box that, as many have previously considered, appears to make him/her more expert than other coaches. Problematically,

therefore, using broad outcome-oriented criteria runs the risk of individuals achieving ‘expert’ status who have not had much influence at all with regards to an athlete’s development and success. Additionally, the coach who has contributed significantly in the athlete’s early development (who will have likely worked to entirely different goals to the coach encountered later on) often doesn’t receive as much praise as the senior level coach despite delivering successful age and stage-specific outcomes. In short, expert coaching depends on, among many other factors, the *specific* performer, situation, and challenge; not on simple, discrete, and generalized evaluations and competencies that are associated with crude outcome measures (cf., Collins et al., 2015).

Interestingly, coaches who are considered expert against such measures (e.g. those who have been associated with notable results and coached for a long period of time) are often appointed to coach teams or players who are trying to return to their previous “winning ways”. However, success is not guaranteed and poor records are often produced; or at least records that don’t match expectations. Specific examples of this would be in the 2015-16 English Premier League football season where Jose Mourinho of Chelsea F.C. and Louis Van Gaal of Manchester United F.C. (who both had accumulated significant time coaching, impressive win records and experience of coaching elite performers in their field) struggled to handle the particular challenges that they faced. Indeed, during the midst of a period of poor performances whilst managing Manchester United, Louis Van Gaal expressed his thoughts in a press conference:

I am always evaluating myself because I think this is an aspect of the philosophy I have. But the philosophy is also making an evolution - I am not the same coach I was 25 years ago. So, you are always evaluating . . . and

because of that, I am, or maybe I have to say now, *was* a very successful manager [emphasis added] (as quoted in Bernstein, 2015).

Interestingly, therefore, here is a manager questioning his own current credentials but yet still with an impressive previous win record and experience of coaching some of the world's most successful players on his CV. Notably, these were all attractive qualities which essentially landed him the coaching role: "His track record of success in winning leagues and cups across Europe throughout his career makes him the perfect choice for us." (Manchester United vice-chairman as quoted in Jackson, 2014).

After Van Gaal's sacking, Jose Mourinho was later appointed the manager of Manchester United, with the same criteria that was used to appoint Van Gaal again being stated as the reason for his selection: "His track record of success is ideal to take the club forward ... He has won trophies and inspired players in countries across Europe ... Jose is quite simply the best manager in the game today" (Manchester United vice chairman, as quoted in Jackson, 2016). However, and somewhat ironically, just a number of months before this Mourinho had been dismissed from Chelsea F.C. with the club stating that "both Jose and the board agreed results have not been good enough this season" (De Menezes, 2016). Overall therefore, using previous outcomes, time spent coaching and/or levels of athlete performance seem to be flawed criteria of coaching expertise, or at the very least *current* and *future* coaching expertise when considered on their own. In this way, Gilbert and Trudel's (2004) assertion that too much emphasis is placed on win-loss records when identifying expert coaches certainly still seems to be true today.

Of course, one particular challenge in defining 'the expert coach' lies in the social construction of expertise in applied settings. Indeed, athletes will regularly seek

individuals to coach them who were former athlete/performers that achieved notable results in their chosen sport (Nash & Collins, 2006), often under the assumption that as he/she has ‘been there and done it’ then they must know how to pass that knowledge on to others. For example, a retired golfer who has numerous major playing achievements may carry so much respect and admiration from others that they instantly command ‘expert’ coach status when appointed as the coach of a club; well, at least initially! Additionally, the way in which coaches are developed also plays a significant role in how expertise is socially constructed and reinforced. To date, most formal coach education programmes have adopted competency-based means of delivery and a “black and white” assessment process whereby trainee coaches need to demonstrate a pre-determined number of coaching behaviours (Collins et al., 2015). For example, a trainee coach in a competency-oriented programme is often required to demonstrate observation skills (one of many “what to do” skills) under examination during a coaching session; the assessor then typically notes that the trainee either successfully or unsuccessfully observes particular stimuli throughout the session and as a result identifies the trainee as competent in observation skills or not. Problematically, however, this crude and simplistic assessment does not allow for insight to the declarative knowledge base that underpins *why* the trainee observed one particular aspect of performance over another and how they will continue to do so in the future.

In contrast to the limitations of outcome/behaviourist/competency perspectives, Nash et al., (2012) subsequently proposed a number of *essential* criteria for recognizing expertise in coaches that were chiefly *cognitively*-based; criteria that lean towards the *process of* and *thinking behind* expert coaching. Specifically, Nash et al.,’s criteria included: applying a large declarative knowledge base to solve problems

and make decisions; use of perceptual skills, mental models, and routines; the ability to work independently and develop original solutions; an approach based on experimenting, reflecting, and life-long learning; an awareness of limitations and areas of strength; and the management of complex planning processes. In contrast to much previous literature, a form of track record or logbook of performer success (e.g., a portfolio to evidence the development of performance to world class level) was identified as a *possible* marker rather than *essential* marker for coach expertise. Overall, therefore, Nash et al. positioned expert coaching as the ability to deliver appropriate and effective actions for “it depends” challenges in “it depends” environments; not for “black and white” challenges in “black and white” environments. Indeed, no two coaching scenarios are identical and so the coach cannot rely on the exact same behavioural responses. This cognitive perspective therefore provides a route by which *consistently optimal* coaching – or expert coaching – can be more accurately recognised and developed. But for expertise to be developed, what type of knowledge needs to be prioritised?

2.3 The Basis of Expertise: Declarative Knowledge

While some may argue that the rapid processing which characterises expert practice (i.e., “I just did it like that!”) is a product of *tacit knowledge* (i.e., that which is implicitly acquired through everyday experiences), coaching automaticity shouldn’t be considered an innate “gift”. Instead, it has been argued that such automatic action should be viewed as a skill based on a detailed *declarative* knowledge base, built up through years of deliberate experience and reflection, which *then* enables the coach to act quickly (Nash & Collins, 2006). More specifically, the interaction model of coaching knowledge proposed by Nash and Collins (2006), as shown in Figure 1, demonstrates the link between declarative knowledge (i.e., knowledge of “whys and

why not's”), procedural knowledge (i.e., “how to” knowledge) and tacit knowledge. This model suggests that in order to make decisions at a tacit level, there will be an integration of procedural and most importantly declarative knowledge of their sport, pedagogy and the “ologies” (Abraham et al., 2006). Of course, it is still possible to make decisions at a tacit level without apparent declarative knowledge; however, without this essential “spine” for decision-making, Martindale and Collins (2013) have noted that such decisions will be better termed as guess work, as typically demonstrated by poorer coaches. Therefore, declarative knowledge is the essential component which facilitates the intuitive and effective ‘on the spot’ decision-making that characterises some aspects of expert coaching (i.e., those aspects when the coach performs under time pressure) (Martindale & Collins, 2013).

Figure 2.1: The Interaction Model of Coaching Knowledge



For example, a successful football coach during one particular match may decide to promote a very offensive tactical form of play, but half way through the game alter the decision to a more defensive approach. Here, this change has been based on a detailed and pre-game consideration of the ‘whys’ and ‘why not’s’ around sticking to the original plan against specific cues provided by the unfolding patterns of play (e.g., the opposing team’s wingers switching and then exposing the weakness of both full backs). Against the success of this decision, a coach with less expertise

who has observed this scenario without access to the underpinning logic decides to simply replicate the expert coach's *behaviour* in their own context (i.e., when a goal up away from home then defend our lead early in the second half). However, due to the magnitude of variance within this new football match (e.g., the players' skill levels, the opposing team's skill levels, the opposing team's own tactical decisions and the size of the pitch to name but a few), the outcome of result is not as objectively successful as the match with the more expert coach, despite successfully executing the expert coach's behaviour. In short, as no two situations are ever exactly the same, simply adopting what has worked at one given time for one individual cannot meet the exact needs of every dynamic coaching and performance environment. Declarative knowledge on the range of potential options, plus the rationale for taking one of these over the others, is therefore essential. Indeed, applying the exact same decision from a previous situation will rarely ever be appropriate for the same coach. For instance, Jurgen Klopp, the Liverpool Football Club manager, prior to the English League Cup Final in 2016, expressed his thoughts on his tactical decisions for this match in relation to an emphatic victory over their opponents earlier that season: "You can be sure we will have a plan but it is not allowed to go with exactly the same plan in a completely different game". (McNulty, 2016).

To summarise the main messages from this section, expert coaching is treated in this thesis as a chiefly cognitive skill. Indeed understanding the "whys" and "why not's" of particular challenges is essential in providing optimal and consistent decisions for "it depends situations" and "it depends challenges". As it is one's "cognitive engine" (e.g., declarative knowledge, mental models, routines, planning) that drives the selection, combination, and deployment of coaching behaviours, this

perspective also offers a direct route for enhancing and sustaining expertise in golf coaches.

2.4 The Role of Decision Making in Expert Coaching Practice

As stressed in the previous subsection, higher levels of coaching expertise rely on one's ability to consider the "whys" and "why not's" of taking various actions. Indeed, as coaching is fundamentally a decision-making process (Cushion, Armour, & Jones, 2003; Lyle, 2002; Potrac, Brewer, Jones, Armour, & Hoff, 2000), expert coaches use their understanding of "whys" and "why not's" to "orchestrate" a series of specific and meaningful actions that will have the most appropriate impact for the particular athlete or team (Jones & Wallace, 2006). Importantly, the "hallmark" of *expert* coaching is that this general cognitive process (i.e., making decisions through use of a large declarative knowledge base) leads to a coach making *consistently* good decisions (Nash & Collins, 2006). Despite this acknowledgment, however, there had, until recently, been relatively few developments on how these decisions are best made (Abrahams & Collins, 2011). Indeed, much previous work has tended to focus on one of two distinct approaches: classical decision-making and naturalistic decision-making. The pros and cons of these approaches will now be considered.

2.4.1. Classical Decision Making: Pros and Cons

As mentioned above, one fundamental element of expert coaching is the ability to make decisions, as based on a large pool of declarative knowledge, to positively enhance an individual or team's development and/or performance. In terms of the decision-making process itself, one key construct in this area is that of classical decision-making (hereafter CDM). Often unrewarded in sports coaching, the CDM approach is particularly beneficial during the planning and evaluation stages of practice and involves a slowed down, methodical and systematic consideration of

available options (Abraham & Collins, 2011). For example, when initially working with an athlete the coach may refer to his/her pool of knowledge (i.e., of the supporting “ologies”, pedagogy and the sport itself) as he/she considers and contrasts which goal(s) and intervention(s) would be most favourable for meeting the athlete’s needs. The CDM approach therefore ensures that the coach has, to the best of his/her ability, considered a breadth of potential avenues with regard to enhancing the athlete’s development or performance. Crucially, this process can also provide confidence to both the coach and the athlete by knowing that time and effort has been committed to select the most appropriate solution (Abraham & Collins, 2011).

Additionally, CDM in the evaluation phases will follow a similar process and seek out the reasoning for the outcomes delivered and routes forward again with relatively little time pressure or additional stress being placed on the coach. For example, lead coaches will often discuss the athlete’s performance and progression with other key individuals (e.g., other coaches and support team members) to decide on the efficacy and impact of the previous programme and the most suitable approach moving forwards. In short, CDM solves a performance problem through a slowed down thinking approach, whereby potential options are contrasted and compared, often “behind the scenes” away from the athlete, with relatively little time pressure (Abraham & Collins, 2011).

Despite its strengths, however, the CDM method has received some criticism for not being able to sufficiently account for how coaches function when there is inadequate time to make thorough decisions (Cushion, 2007; Lyle, 2010). This is pertinent for sport coaching as the “live performance” (e.g., a coaching session or conversation) is invariably dynamic and almost always in an environment that emphasizes some degree of “on the spot” decision-making (Abraham & Collins,

2011). As such, the deliberate and slowed-down nature of CDM is not well equipped to meet the requirements of the ill-structured problems that present themselves in complex and stressful contexts that require more immediate action (Mongomery, Lipshitz & Brehmer, 2005). Significantly, it is also suggested that, in naturalistic settings, experts do not appear to directly compare multiple options; a practice which is the cornerstone of CDM (Abraham & Collins, 2011). For example, an athlete may fairly and accurately question a coach's CDM-based intervention during a live coaching session and suggest that they alter their focus to work on a related but different area for that day; if the coach then decides to meet this request based on the weight and clarity of the evidence for change, then he/she must now make decisions "on the spot", under both time and social pressure to work towards this revised goal. As such, the CDM principles of referring to other experts and carefully and slowly considering multiple options without undue stress or time restraint are no longer available or applicable. Notably, many athletes will select a coach largely due to their ability to make "on the spot" decisions during the live dynamic sessions (Cushion, 2007); a skill that is also an attractive characteristic in the eyes of the public and the media (Abraham & Collins, 2011; Samuel, 2016). More specifically, this "on the spot" style reflects an approach known as naturalistic decision-making (hereafter termed NDM).

2.4.2. Naturalistic Decision Making: Pros and Cons

As suggested, the NDM process is quite the contrast to CDM, whereby decisions are made during real life, dynamic situations often under stress and with short timeframes (Abraham & Collins, 2011). The NDM model was initially developed through observations of individuals in high pressure, real life situations, such as fire-fighter decision-making (Philips, Klein & Sieck, 2004). One key

mechanism when individuals use NDM is the ability to connect recognised cues from previous experiences to the current situation (Kahneman & Klein, 2009). Continuing the example from the preceding subsection, during a coaching session an athlete may start struggling and insist that a problematic feature be addressed before returning to the original goal. The coach can then recall previous experiences that mirror this situation and potentially take similar decisions to achieve their desired outcome. In short, using previous experiences to help solve present situations is a key mechanism used in expert NDM.

Despite these advantages of NDM over CDM when time and resources are limited, as well as it being the preferred style for expert coaches (Lyle, 2010), there are a number of disadvantages to relying on NDM alone. Firstly, Abraham and Collins (2011) suggest that it would clearly take a long time to encounter the vast array of coaching scenarios that might occur and then develop pertinent response patterns for relevant interventions. Additionally, while coaches might identify the “correct” (or most effective) option when making “on the spot” decisions, this is not always the case (Abraham & Collins, 2011). Mistakes, or less effective decisions, can often be ignored or blamed on someone else, particularly when over confidence sets in. Indeed, identifying and reviewing the reason behind poor decisions is difficult when using NDM due to the lack of up-front rationale (Abraham & Collins, 2011).

As outlined, therefore, both CDM and NDM have their respective benefits and downfalls for application in the sports coaching context. CDM significantly contributes to the quality of decisions during the planning and evaluation of coaching activity, whereas NDM better reflects decisions made during live coaching sessions. Of course, the use of these styles shouldn’t have to be one or the other. Indeed, harnessing the benefits (and countering the limitations) of each style would appear to

be a best practice procedure for coaches given that their work is conducted on both short/rapid *and* long-term/slowed down timescales (Abraham & Collins, 2011).

2.4.3. The “Nested Model” of Decision Making: A Scaffold for PJDM

Against the benefits and shortcomings of both CDM and NDM, Abraham and Collins (2011) proposed that a best practice decision-making model for sports coaches involves a blend of these two processes. More specifically, the nested thinking model was developed, as shown in Figure 2.2.

Figure 2.2. The Nested Model

Level	Exemplar Objectives	Timeline & Activity				DM Style
Macro Quadrennial: Socio - Politico- Strategic	<ul style="list-style-type: none">Medals at OG (1), Worlds (1), Euros (4) & Junior Worlds (2)Establish group as major player	1 Year	2 Years	3 Years	4	CDM - Formal Knowledge Source
		Years				
Consistency in Competition						
Meso Seasonal: Socio- Tactical - Motivational	As above plus: <ul style="list-style-type: none">Consistent placing in semi final level at World CupsAbility to rationalise and learn from resultsConfirmation of racing styleConfidence in preparation, systems and coachingMaintaining training/practice loadIndividual goals and plans established	Weeks 1 – 6	Weeks 7 – 12	Weeks 13 – 18	Weeks 19 – 24	NDM – Intervention Knowledge Source
		Focus on Practice Behaviour	Lower level events, training through	Two targeted events, with reviewed and revised schedules	One World Cup Performance, with mini-peak	
Building confidence through understanding						
Micro Sessional: Idio - Tactical	As above plus for example: <ul style="list-style-type: none">Talk through planning and debrief					

In this integrated model, coaching decisions at a micro level (e.g. an individual practice session) are informed by and considered against meso level (or medium term) agendas, which are themselves informed by and considered against macro level (or long term) goals. Reflecting the different timescale on which the coach will act (i.e., short, medium or long term), both CDM and NDM are therefore emphasised to different degrees depending on the context and challenge faced.

To illustrate the interplay between CDM and NDM, a coach about to embark on work with a player over multiple sessions, months or even years must carefully identify the “bigger picture” objectives for the player and more specifically, their longer-term performance and outcome goals at the macro level. By its nature, this process will rely on a much higher degree of CDM than NDM in order to determine the most efficient developmental pathway for the athlete (Abraham & Collins, 2011). Of course, there will still be a need for some degree of NDM (e.g., when conditions change at short notice before a funding review) but, generally speaking, this will be somewhat less than the need for CDM in terms of volume and impact.

Following this, at the meso-level the coach can shape goal setting processes and interventions toward the obtainment of the macro goals (e.g., planning for blocks that make up the first half of a season). This process again will involve a bias towards CDM, whereby plans and interventions will be thought through and compared for the most effective option. Significantly, and reflecting the increasing proximity to day-to-day or session-to-session action, NDM will, generally speaking, start to play slightly more of a role (e.g., if an athlete requires the coach to alter the intervention before a particular block or session, then the coach must make a more time-pressured decision to keep the new proposal in line with the meso and macro goals). Finally, NDM will start to have a noticeably larger role in micro level planning and practice (e.g., that

occurring on a day-to-day/moment-to-moment level). Indeed, at the micro level coaches are more inclined (and required) to respond to the live dynamics of coaching sessions.

Importantly, and emphasizing the benefits of the nested approach, NDM is proposed to be more relevant and impactful when directly linked to the CDM that has been used at the macro and meso level (Abraham & Collins, 2011). More specifically, macro and meso plans act as a map to assist in the session direction (thus ensuring that “on the spot” adjustments still help the athlete to reach their long-term destination). Indeed, when the session gets disrupted (or ‘road-works’ / ‘closed roads’ are encountered) then the coach will have to think ‘on the spot’ as to which direction to take the session to still achieve the overall objective (or find the best way to work around the ‘travel disruption’). Referring to, or being primed by the CDM that underpins meso and macro goals (or the overall road map) will therefore help bring some clarity and guidance as to the direction that the session should be going. In this sense, systematic planning is a route to making better intuitive decisions, as it aids the coach to base those instantaneous judgments against their classical-arrived decisions (Martindale & Collins, 2013).

As a result of adopting a nested thinking/planning approach, it is argued that a coach can be better prepared to approach their often chaotic and high-pressure environments through the use of NDM processes that are linked to longer-term agendas; in short, providing a “best of both worlds” blend (Abraham & Collins, 2011, p380). In this way, the “nested model” is particularly useful for coaches in the sense that it elicits the benefits and counters the shortcomings of both CDM and NDM whilst interlinking the macro, meso and micro goals for the athlete and facilitating a clear, coherent and consistent programme of support. However, what *exactly* can help

coaches to make sure that their decision making - and therefore their support – is clear, coherent and consistent from the off? To begin to answer this question, the next section will identify factors established in parallel PJDM literature and consider their relevance for nested coaching in a golf context.

2.5. PJDM Factors in Nested Golf Coaching

As outlined in the prior section, effective nested coaching relies on a coach's ability to make sound initial decisions that frame whole programmes of work with athletes. But how are such initial, classical-type decisions best made? In a first foray into this area in sport literature, Martindale and Collins (2005, 2007) introduced PJDM as a framework on which sport psychologists could become more aware of (and better at making) chains of decisions that span long, medium and short-term agendas. Within this work, a number of key PJDM terms were identified which can all, importantly, be related to golf coaching. These include *issue conceptualisation* (i.e., identifying and conceptualising the performance issue/challenge), the *nature of the goal* (i.e., the type of target set), the *nature of the relationship* (i.e., the way in which the practitioner and performer shall work), *intentions for impact* (i.e., the rationale for the practitioner's action), and *decision-based evaluations of effectiveness* (i.e., assessing the validity and impact of practitioner decisions). As outlined by Martindale and Collins (2005, 2007), all of these factors should play a role in the judgments and decisions that practitioners make if they aim to provide a clear, coherent and consistent programme of support from the off and then throughout their time working with a client. These factors will now be considered in more detail with an emphasis on their relevance and nature in a golf coaching context.

2.5.1. Issue Conceptualisation

When working with an athlete, the coach must firstly single out a specific area or areas to adjust/improve if their chains of decision making are to be clear, coherent, consistent and impactful. Therefore, the coach would be wise to undertake some form of needs analysis before a programme is developed, which is then presented to the athlete and refined based on further feedback. In order for the coach to identify what particular area requires work, he/she can consider the numerous areas that can influence development and performance levels (e.g., biomechanical, psychological, tactical, technical aspects) against the issue presented by the performer.

While some individuals may use only one method for identifying and exploring the area that requires work, such as the coach's observation skills, triangulation can help to counter threats to the subsequent intervention's validity (Robson, 2002). For example, a blend of both quantitative and qualitative data will usually be viewed as best practice in conceptualising the performance issue due to the ability of these approaches to paint as full a picture as possible (Robson, 2002). More specifically, the triangulation process for the athlete's needs analysis may draw from a variety of data sources such as performance statistics and biomechanical data (quantitative perspective) along with interviews and observations (from a qualitative perspective) to name just a few. To accompany this process, the coach can also draw upon their declarative knowledge of the performer, the sport and pedagogy (Abraham et al., 2006).

Additionally, the coach's 'theory' of performance/behaviour change (e.g., whether progress will be best achieved through blocked or variable practice) and professional philosophy (e.g., whether they believe in a one size fits all model or that

coaching is specific and unique to the individual) will strongly influence issue conceptualisation of course. For example, a coach who believes that all golfers should have the same technical components, such as a strong grip and an upright posture, might conceptualise performance issues by how many knuckles appear on the lead hand or how much forward flexion/bend is utilised by the golfer. Conversely, a coach who believes that golfers should look for tailored solutions is more likely to conceptualise performance issues by taking measurements in lots of areas to work out a balanced approach (cf. Martindale & Collins, 2005). As a further example, a coach may have a strong professional background in the field of sport psychology and, more specifically, an interest in goal setting; when conceptualising the performer's issue(s), it would then be likely for this coach to at least consider this area as a potential target for action. As such, the way in which a coach views himself/herself, their responsibilities, and the knowledge that they possess (i.e., of the sport, "ologies" and pedagogy) provides a specific lens by which they collect, interpret and use the information acquired during the needs analysis. This lens – and the way in which issues are then conceptualised – will also inevitably shape the nature and quality of the coaching process. Indeed, the macro, meso and micro agendas of the coach should all be interlinked and driven by the outcomes from the issue conceptualisation processes, with the quality of this issue conceptualisation therefore crucial to the whole coaching process.

2.5.2. Nature of the Goal(s)

Once the performer's issues have been conceptualised, it is important for the coach to explicitly identify the goals that are to be targeted plus the time frame against which they might be achieved. This is important because the time frame will ultimately influence decisions around what type of interventions are provided by the

coach and also assist in managing the athlete's expectation levels throughout the coaching programme. For example, a golfer who is looking for coaching to help them achieve particular results at the Olympics (which is four years from the current date) would clearly set longer-term goals as the agenda. Oppositely, an individual who is competing at their local club-level tournament at the weekend may require a shorter-term goal/solution and may not be concerned with longer-term agendas just as long as they do not come last in the upcoming competition!

As well as identifying the time scale of the goal, a number of other characteristics must be taken into account. One particularly significant contributor to the nature of the goal should be the athlete's characteristics; such as their personality, career biography, motivation and availability (Martindale & Collins, 2005). For example, a senior professional golfer who only sees a coach at tournaments every four months will probably benefit from working on goals that are based around each tournament given the fact the coach is not present for significant periods of development time. Conversely, a young pre-elite golfer who interacts with their coach once a week will be more likely to benefit from longer-term goals that support robust learning.

As a key qualification, Martindale and Collins (2005) further explained the importance of not assuming that the outcome goal is always to be performance improvement. In a coaching context, some individuals may simply wish to maintain their current level of performance and not necessarily enhance it. For example, an athlete performing at their personal career best may wish to stay at this level and not push for an elusive "next stage" in performance. The reasons for this may be multiple; the additional work load, both mentally and physically, may be too demanding and risk injuries; or, quite simply the athlete feels that pushing for the next level may rock

the boat so much that they lose their current level of performance and deteriorate altogether.

In sum, identifying the nature of the goal is important to help set the scene for the coaching interactions that inform and follow the issue conceptualisation process. In particular, identifying the outcome/process balance as well as the timeframe for the goal will give the coach an indication of the type of coaching methods he/she can utilise with that particular athlete and the decisions that they will subsequently make throughout their time together.

2.5.3. Nature of the Relationship

Another factor that will significantly shape the decisions that coaches make throughout full programmes of support is the nature of the coach-player relationship. Indeed, the nature of the relationship may result in the coach making decisions that are aimed at being more consultative/reassuring with a player, or oppositely, a more directive/instructional approach may be deemed more appropriate. For example, a coach and player may decide to work towards longer-term agendas and use robust learning methods that aim to foster learning and self-awareness; in this instance the athlete may face tough moments in practice where encouragement and reassurance are important features for the coach to be aware of. In contrast, the same coach may work with another player and decide to work towards shorter-term agendas and therefore use “quick fix” learning methods in the process; in this instance the relationship will be much more didactic with the coach providing a more “do it like THIS” and results-based approach to facilitate a quicker (but less stable) increase in performance levels. Either way, the way the coach and player are to interact provides an additional frame for the chains of decision-making consequently made and delivered by the coach.

How often the player and coach liaise, where this work will take place and who decides what is to be worked on will further influence the nature of the relationship and therefore the chain of decisions that a coach will subsequently make and deliver in their work with a player. For example, if the player insists on what is to be worked on and decides when and where this takes place, then this will greatly influence the types of decisions that the coach makes and ultimately the interventions/solutions proposed. Interestingly, the nature of the relationship may also change over the course of time. For example, an athlete may initially heavily rely on the coach as they work on a number of goals that require the coach's watchful eye, requiring a relationship that is close and involves regular contact. However, through time the coach may start to develop a more self-reliant athlete as the goal changes to one that requires the golfer to self-correct their issues and therefore the amount of coaching interaction is reduced. In sum, therefore, consideration of the nature of the relationship between coach and athlete provides another key frame for the decisions made and delivered throughout the programme of work.

2.5.4. Intentions for Impact

As outlined by Martindale and Collins (2005), it is compulsory for applied sport psychologists to have a rationale for their decisions in order for their actions to be considered justifiable, evidence-based, and in accordance with best practice; this approach is also equally necessary for golf coaches. Indeed, this requirement not only provides a degree of professionalism within the service but it also closely matches the cognitive process relating to the “whys” and “why not’s” of expert coaching. Specifically, “intention for impact” is a concept borrowed from counselling psychology and is the essential bridge between issue conceptualisation and providing an intervention (Martindale & Collins, 2005). In short, it relates to the justification for

taking action and can be viewed as the coaches' validation as for why one approach is chosen over another. A coach's intentions are therefore a crucial foundation from which clear, coherent and consistent decisions can be based. Indeed, it has been argued that these intentions essentially define the quality and effectiveness of an intervention (Martindale & Collins, 2005).

The coach's own experiences and preferences, the player's characteristics and needs, the issue conceptualised, the nature of the goal and the nature of the relationship should all shape the coach's intentions for impact. Indeed, the intention is both a reflection of what the golf coach foresees as the outcome of the intervention and the way in which the golf coach will relate to the golfer (as shaped by the nature of the goal and the nature of the relationship) (Martindale & Collins, 2005).

As an example of what intentions for impact may look like in the context of golf coaching, take a coach working with a promising professional golfer who wishes to compete at a qualifying tour school the following year but has a specific technical aspect that requires altering (lead wrist extended too much for too long throughout the swing). This golf coach may therefore set a macro-level intention to help the player *arrive at qualifying school with established skills in having the lead wrist consistently in flexion during the desired positions in the swing*. Through this macro-level intention, the coach then has clear rationale on which to base all intentions for impact (and subsequent interventions) at the meso and micro levels of the support programme. For example, intentions for impact at the meso level for this player might involve providing a block of sessions that assist in identifying the new movement and then making this automatic and pressure proofed. Similarly, intentions for impact in the first sessions with the player (i.e., at the micro level) might involve highlighting the issues in the current technique through a series of exercises that raise awareness of

the player's current movement pattern (cf. Carson & Collins, 2011). In sum, therefore, what a coach intends to do with a player will also clearly impact on the chains of decisions made and delivered throughout a programme of support.

2.5.5. PJDM-Based Evaluation of Effectiveness

As an athlete works alongside a coach, there is clearly the need for review procedures to evaluate the effectiveness of the coaching decisions made along the way and to keep a programme on track. While client feedback is usually the primary source of feedback, such evaluations on their own can often be misleading due to the athlete's potential focus on outcomes and interpersonal biases. For example, take a high handicap golfer who requires a series of lessons to help work on their sliced shot; the coach identifies a number of issues (e.g., face open to path, swing direction too far left and heel strike with driver) that all contribute to the golfer's sliced shot. As they establish the nature of the goal, the coach decides that, given the golfer's level of skill, working on all three aspects would be too challenging so he/she decides to work on one aspect initially (improving the centeredness of strike). Due to the golfer's low skill level, this task proves challenging enough; however, by the end of the third session the golfer is now striking the ball somewhat consistently in the middle of the club face. Yet, and perhaps much to the frustration of the golfer, the golf ball is still slicing due to the other issues within their swing that have not yet been addressed. If at the end of this session the golfer were to give their evaluation on the session based on crude outcomes (i.e., how bad is my slice now?), there is a reasonable chance that their feedback would be negative (or inappropriately focused) given that they are still slicing the golf ball. When viewed through a PJDM lens, however, it is clear to see that progress is being made against the coach's explicit decisions made before the programme of work was initiated.

As an aside, this example also stresses the need for the athlete to have a sufficient level of understanding with regards to what is trying to be achieved and “why” this particular approach is being taken (and why not others). Indeed, if the player does have such understanding then they will be less likely to simply judge the coach’s effectiveness solely from the “hard outcomes” of the session and instead be inclined to judge it against the PJDM factors presented above (i.e., issue conceptualisation, nature of the goal, nature of the relationship and the intentions for impact).

In sum, outcome measures are somewhat purposeless without adequate process measures that frame what a coach was endeavouring to achieve and for what specific purpose (Martindale & Collins, 2007). Indeed, simply identifying the golfer’s current performance level is a fairly empty analysis without considering the degree of difficulty associated with such changes and the underpinning process. In addition to this, any evaluation process must also consider the time frame associated with obtaining the desired goals (e.g., two-week goal, two-month goal or two-year goal) and the influence that this had on the type of coaching provided (e.g., coaching focused on robust long-term learning over short-term results). Using a range of process and outcome measures that are specific to the coach’s PJDM is therefore vital for accurate evaluations.

2.6. Summary and the Next Step

Given that coaching is primarily a decision making process and that coaching expertise is largely built on one’s *cognitive* skills, a PJDM focus appears to be clearly relevant for studying and progressing golf coaching. More specifically, the chains of decisions made and delivered by golf coaches will logically be optimal (and enhanced) when adopting a nested approach that is underpinned by a detailed

understanding of issue conceptualisation, the nature of the goal, the nature of the relationship, intentions for impact, and PJDM-based evaluations of effectiveness. Indeed, the PJDM principles identified in this chapter can give the coach the opportunity to make and deliver effective “it depends” decisions for “it depends” situations.

However, and despite a growing body of work on PJDM in coaching and other support professions (Abraham & Collins, 2011; Collins, Burke, Martindale & Cruickshank, 2014; Collins & Cruickshank, 2014; Cruickshank, 2013; Martindale & Collins, 2005, 2007), this area has received little obvious attention in both professional training and research in golf. For example, although Grecic and Collins (2013) have provided insight into the role of the epistemological chain in golf coach decision-making, this line of focus is different to the cognitive processes of making and delivering decisions of which this thesis is focused on (i.e., I am more interested in *how* decisions are made and delivered by coaches rather than *why* coaches make the decisions they make). In particular, there is little empirical understanding of the conditions under which golf coaches have to make and deliver their decisions; understanding which is essential if we are to make improvements to the coaching process of golf. As such, the next step for this thesis was to identify the typical manner in which issues are conceptualised, the types of goals and time frames set, the nature of the relationships formed, and how practice is evaluated by golf coaches. More specifically, the following chapter describes a survey that was conducted to provide an initial insight into the current application of PJDM constructs by golf coaches. It was anticipated that these findings would lead to the identification of particular key aspects of making and delivering decisions in golf coaching, which could then be explored in specific detail in subsequent chapters.

Chapter 3:

Exploring the Nature and Parameters of Golf Coaches' PJDM

3.1. Introduction

As outlined in Chapters 1 and 2, golf literature has predominantly placed its attention on performers and the study and application of biomechanics (Bourgain et al., 2018; Brown, Selbie & Wallace, 2013; Cole & Grimshaw, 2016; Meister, Ladd, Butler, Zhao, Rogers, Conrad and Rose, 2011; Nesbit & McGinnis, 2011, Nesbit, 2005), psychology (Fisher & Etnier, 2014; Hemmings, 2011; Finn, 2008; Jenkins, 2007; Sayers et al., 2017) and physiology (Callister & Lubans, 2011; Fletcher & Hartwell, 2004; Green et al., 2015; Smith, 2010). As a consequence, these works have provided an opportunity to enhance the declarative and procedural knowledge base of coaches (and other practitioners), usually in terms of technical aspects of golf performance (i.e., what coaches might do when working with a player and their reasons). However, few studies have considered facets in the actual coaching process and there is a lack of published work on how golf coaches make and deliver decisions. In fact, despite recent application of a PJDM focus to coaching in general (Abraham & Collins, 2011) and in specific other sports (e.g., Collins & Collins, 2013), I am not aware of any research by academics that has explored how professional judgment and chains of decision-making are best formed and delivered by those operating in the specific context of golf. Additionally, this area also doesn't seem to have been sufficiently targeted in coach education or research in professional bodies.

Against this current dearth of advice, Chapter 2 highlighted that the frame of PJDM can direct researchers and practitioners to the cognitive processes that are involved in supporting and delivering coherent chains of decisions in golf coaching;

decisions that prevail from slowed down, classical planning to time-pressured, rapid responses in live action. A focus on golf coach PJDM also aligns with the recent assertion that expertise in sports coaching is a chiefly cognitively-driven process (Collins et al., 2014; Nash et al., 2012).

Building on these foundations, and as a logical first step for research in this area within golf, the purpose of this chapter was to shed some initial light on the conditions in which golf coaches must typically make, deliver, and evaluate their decisions. Specifically, my research question was: what are some current trends in golf coach decision-making across all levels of performance and what impacts on these trends? Indeed, if this thesis was to ultimately develop principles for effective PJDM in golf coaching then gaining some understanding of the context in which golf coaches operate was deemed a crucial starting point; particularly as little empirical evidence exists on the technical, operational and socio-cultural challenges faced by golf coaches in terms of their decision making. Regarding the latter, there has been a multitude of books published on golf coaching and a plethora of online resources exist which offer a description – either explicitly or implicitly – of the culture of golf and its coaches. Typically, these report that golf coaching is biased towards meeting the player's requests, favours short-term results and generally reflects a quick fix culture (Glanville, 2010; McMillan, 1994; Stephens & Pait, 2003). However, while these anecdotal messages do seem consistent, a systematic and theory-driven consideration of golf coaching culture and its precise implications for coach PJDM has yet to arrive.

Against this situation, my aim in this chapter was to therefore survey golf coaches' perceptions of core PJDM processes. As covered in Chapter 2, these PJDM processes were: issue conceptualisation, the nature of the goal, the nature of the relationship, and PJDM-based evaluations of effectiveness. More specifically, I

anticipated that this study would shed some initial light on the nature of the PJDM challenge for golf coaches, current PJDM practices, the extent to which different PJDM factors are associated with perceived coaching effectiveness and, most importantly, implications for further exploring PJDM at the elite level of performance. It should be noted that exploring coaches' intentions for impact was purposely left out of this study on account that a coach's intentions for impact are highly specific to the individual athlete with whom they are working with. Instead, this initial study was designed to explore the broad context of golf coaches' PJDM and therefore to provide a base to then consider some specific skills required by golf coaches, including their intentions for impact (as covered in Chapters 4 to 6).

Although my primary interest as a practitioner lies with coaching at the elite end of performance, as outlined in Chapter 1, it is also important to acknowledge that this opening study aimed to survey coaches operating with *all* levels of golfers (i.e., from club to county to national/international to tour level). The reasons for this were multiple: firstly, it is rare for a coach to work solely at one level of performance, especially when working their way up the coaching ladder, and so seeing the different conditions they have to switch between is relevant; secondly, using all performance levels sheds light on which challenges pervade golf coaching culture as a whole; thirdly, gathering data across all levels of golfers presents the opportunity to compare and contrast similarities and differences across all groups, as well as getting a feel for the culture that elite players have been exposed to throughout their careers; and finally, it would give a contextualised perspective on specific elite-end challenges that would then inform the subsequent chapters of this thesis. Therefore, this chapter seeks to identify what are some of the current trends in golf coach decision-making across all levels of performance and what impacts on these trends?

3.2. Method

3.2.1. Participants

In order to reach out to as many golf coaches as possible, contact was made with the PGA UK to enquire about potential access to their database of members. The PGA subsequently granted permission to distribute an e-mail on behalf of the research project which contained a link to the survey. In addition to this, my own social media platforms were used as a means of recruitment for completion of the survey (e.g., Facebook and Twitter). Both avenues of communication (PGA e-mail and social media platform) comprised of the same drafted introduction message along with a link to the survey (the first page of which provided all background information so that participants were fully informed of the purposes and conditions of the research).

Subsequently, a total of 71 golf professionals completed an online survey who coached at club level ($n=71$), county level ($n=55$), international/national level ($n=42$), and tour player level ($n=34$). These coaches were based in the UK ($n=60$), Australia ($n=4$), USA ($n=3$), Canada ($n=2$), France ($n=1$) and Holland ($n=1$). To be clear, I decided not to set any limitations with regards to the country in which participants coached. Of course, this is not to say that coaching is the same in different cultures; indeed, we know that isn't the case. However, as the study focused on coaching within the general sub-culture of golf rather than golf coaching within different cultures, this approach was deemed appropriate. Additionally, the relevance of this approach was also checked by comparing the responses from non-UK participants against UK participants during analysis. This process did not reveal any notable discrepancies with the responses and, instead, reflected a consistent pattern across UK and non-UK based coaches.

The golf qualifications/certifications held by participants based in the UK ($n=60$) had the following breakdown: UKCC Level 3/PGA Level 3 ($n=46$), UKCC Level 2 ($n=11$), UKCC Level 1 ($n=1$), none ($n=2$). Additional golf-specific qualifications held by participants included: PGA of Australia ($n=4$), PGA of USA ($n=1$), PGA of Canada ($n=2$), BA (Hons) Degree in Golf Coaching ($n=2$), PGA of France ($n=1$), UK PGA Master Professional ($n=1$), GSED ($n=1$), TPI Level 3 Golf Instructor ($n=1$), US PGA Master Professional ($n=1$), Class A Dutch PGA ($n=1$), PG Cert ($n=1$). Finally, one participant had a general science-based coaching degree.

3.2.2. Survey Design and Questions

Through the use of online questionnaire software (Survey Monkey), a 21-question survey was created to collect golf coaches' perceptions, opinions and experiences of the core PJDM processes identified by Martindale and Collins (2005, 2007) and covered in Chapter 2. Although a number of systems were considered (e.g., Qualtrics, Smart Survey, Zoho), Survey Monkey was the selected data collection system primarily based on my previous use and familiarity, but also for its support of the data analysis process. More specifically, Survey Monkey automatically provides a computer generated quantitative analysis of the data collected, presenting this in a way that aligned with the data trends the study was intending to identify and explore. In addition, Survey Monkey was selected due to the ease of use for participant. In this respect, Brace (2018) explains that it is important to reduce frustration levels for the participant in survey-based research, as this can increase the chances for completion of the survey. Additionally, the presence of 'progress indicators' are a favorable feature used in online surveys as it gives an indicator to the participant how much of the survey has been completed (Brace, 2018). Usefully, Survey monkey had this feature available, which also contributed towards its selection. Furthermore, one of

the benefits of an online survey is the option to ensure the participant has provided a response to a question before moving on to the next (Brace, 2018); again this was a feature made available through the use of Survey Monkey.

When developing the questions, a number of established considerations in line with Tourangeau, (1984) had been considered. Firstly, it was decided to keep the survey anonymous with the rationale being that participants can be less sensitive to social desirability when answering questions under this condition (Willis, 2004). In other words, the participant can be more likely to tell the truth and not contrive an answer that they feel might make them ‘look good’ due to the answers not being linked to them. In addition, particular care was given towards the terminology used within the questions to ensure participants had the best chance of understanding what the questions meant (King, Horrocks & Brooks, 2018; Roulston, 2018; Willis, 2004). Willis (2004) suggests ‘meaning of terms’ can be drastically different for respondents; as a result, careful consideration to what specific words or phrases might mean to the participants was given (Roulston, 2018). For example, instead of asking participants to describe the typical “nature of the goal” with their students, questions were formed using wording that would be much more relatable to the majority of coaches. For example, in the case of the nature of the goal, participants were asked in most cases, what type of main goal do your current players prefer to work towards?

As further rationale for question development, considerations were given to the aim of the study (i.e., to acquire a broad picture on the context of golf coach PJDM) as well as the time for completion (i.e., the need to make the questionnaire as concise as possible to encourage participation) (Tourangeau, 1984). More specifically, these questions explored issue conceptualisation, the nature of the goal, the nature of the relationship, and PJDM-based evaluations. In other words, the

questions in the study were developed in direct relation to the constructs considered in Chapter 2, the purpose of this study, and my professional knowledge.

In terms of the style of questions asked, most questions employed a multiple-choice answer format, with three questions (Q4, Q9, Q11) requiring a short written response. The rationale for primarily using multiple-choice questions was my belief that participants would find it much more convenient to select an option that closely matched their view/opinion from a number of options available to them, rather than to write out descriptive answers for each question (McAllister & Guidice, 2012). Of course, consideration was also given to the limitations of multiple-choice questions, specifically being that participants might simply select an answer option without carefully reading the questions and without meaningful thought when selecting (McAllister & Guidice, 2012). As such, a small number of open questions requiring a short written response were included to obtain some detail on the reasons why participants selected some particular answers over others.

Throughout the process, the use of a critical friend (Rattray & Jones, 2007), more specifically my director of studies, was used to assist in checking that questions that were pertinent towards the subject focus area. My director of studies was selected primarily due to having an area of expertise within PJDM along with experience in the development, deployment and analysis of surveys. In terms of the overall design of the survey, questions were presented in a particular order to offer a logical flow through the topic areas. For example, starting the survey by asking participants what percentage of their players have a quick fix mentality was considered too direct without setting up any preceding context. Starting the survey with such a question may have also been suggestive that the remainder of the survey would surround this topic (which it did not). Therefore it was deemed more appropriate to start the survey

with generic questions and lead more subtly towards the more direct questions relating to all PJDM-based principles.

3.3. Procedure

The developed survey was piloted using PGA coaches ($n=5$) who were not taking part in the main data collection phase who then provided feedback regarding the survey's content (i.e., were questions relevant?), clarity (i.e., were questions and answer options easy to understand?) and coherence (i.e., did the questionnaire have a logical flow?). From this process, a number of minor changes were made to the phrasing and ordering of particular questions but none to the core content. For example, initially question 7 was placed ahead of 5 and 6 but it made more sense, after feedback from the pilot group, to capture the data of what the coach preferred first, followed by what the coach believed the player preferred second. Finally, question 7 (identifying what the coach and player usually end up working towards) would come next to identify the extent of player influence on the nature of the goal.

Once the questionnaire was finalised, an electronic link to the survey was sent to a pool of golf coaches through the use of electronic databases (PGA e-mail database) and social media. Of course, limiting the survey to only an electronic link narrowed the participant range to those who operate electronic devices. However, it was considered too impractical to provide the survey by hand or mail as an alternative data collection method to the field of professional golfers across the UK and overseas. It was also expected that the vast majority of participants would have some form of electronic device. Ethical approval had been granted from the University's ethics committee and all participants were made aware of the purpose of the study, that their participation was voluntary, and that the information they provided would remain anonymous during the processing, write up and potential publication of the findings.

The survey received a total of 73 attempted completions, however this was reduced to 71 during the analysis due to incomplete submissions (i.e., a failure to complete the full survey). Termination point for this survey was decided when response patterns reached stable levels (i.e., responses levels remained similar regardless of additional completions) in addition to a sudden reduction of survey completions over a period of time (2 months) (Carson, Collins, & MacNamara, 2013). Survey Monkey automatically produced all of the statistics on which the Results and Commentary section that follows is based. In addition to the statistical information that is presented, exemplar written responses to questions 4, 9, and 11 of the survey are also provided to offer additional context and insight to the area they tapped into.

3.4. Results and Commentary

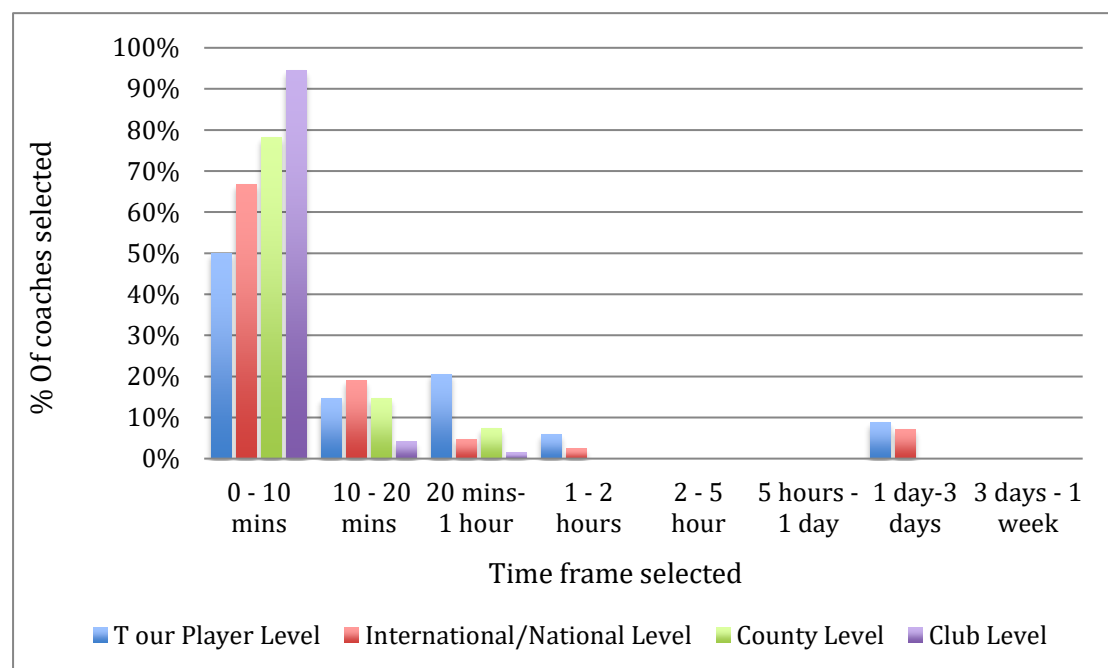
The results from the survey are presented in relation to the core PJDM processes identified by Martindale and Collins (2005, 2007). More specifically, these processes are: issue conceptualisation, the nature of the goal, the nature of the relationship, and PJDM-based evaluations of the effectiveness. For each of these processes, figures and tables are presented that summarise all of the relevant responses alongside a commentary on the main points of interest from these tables.

3.4.1. Issue Conceptualisation

As shown in Figure 3.1, one of the most notable findings on the issue conceptualisation process was the short time taken across the board by coaches to understand the nature of the performance issue. For example, the results showed that 94.36% of club level coaches draw their conclusions within ten minutes of when they meet their golfer for the first time. The brevity of this process appeared to be on a sliding scale with those working with higher-level golfers taking generally more time

to conceptualise the issue. However, even at tour level, 50% of coaches reported taking just ten minutes to conceptualise the performance issue. Indeed, despite the potential benefits of triangulating the issue conceptualisation process, golf coaches appeared to be using considerably short time frames to formalise their decisions in relation to what aspects of performance require work.

Figure 3.1. Average time spent deciding what to work on and in what way.



Shedding some light on the reasons behind the limited commitment to issue conceptualisation, one club level coach expressed a common view that player expectation was a major contributing factor:

If, as a coach, you have not said anything after fifteen minutes the player will start to wonder if you know what you're doing as they almost expect you to pick out the issues within a few shots (highly unlikely).

Tellingly, the “highly unlikely” noted at the end of this representative quote suggests that coaches may often recognise that conceptualising the performance issue can

rarely be achieved in under fifteen minutes; yet a high number of coaches reported that working on this timescale was common.

At the other end of the performance spectrum, a tour level coach who was also a PGA master professional confidently expressed his/her ability and own desire to make decisions in extremely short periods of time:

On full swings, only three swings were needed for me to discover the root of the problem. You shouldn't take more than that.

In this case, the time spent on conceptualising the issue was still therefore extremely short but reflected a conscious decision to do so. Either way, the pattern of committing little time and resources to understanding the nature of the golfer's challenge and apparent preference to rely on NDM at the expense of a more thorough triangulation and evaluation process based on CDM was generally evident at all levels of coaching.

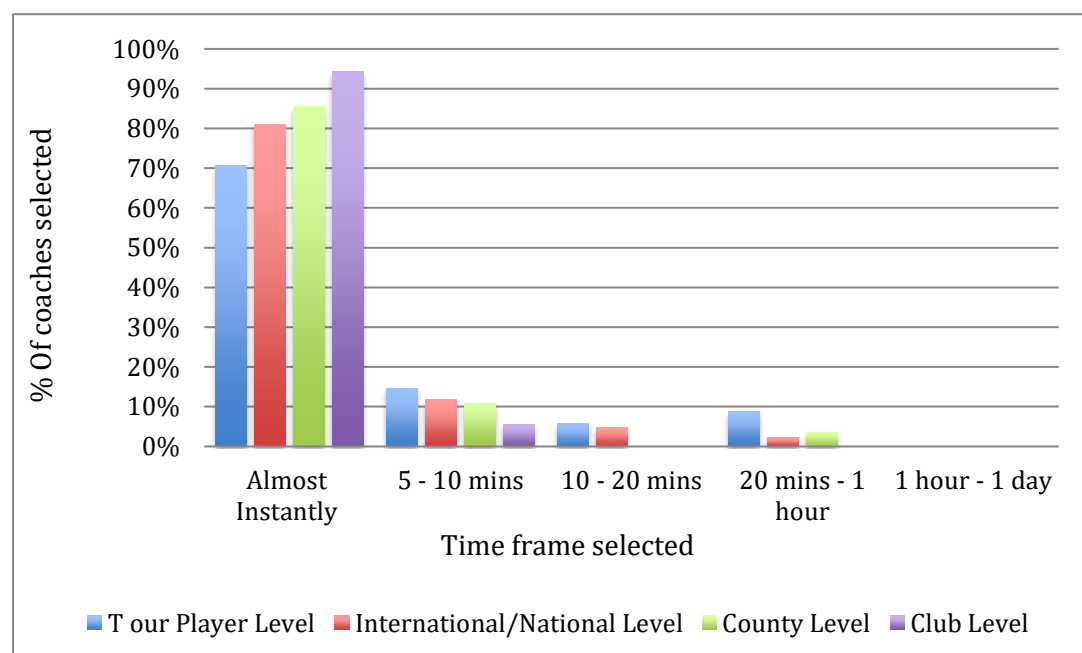
It does need to be acknowledged, however, that some tour level coaches did report a generally more considered approach to issue conceptualisation than club, county and international/national level coaches. For example, one tour level coach suggested that he/she takes a couple of days before making an initial decision as to what to work on with a new golfer:

I need to have a good thorough look at what's going on (physical assessments, 3-d data capture, game analysis). Ideally I will talk over with other coaches who are more expert in particular areas. Then I will talk it over with the player and together we will develop the first goal.

Here, the longer time frame adopted by this coach reflected more of a CDM approach to conceptualising the player's needs. Additionally, using multiple sources of data allowed for triangulation when conceptualising the issue; not only had s/he collected multiple sources of information but s/he then compared and contrasted with other coaches to identify the issue and so embraced key hallmarks of CDM. Notwithstanding these points, however, this coach certainly appeared to be an “outlier” in terms of his/her approach to conceptualising the performance issue. In sum, there was a significant bias for coaches across all levels toward a quick and shallow approach to issue conceptualisation, in particular club level coaches.

As well these insights on the initial issue conceptualisation process, the survey also solicited data on issue conceptualisation that occurred within a pre-existing coaching relationship. More specifically, and as shown in Figure 3.2, participants also revealed telling trends when they were asked by players to change what they were working on.

Figure 3.2. Average time spent deciding the best way to work on a new goal(s) when requested to do so by the player



In particular, the majority of all coaches suggested they would decide almost instantly when asked to alter the goal. When asked to reflect why this is normally the case, one club level coach informed me:

If they are not happy with what I am doing and I don't change then they will simply stop getting lessons because they feel it's not helping them, and they don't want to waste their money.

Alternatively, a small number of tour level coaches did appear to take their time over changes in direction with 8% taking 20 minutes to one hour, which may reflect a greater degree of CDM taking place. For example, one tour level coach suggested he would take over 20 minutes to make a decision with the following reason:

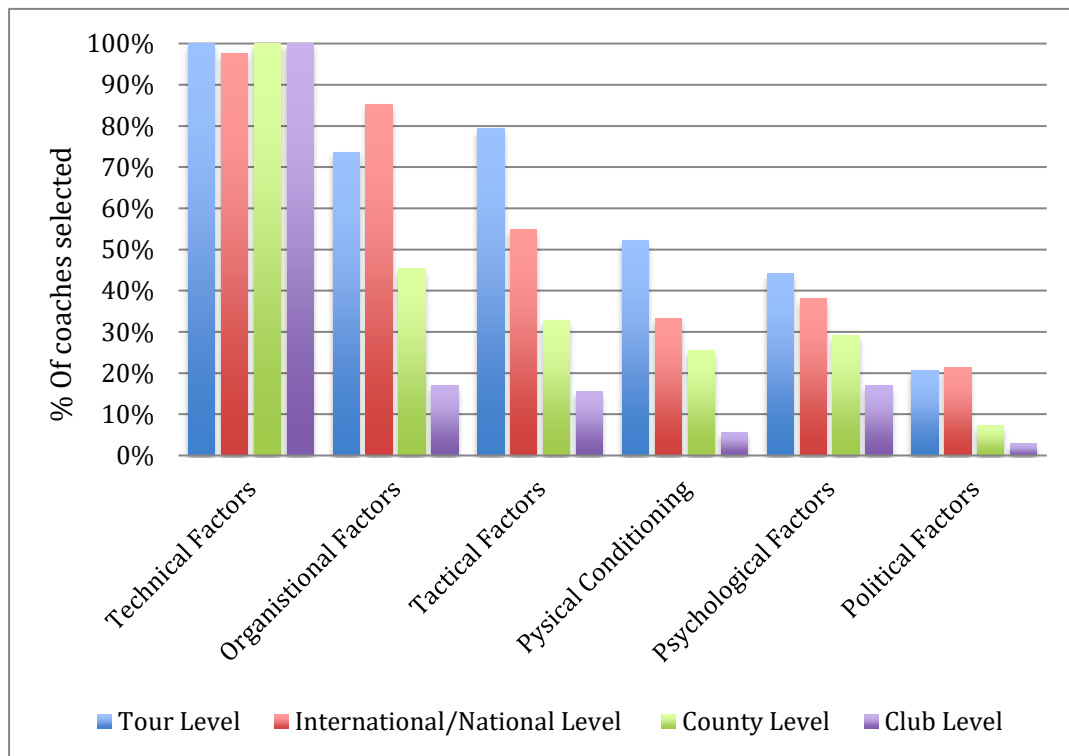
They are normally un-happy with the progress or what we are working on, so they want to change it pretty quickly. But we cannot be hasty and just jump into trying anything (despite the often high emotions); there must be a reason and some structure as to why we choose a new avenue.

In sum, another sliding scale was apparent when coaches were asked to alter what they are working on mid-relationship, albeit over a smaller range than at the start of the relationship, with a heavy bias towards making decisions almost instantly across all performance levels.

Shifting from the timescale of the goal to its focus, Figure 3.3. shows how virtually all participants in the study across all performance levels used technical

factors as their main goals (tour level 100%, international/national level 97.61%, county level 100% and club level 100%).

Figure 3.3. What performance factors the main goals consist of



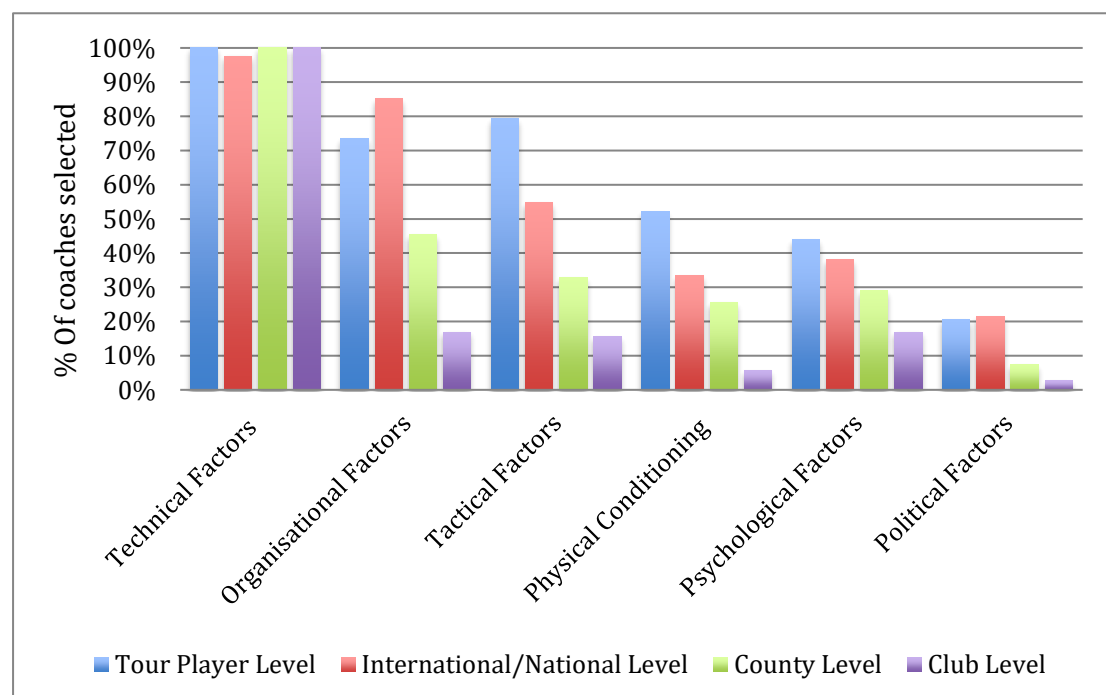
In sum, there is a notable decline in the range of performance factors used by coaches to focus their goals as the level of golfers' skill declines. More specifically, tour level coaches seemed to adopt more multi-dimensional goals whereas the lower down the skill level of player, the more uni-dimensional (and technique-oriented) the goals become. However, while tour level coaches in general appeared to focus on a variety of performance factors within their main goals, subsection 3.4.1. reported that 50% still used less than 10 minutes to conceptualise the player's performance issue(s). This leads to the question, how can a coach who is triangulating their data during the issue conceptualisation stage across multiple performance disciplines arrive at such multi-dimensional decisions within just 10 minutes? Are they really triangulating

across such broad performance disciplines? If not, then what does this suggest about the credibility and validity of issue conceptualisation process amongst tour level golf coaches. Or if so, then what processes are they using to optimize the efficiency of their work?

3.4.2. Nature of the Goal

Considering the nature of the goal between coaches and players, Figure 3.4 shows how virtually all participants in the study across all performance levels used technical factors as their main goals (tour level 100%, international/national level 97.61%, county level 100% and club level 100%). Other performance areas were used to a smaller degree, particularly as the performance level decreased.

Figure 3.4. Prevalence of different main goals in all coaching relationships

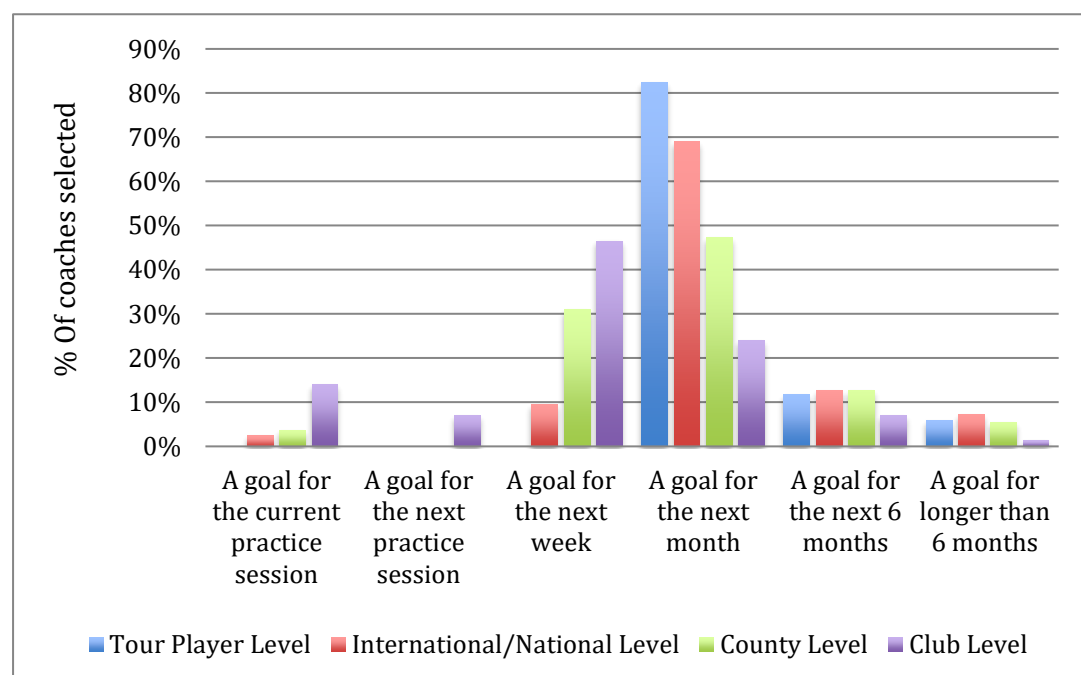


In sum, there is a notable decline in the range of performance factors used by coaches to focus their goals as the level of golfers' skill / performance declines. More

specifically, tour level coaches seemed to adopt more multi-dimensional goals whereas the lower down the skill level of player, the more uni-dimensional (and technique-oriented) the goals become.

As shown in Figure 3.5, golf coaches also described differences in their preference of the timeframe for achieving goals. For example, 82.35% of tour level, 69.04% of international/national and 47.27% of county level coaches suggested that they preferred to work towards a goal for the next month. Interestingly, 46.47% of club level coaches suggested that they preferred working towards a goal for the next week.

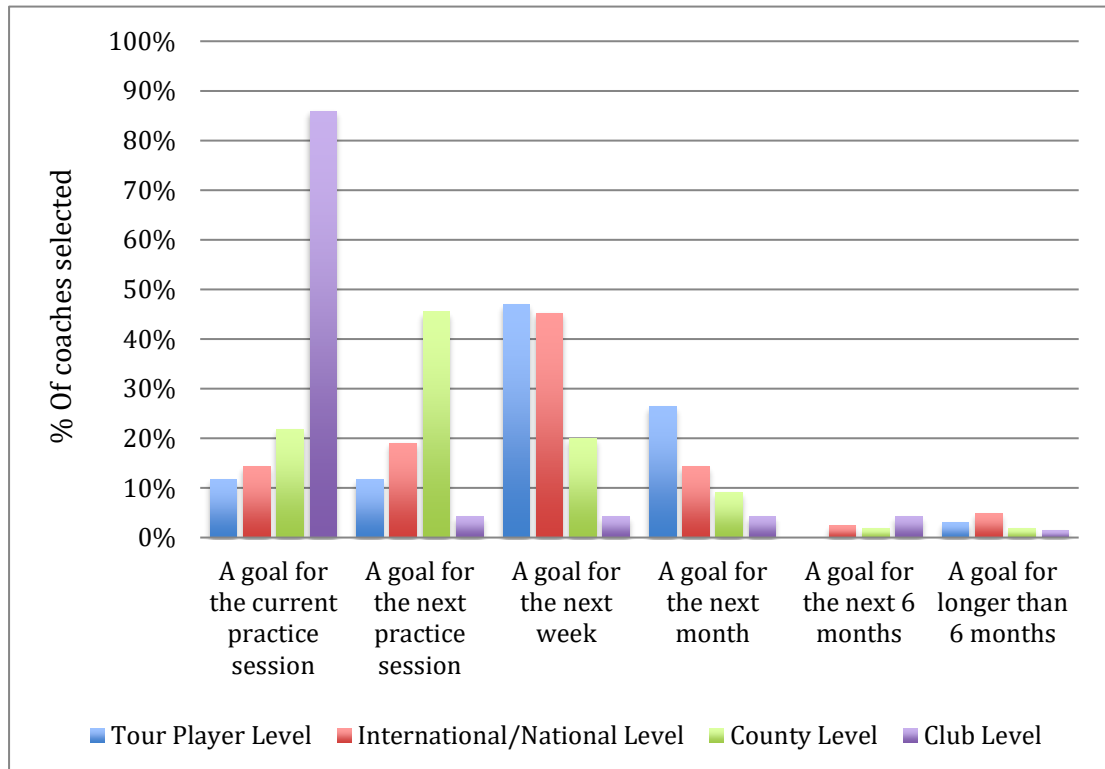
Figure 3.5. Coaches' preferred main goal with current players



In comparison to the coach's own preferences, Figure 3.6 shows how 85.91% of club level coaches believed that their players would prefer to work towards a goal that is achieved in the current practice session (as compared to the coach's own general preference of working towards a goal for the week or a goal for the next

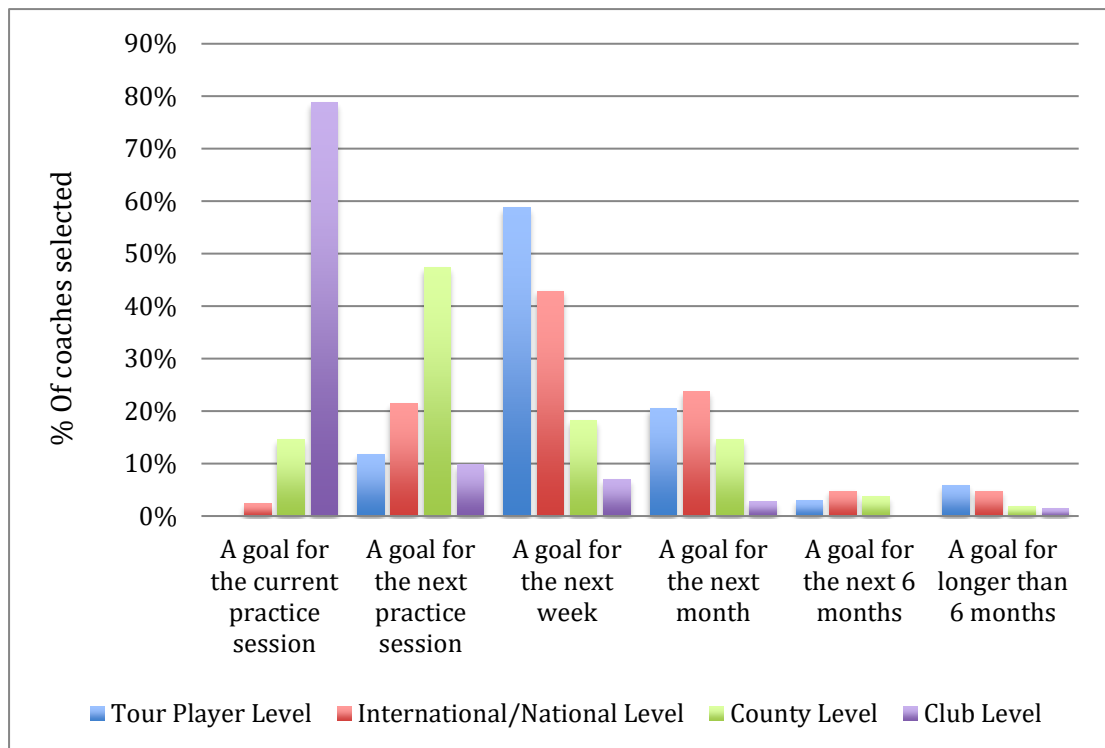
month). It appears (from the perspectives of these golf coaches at least) that golfers across all levels have a general desire to achieve their goals in a much earlier timeframe than their coach.

Figure 3.6. Coaches' perceptions of their players' preferred main goal



Noticeably, as a whole, Figure 3.7. highlights how coaches identified that they generally tend to end up working towards a goal that is set to an earlier time frame than they would prefer. This suggests the player is having an influence on the nature of the goal.

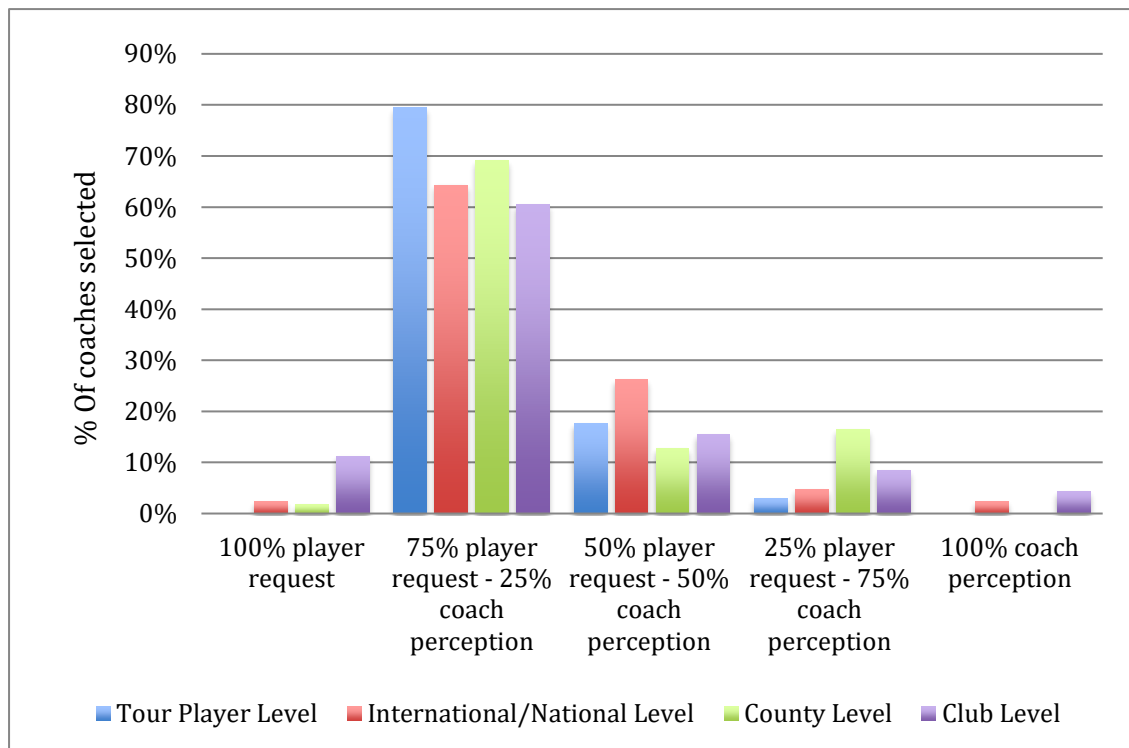
Figure 3.7. Type of main goal both the participant and their player end up working towards



3.4.3. Nature of the Relationship

Now moving to consider the nature of the relationship, and to further extend the points highlighted in Figure 3.7, Figure 3.8. shows that over 60% of coaches across all performance levels suggested that when selecting a timeframe for a goal, 75% of that decision is under the player's preference/influence and 25% related to their own contribution.

Figure 3.8. Relative contribution of coach and player towards the decision on the goal timescale



When asked why the coach believed this to be the case, a number of notable themes arose within the short responses provided. At tour level, for example, 23 coaches mentioned that their players are primarily (and often exclusively) concerned with their performance level, with one in particular mentioning:

Because the player wants to consistently perform at a high level, they are regularly competing and can't afford to have a glitch/dip in their performance.

In a similar vein, 35 national/international level coaches suggested that their players have 75% influence on the decision of the time frame for a goal due to them "being the boss". The following two coaches in particular provide telling descriptions of their relationship with national/international level players in general:

This player is my boss; if they are not happy with the work I am doing and want to change then we will. They will also push when the goal will be met.

The relationship is always fragile because the player is ultimately the boss; they have the power to drop you as soon as they want to. So you have to respect what they want, and they usually want the change to happen much quicker than what the coach is anticipating.

This pattern in perception also appeared in relation to club coaches:

I have my expectations but the player is ultimately the boss of the lesson. He/she decides how long the lesson is, when he/she will get the lesson and what the lesson is on. He/she also expects the lesson to fix his problem within the time frame of the lesson. They struggle to see past the lesson and into the long-term progression.

Complementing the above statement, 58 club level coaches mentioned that they believed their players 'short-term thinking' was the reason for them having a significant sway in influencing the timeframe for when goals should be achieved. For example, the following two exemplar perceptions were reported by club coaches:

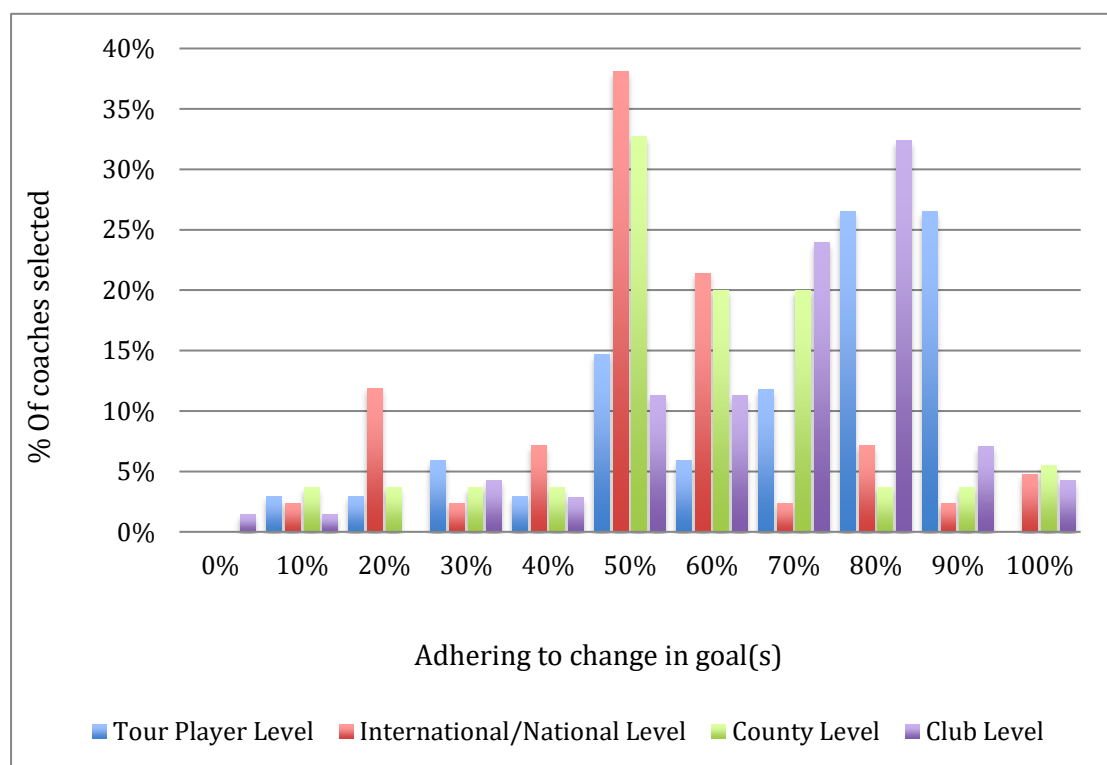
The player has the entire focus on the session; they don't seem to look beyond the next few days of planning. If I have a goal for them that should be met within a month they have no chance of looking/focusing that far down the line.

The player will want the goal to be met literally as soon as possible. They don't really want to invest in more lessons or time to practice.

They almost have a belief that they can buy an improvement in their game [within that single session].

Further reflecting the scale of player influence, Figure 3.9. shows that 64.70% of tour coaches and 67.39% club level coaches suggested that they will change the goal if the player requests to do so 70-90% of the time.

Figure 3.9. Extent of coach adherence to requested change in focus from player



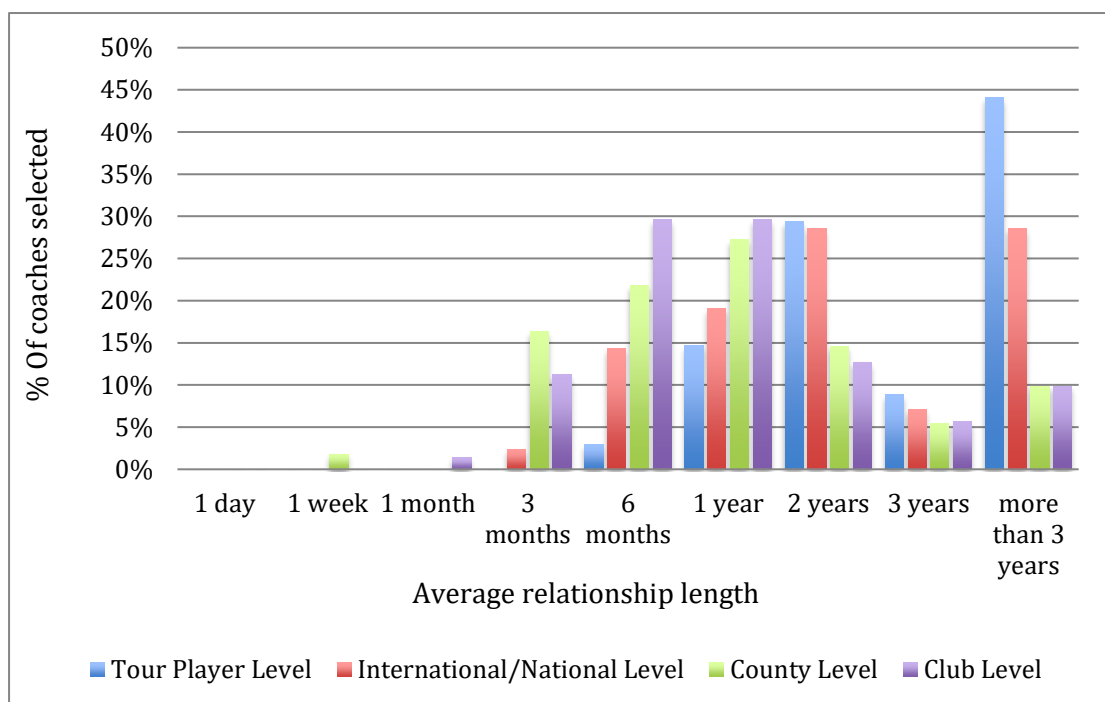
Indeed, when coaches were asked why they believe this is the case, 44.11% of the tour level coaches and up to 90.14% of club level coaches mentioned in some way or form that “the player is the boss”. One particular tour level coach explained:

This player is my boss, if they are not happy with the work I am doing and want to change and I don’t allow this to happen [then] there is a high chance I won’t be working with them for much longer. Despite my professional

thoughts and judgments they can often disagree and move on [to work with another coach].

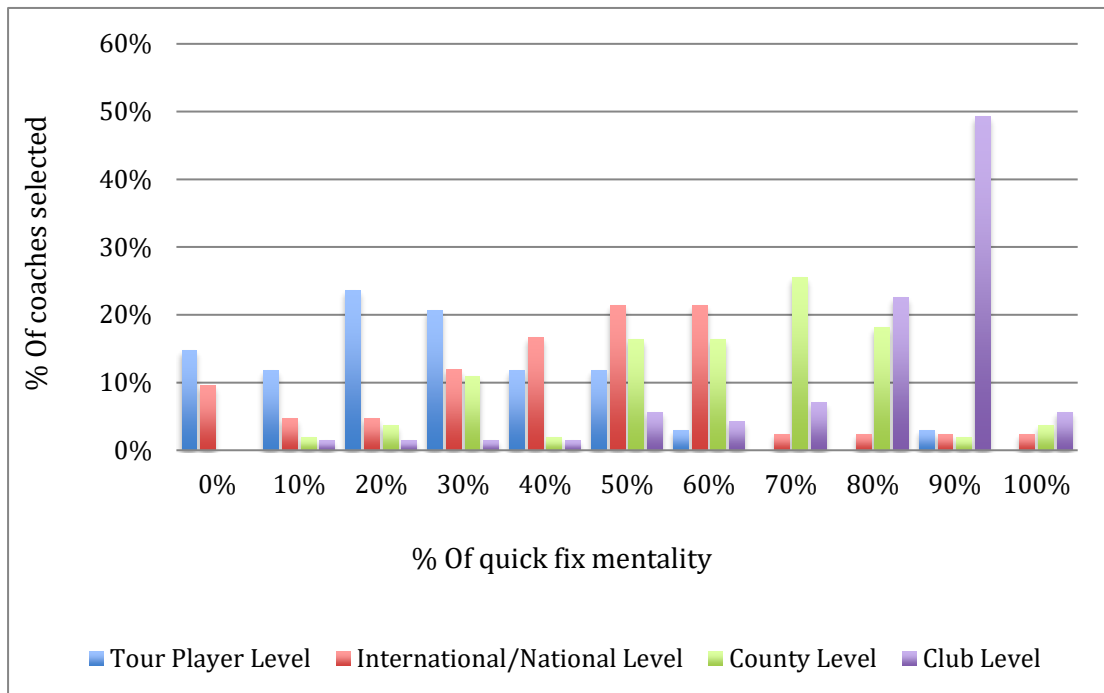
In terms of the coaching timeframe, Figure 3.10. highlights how the average coaching relationship at club level is primarily split between six months and one year. This timeframe is considerably short when referenced against the tour level coaches suggesting the average relationship lasting more than 3 years.

Figure 3.10. Average length of coaching relationship



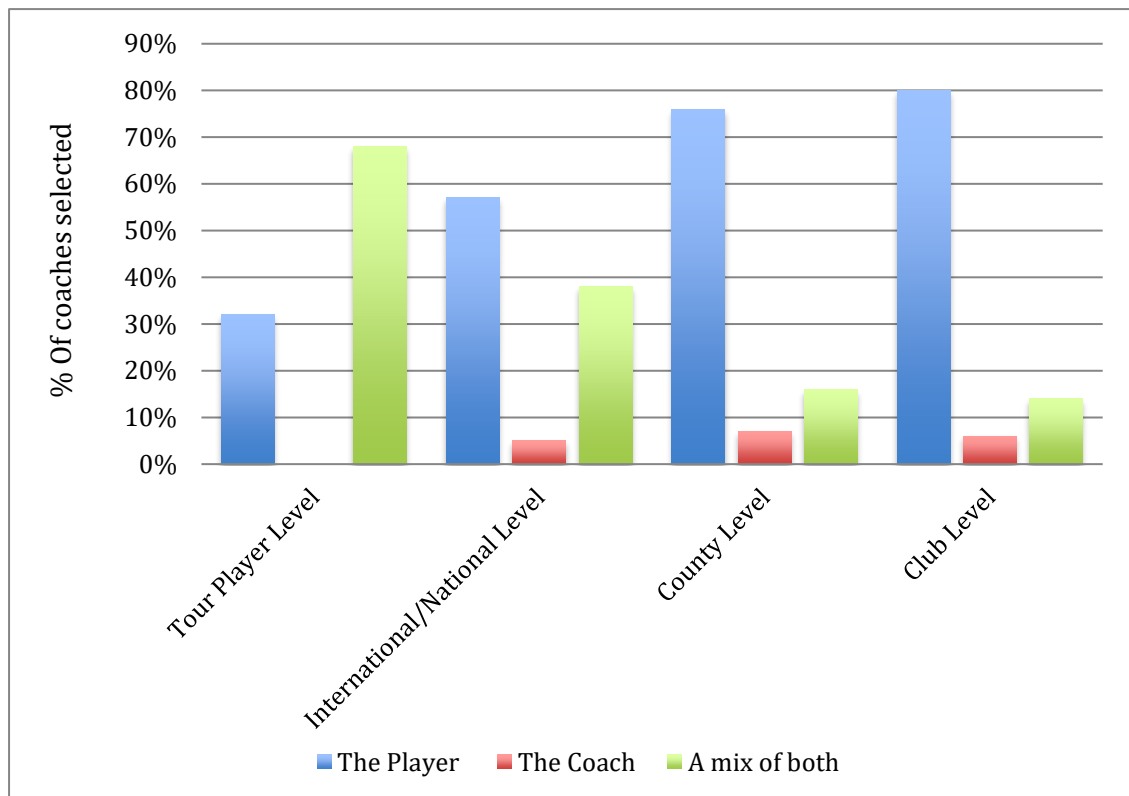
Not only does it appear that the player generally has a large influence over when a goal should be obtained across all levels, it is also clear that coaches suggest that golfers generally have a “quick fix” mentality. Figure 3.11. shows particularly at the club level, 84.49% of coaches suggested that 70-100% of players have a quick fix mentality. This number starts to reduce as skill level increases, again reflecting another sliding scale.

Figure 3.11. Percentage of players with a ‘quick fix’ mentality as perceived by coaches.



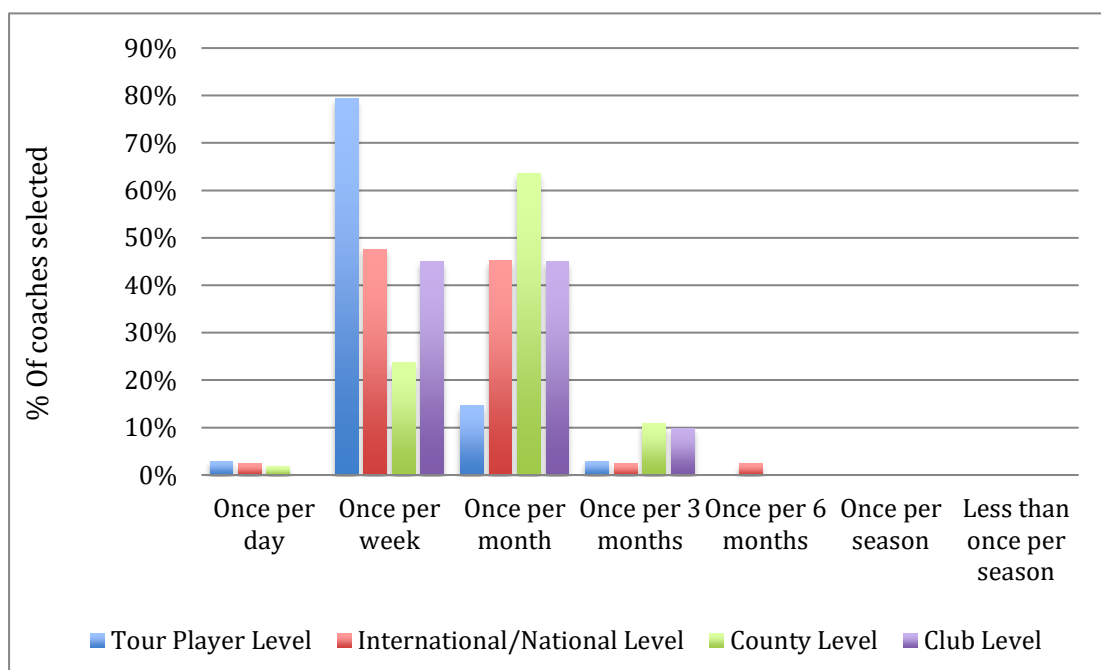
When looking at who decides when, where and how often the coaching interaction takes place, Figure 3.12 shows that the three lower performance levels are generally decided upon by the player, whilst at tour level it is primarily a joint decision.

Figure 3.12. Coaches' perceptions of who normally decides when, where and how often coaching occurs.



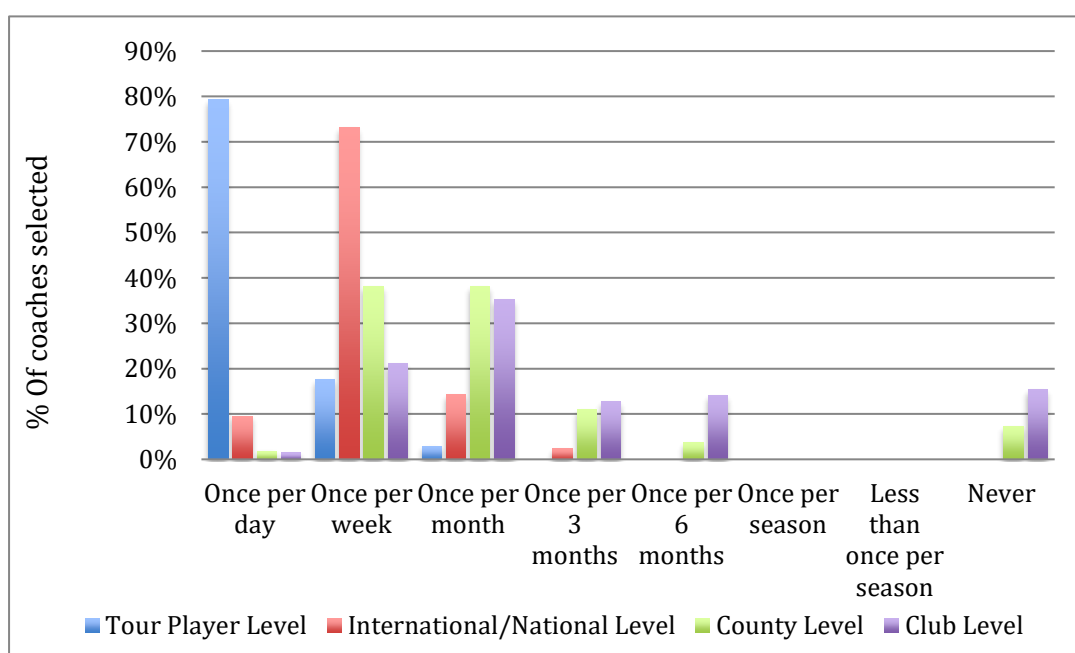
In terms of how often the coach and player interact, Figure 3.13 also shows that when asked (to the closest average) how often they see their players face-to-face, tour level coaches suggested once per week whilst the other performance levels were divided between once per week and once per month.

Figure 3.13. Level of face-to-face contact between coach and player



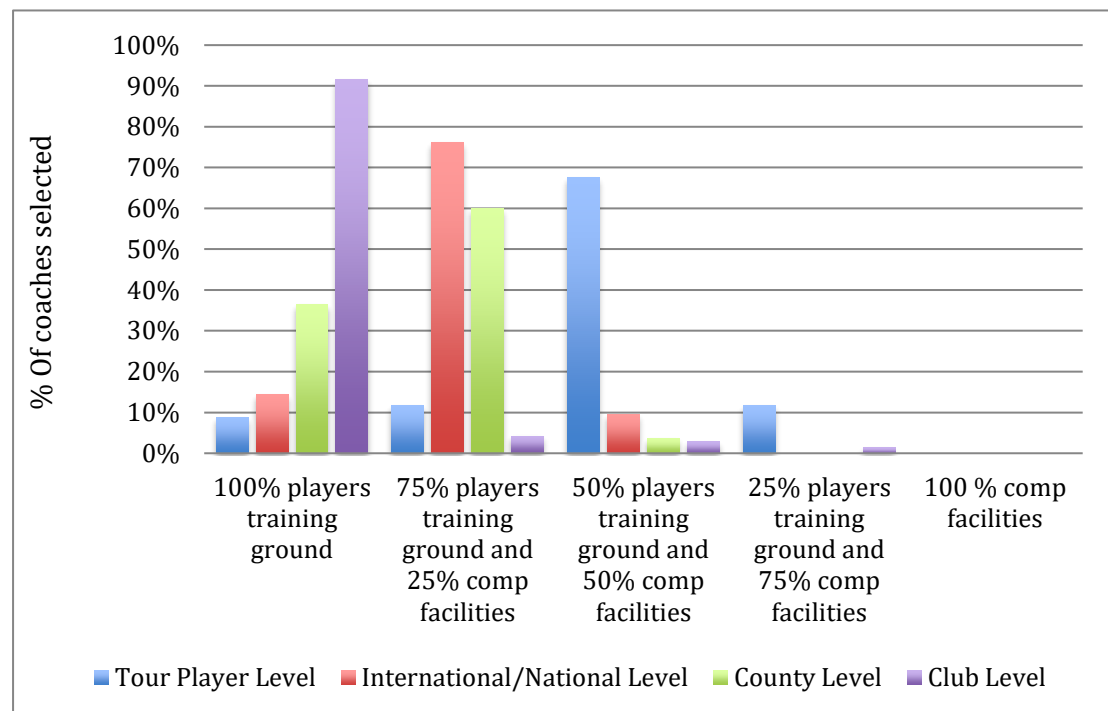
Supplementing these findings, Figure 3.14 shows that 79.41% of tour coaches are in contact once per day with their players beyond face-to-face contact. Whilst the lower performance levels are in contact much less, again presenting another sliding scale across performance levels.

Figure 3.14. Level of contact between coach and player beyond face-to-face



With regards to where coaching interaction takes place, Figure 3.15. shows some noteworthy results. Tour level coaches typically divide their time equally between the training ground and competition facilities, whilst the lower performance levels have a bias towards using the training ground more often.

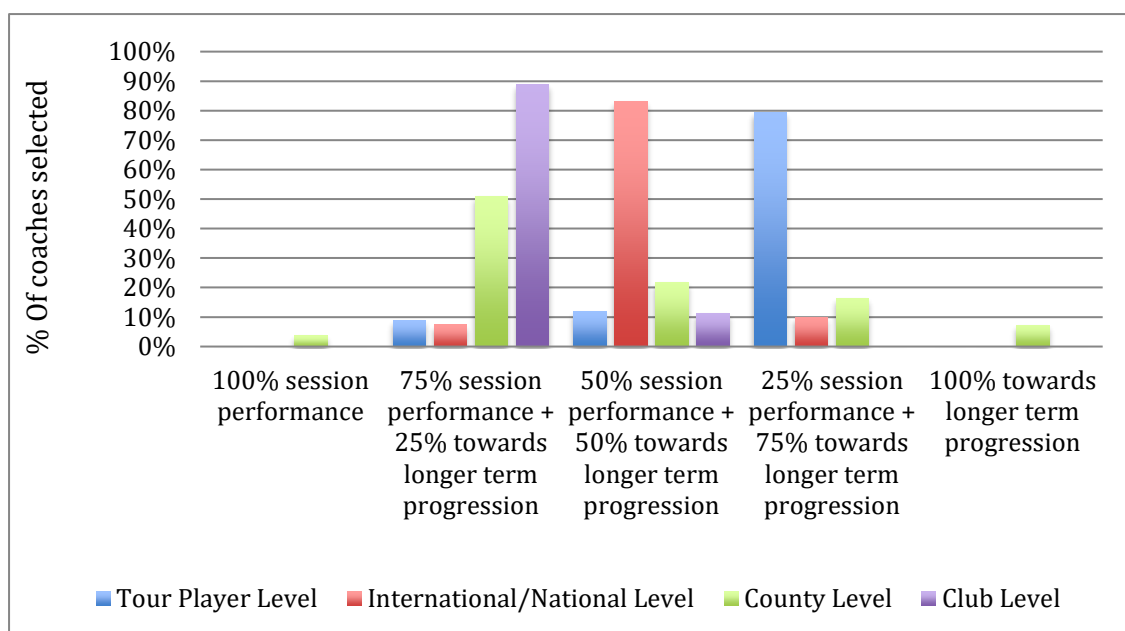
Figure 3.15. Location where coaches normally see their players



3.4.4. Decision-Based Evaluation of Coaching Effectiveness

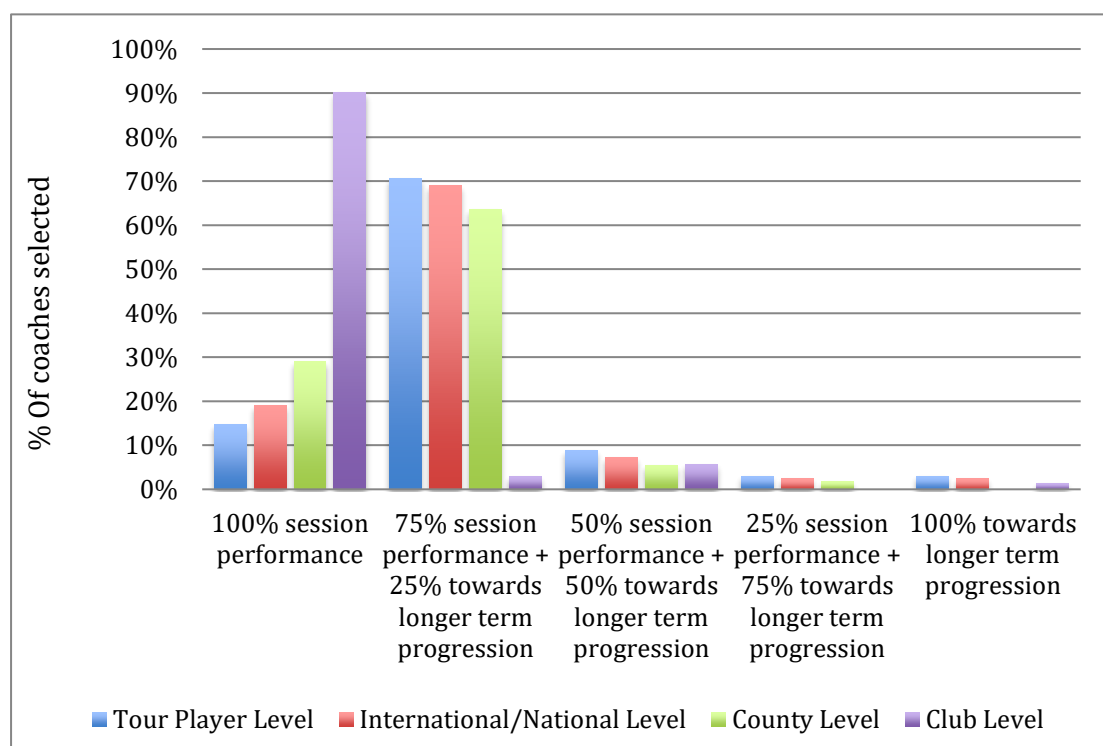
In terms of evaluating their effectiveness, Figure 3.16. shows that tour level coaches placed longer-term progression as a higher priority over session level improvement, whereas the coaches working with lower skill levels placed session level improvement as an increasingly greater indicator.

Figure 3.16. Markers of effectiveness used by coaches to evaluate their decisions.



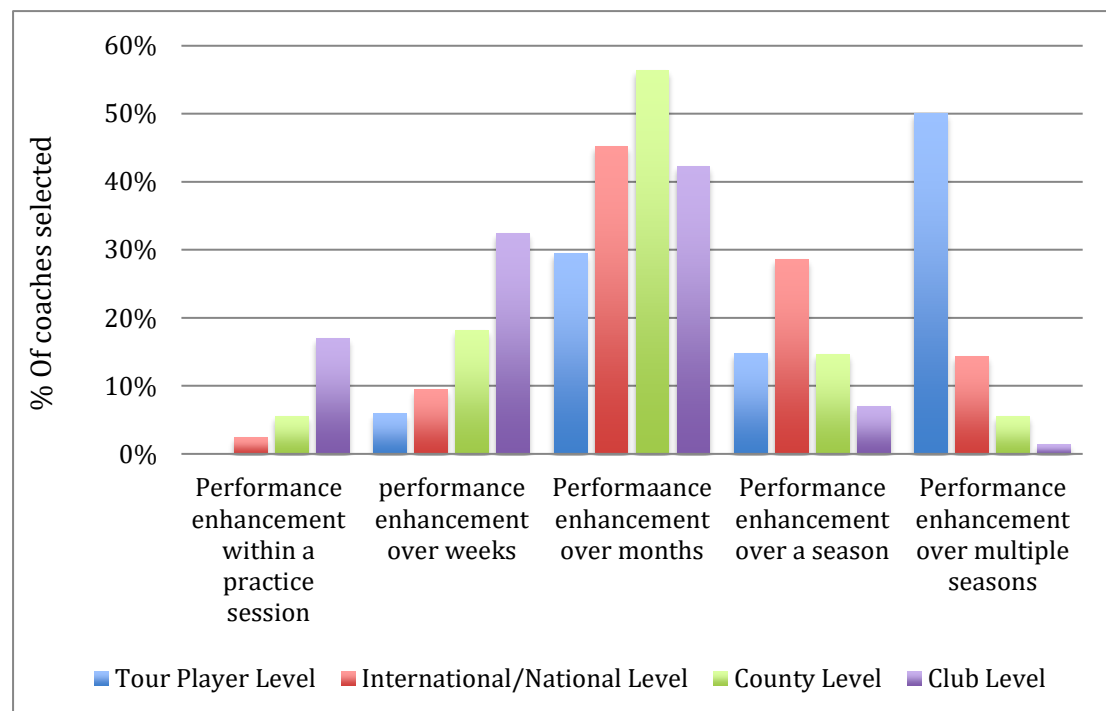
Indeed, Figure 3.17. indicates that coaches across all levels suggested that their players' will use the session performance as the largest indicator to gauge the quality of the coaching session.

Figure 3.17. Markers of effectiveness used by players to evaluate their coaches' decisions.



Somewhat in contrast to Figure 3.17, Figure 3.18. shows that 50% of tour level coaches suggested that, from their own perspective, performance enhancement over multiple seasons was the most significant maker of coaching effectiveness. Additionally, 45.23% of international/national level, 56.36% of county level and 42.25% of club level suggested favouring performance enhancement over months as their most significant marker for coaching effectiveness.

Figure 3.18. Most significant marker for coaching effectiveness as perceived by the coaches



In sum, this shows at tour level there is again a longer term thinking approach, whereas the remaining three performance levels have a shorter timeframe as their marker for effectiveness.

3.5. General Discussion

This study aimed to identify the broad picture (from club level to tour level) of golf coach decision-making based against the established PJDM concepts

introduced in Chapter 2. More specifically, the study explored golf coaches' perceptions on issue conceptualisation, the nature of the goal, the nature of the relationship, and evaluations of coaching effectiveness. The intention for impact construct was purposely left out due to it being highly specific and individual from player to player. I anticipated that this study would shed some initial light on the nature of the PJDM challenge for golf coaches, current PJDM practice, the extent to which different PJDM factors are associated with perceived coaching effectiveness and, most importantly reflecting my professional interest, implications for further exploring and optimising coach PJDM at the elite level of performance (i.e., what seem to be the most significant aspects of golf coaches' PJDM).

3.5.1. Summary of Findings Across Coaching at All Levels

As noted throughout the Results section, and characteristic of all PJDM factors explored, participant responses reflected a sliding scale whereby those working at the tour end adopted a generally more considered, comprehensive and coherent approach (at least in relation to those working at the club end). For example, coaches who work at higher levels of performance typically take longer time periods to decide what to do (issue conceptualisation) over those working with lower levels of performance. This generally includes using a higher level of triangulation to ensure that the area they decide to work on is, in fact, relevant to the player's identified goals; although some questions were raised about the extent of this triangulation process given that 50% of tour coaches still apparently reached decisions on what to initially work on and in what way in under ten minutes. The seemingly longer, more considered approach appears to reflect the thoughts of Glaser (1990) who suggests that experts may appear to solve problems more slowly, but overall they are much quicker than novices. This approach also mirrors that of fire fighters and surgeons

who, despite working under more immediate pressure, are still hesitant to ‘get to work’ and instead will use CDM tools such as mental simulation to help ensure that the subsequent decisions made are appropriate for the given situation (Phillips et al., 2004).

Additionally, from the results of this study, the set goals are also characteristically longer in length for those at higher levels of performance, which complements the fact these coaches work with their golfer for longer periods of time. This is opposite to the trend found with coaches working with lower skill level players, who typically work towards a shorter time framed goal. Interestingly, the approach adopted by coaches working with those performing at a lower level appears to replicate those in other domains such as the fitness industry (Rousseau, 2015; Thomas, Hyde, Karunaratne, Kausman & Komesaroff, 2008) and the music industry (Gordan, 2003) where a quick fix/shorter term outlook is often characteristic of their participants and performers. The underlying message gleamed from other industries and sports, such as skiing (Lockerbie & Tate, 2012; Thorpe & Chawansky, 2016) and fitness (Maffetone & Laursen, 2019; Rousseau, 2015) is that this style of intervention can be extremely frustrating for both the coach and the athlete/performer; largely due to the increased tendency for ‘to-ing and fro-ing’ between the same performance issue with little progression (Maffetone & Laursen, 2019). Therefore, a common recommendation in other literature has been that athletes/golfers with a lower skills level might want to ‘buy in’ to the alternative longer-term approach if they would like to reduce frustration levels felt during the intervention and coaching process (Kearney, Le, Cunniffe & Heerey, 2018).

Finally, coaches working at higher performance levels in this survey were also more multidimensional with their goals, covering a range of performance areas, whilst

club level coaches in particular strongly favor more uni-dimensional, technique-orientated goals. Furthermore, the technique biased uni-disciplinary approach appears to replicate sports such as skiing (Kuna, Brymer, David & Marinkovic, 2018; Lockerbie & Tate, 2012) specifically those on holiday might want to learn the skill quickly to help enjoy their time on the slopes whilst not having much regard for skill retention or further progression (Lockerbie & Tate, 2012). However, those who are looking to obtain longer-term intentions, specifically Olympic level skiers adopt a more multidisciplinary approach (Rasdal, Moen & Sandbakk, 2018).

With regards to the nature of the relationship, another sliding scale was apparent, with coaches at higher levels of performance working with players more regularly for longer periods of time, whilst also seeing them more at competitions. This is quite the opposite once again to coaches working at lower performance levels (especially club level). In this respect, the coach athlete relationship, specifically the longevity of it, seems particularly crucial in relation to the impact on performance with the athlete (Jowett & Cockerill, 2002). For this reason and others, the coach athlete relationship has been long recognised as a foundation and major force in promoting an athlete's development in technical, psychological and physiological skills (Jowett & Cockerill, 2002). Interestingly, the opinions of Jowett (2017) compliment the findings identified in this chapter, in that a longer lasting coaching relationship is compatible with developing multiple performance disciplines (e.g., psychology, physiological and tactical).

When evaluating the effectiveness of coaching, both coaches and players (as perceived by coaches) at higher performance levels tended to use longer-term markers as indicators of effectiveness. For example, it was indicated that at the end of a coaching session that both the coach and player will reference progression against

longer-term agendas at higher performance levels, whilst giving less attention to the short-term session level performance. Coaches working at lower performance levels, however, revealed that they primarily use session level performances as a key indicator of coaching effectiveness, with little focus and attention towards the attainment of longer-term goals.

In sum, there is a clear sliding scale from tour level coaches down to club level coaches, with the tour level coach typically taking longer to decide what to do (issue conceptualisation), working towards longer-term, more multidimensional goals (nature of the goal), working with players more regularly for longer periods of time at both practice and competition venues (nature of the relationship) and evaluating progression on longer-term markers (evaluation of effectiveness). As such, clear differences are apparent on the nature of the PJDM challenge for golf coaches at different levels, their current PJDM practice, and the extent to which different PJDM factors are associated with perceived coaching effectiveness.

While this general trend may be unsurprising – given that performers (and coaches) operating at higher levels typically invest more time and energy into their development and performance – there are, however, some telling patterns when inspecting the results more closely. Specifically, even coaches who are working with higher levels of performers still seem to have their PJDM *significantly* shaped by: 1) their players' shorter-term orientation (across goals, plans, delivery and evaluation); and 2) their players' power paired with the coach's need/desire to stay in a job. Ahead of Chapters 4 to 6, it is on coaches working with elite level players (i.e., those at national/international and tour level) that the discussion will now focus.

3.5.2. Considerations for Elite Level Coaching

Considering golfers' perceived desire for short term objectives and occupation with performance on the day, participants reported that elite players typically had a desire to achieve a goal in a shorter time frame than the coach; complemented by the finding that a third of tour players were felt to have a quick fix mentality. Similarly, coaches reported that they worked towards a goal set to an earlier timeframe than they would prefer, which then has implications for what the coach suggests and how that information is passed onto the golfer. In addition to this, tour level golfers were felt to evaluate the effectiveness of coaching over a shorter time frame than the coach, which again highlights the short (or at least *shorter*) termism of the player. The situations mentioned may largely be due to the player not fully understanding the process in place to achieve the longer-term goals; or it may be a result of coaches working with the player more at competition than at their home base training grounds, which naturally has a performance rather than a long-term development focus at the forefront (Cote, Salmela & Russell, 1995). For example, a coach working at a tournament may have to manage a player whose primary desire is to perform well that week and, as a result, use this week's performance as an indicator of the coach's effectiveness regardless of its assistance or interference towards any longer-term agendas. Furthermore, tour players were perceived to have a general expectation that the coach should work quickly, identify a clear issue and provide a fix that will produce an immediate result. This once again complements the players' desire to achieve results in an earlier time frame and preference to use short-term session level performances as an indicator of coaching effectiveness. Interestingly, this situation mirrors that of football managers/coaches whose decisions and actions are also shaped by the typically shorter-term outlook placed upon them by the owners, fans, media and team players (Hughes, Hughes, Mellahi & Guermat, 2010).

Considering the influence of tour players' power over the coach alongside the coach's need / desire to stay in a job, these two characteristics go hand in hand and reflect a situation whereby the player was broadly identified as being the boss and essentially the ultimate decision maker. Indeed, the results showed that coaches often end up working towards a goal that is on a timeframe more preferred by the player. Furthermore, it was found that coaches will often change the goal when requested to do so by the player with this decision-making process again completed over a notably short time period. It was also notable that some coaches identified that such immediate responses were not only due to the player's pressure/demands but also the coach's *own* desire to make decisions quickly, as if a marker of expert coaching. One final point that is worthy of highlighting is that no coach across all levels suggested that they are the primary decision maker for deciding when, where and how often they work with their player. Indeed, it seems clear that coaching practice is delivered in favour of the player's preferences, a factor which has significant influences on the type of coaching that can be provided for the player and the types of goals achieved.

Although these features (i.e., player short-termism and power) help to explain *why* coaches end up working in a manner at such odds with their preferences, another intriguing consideration is *how* this actually plays out or is perpetuated. In this respect, the findings from this study appear to point to particular flaws with: 1) how coaches conceptualise issues; and 2) how coaches "sell their message". Regarding the former, there appears to be a significantly limited issue conceptualisation process used by coaches. Indeed, coaches across all levels appeared to work to a particularly brief time frame when they make their decisions on what the coaching programme needs to deliver and involve, which indicates a general lack (or sub-optimal use) of triangulation. This is also complemented by an apparent desire

across coaches to work quickly as if it were an indicator of coaching expertise/effectiveness. By not conceptualising the issue sufficiently, then simple solutions are likely to be identified with apparently simple answers that should logically, be quick to solve. Of course, this might be the case sometimes. However, performance development and long-term progression is rarely simple and instead often highly complex (Carson & Collins, 2011). If the performance issue is in fact a complex multifaceted issue, but the coach identifies and presents the issue to the player as a simple and singular performance concern (e.g., a technical component), then it seems reasonable to suggest that this will influence the thinking of the player throughout the entire programme of work (to be that of a shorter term outlook).

Therefore, if coaches are looking to better manage the quick fix culture associated with golf coaching then it seems that they may need to adjust their initial decision making processes to reflect this. For example, from a different domain, those who are employed to help support businesses are encouraged to initiate their analysis through detailed assessment of multiple business related areas (e.g., marketing, staff training, product design, shipping, customer service) (Kimsey-House, Kimsey-House, Sandahl & Whitworth, 2018). Following this, they would then present the findings to the business owner(s) whilst explaining how all business areas are linked to the intervention and the realistic time period for impact (e.g., eight months to improve three specific business related areas, twelve months to improve all seven identified areas for improvement). Overall, such an approach sets a frame of work based on multiple performance related areas that require work over a period of time that is realistic and long term in nature (Klopper & Coller-Peter, 2018). Of course, working with an individual golfer is on a much smaller scale to changing a business. However, the same general principles do seem to apply when seeking sustainable, long-term

performance improvements. For example, from a sport coaching perspective, much previous research has highlighted the benefits of an approach whereby at the start of the development programme, the athlete will be made clear on the multiple performance disciplines (e.g., nutrition, psychology, technique, strength and conditioning) that can contribute towards achieving their performance goal along with the scheduled time frames for achieving the meso and macro goals (Bourdon, Cardinale, Murray, Gastin, & Kellmann, 2017; Sauvage & Loudon, 2017).

Indeed, it seems fair to suggest that an extremely quick issue conceptualisation will set the tone for the whole programme of work, whereby the player then *expects* coaching to continue to operate on a quick timescale (i.e., “working that way must be normal, especially when everyone else is doing it like this”). A major opportunity to sell a longer-term focus and the credibility of the coach’s knowledge is therefore potentially compromised, perhaps even irreversibly. Of course, it is crucial to note that the coach shouldn’t be “the owner” of the player’s development if the player is to be optimally independent, adaptable and resilient (cf. Grecic & Collins, 2013; MacNamara & Collins, 2015; Mageau & Vallerand, 2003); however, as they are employed to support the attainment of goals to the best of their ability, then it makes sense that their potential to contribute (and direct when/where relevant) should be maximised. More specifically, it will likely be the coach who has greater levels of declarative and procedural knowledge in the areas that require improvement and who can therefore establish the most informed focus, timescales and work schedule (Nash & Collins, 2006; Martindale & Collins, 2013). Indeed, *most* players – given the fact that they are players and not coaches – will be naïve to the full complexity of their presenting issue from a *coaching* perspective; even in apparently simple changes (Carson & Collins, 2011). They will also likely be naïve

(or more naïve) to the process by which changes must be made; especially those which aim to deliver longer-term gains. In this respect, it is important that the coach can educate the golfer as to the difficulty of their current performance issues and develop a shared mental model on future action through explaining how long he/she feels it will take to address (Richards, Collins & Mascarenhas, 2017) Of course, this relies on appropriately qualified and educated coaches of – but this is another issue!

Finding support for this point, this somewhat replicates the “buy-in” message surfacing from the 5-A model of technical change (Carson & Collins, 2011), which suggests that having the athlete/golfer ‘buy-in’ to the process of longer-term objectives requires a consistent and coherent message to ensure the coach can complete his/her evidence-based intentions for the benefit of the player. Additionally, other literature in sport has emphasised the importance of athlete ‘buy-in’ for enabling the motivation and commitment levels to stick with a development/performance programme. For example Butler and Hardy (1992) expressed that athletes who have little input or a passive role in the creation of a psychological performance profile may experience moments of low motivation and commitment to follow the interventions that follow. From coaching literature, the importance of coach-athlete relationships for supporting buy-in has also been stressed. For example, Sagar and Jowett (2015) suggested that athletes performing at high levels often have a fear of failure, which can significantly influence their trust levels and ability to commit to a coach’s developmental programme. However, athletes who have some element of self-control and a coach-athlete relationship that creates the trust can reduce their fear of failure (Sagar & Jowett, 2015). Therefore, including the athlete during the issue conceptualisation and goal setting process might assist in reducing the athlete’s fear of failure when taking on ambitious long-term goals and, as a by-product, increase the

chances of them sticking with these longer term agendas which might at times provide challenging moments (Eccles & Tenenbaum, 2004). On the findings of this chapter, however, detailed discussion and negotiation of the issues, goals, what is required to achieve these goals, and what progress will look like seems to be significantly overlooked or under-emphasised by elite-level golf coaches.

Despite the importance of educating the golfer about *why* it is essential to work coherently and consistently towards a realistic and agreed goal, the coach of course needs to be cautious of over-selling the approach. Indeed, there are a number of reasons for the need for balance between pushing the coach's preferred longer term agenda and the players shorter term desire; as one key point, golf coaching has historically been characterized by a quick fix culture and simply suggesting golfers should place their focus on longer term agendas may be such a culture shock that it deters golfers from committing to the coach's advised programme (or even participating in golf at all for those who are just beginning in the sport; Carson & Collins, 2011). Secondly, elite level golfers have a professional requirement to maintain current performance levels to prolong their career (despite also wanting to achieve longer term objectives); in this instance the coach must therefore not only stress the commitment levels for longer term agendas but also meet the requirements that the short term situation demands (e.g., maintaining high performance levels for the remainder of the season to retain the player's tour card).

3.6. Summary and the Next Step

Overall, this study has shed light on the general contexts faced by golf coaches when making and delivering decisions with a broad spectrum of performance levels, something which to date has been unexplored. It has also shed light on the

current typical approaches taken by coaches with regards to their PJDM and how it is evaluated. Specifically, the broad findings have shown that there is a sliding scale from tour level coaches down to club level, with the club level coaches/players working towards the shortest time frames for the attainment of goals, having the shortest timeframe to conceptualise an issue, heavily player driven, largely technically biased and in-favor of outcome measures with regards to evaluation of coaching effectiveness.

In specific reference to the elite coaches (i.e., those operating at national/international and tour level), the study presented in this chapter has shown that these practitioners face particular challenges for their PJDM, many of which seem rooted to the established “quick fix” and “player power” culture of golf coaching. More specifically, this study has shown that the elite-level golf coach (as well as coaches at any level) must have the ability to: 1) recognise and manage their player’s short(er) termism; 2) recognise and manage their player’s power; and 3) continually frame their work against the player’s long-term objectives in a way that sells the required programme. However, as this study aimed to provide a broad overview of the current PJDM landscape in golf coaching, little insight was given into *how* golf coaches can actually *manage* these key challenges to make and deliver decisions with specific individual players. The next chapter therefore looks to identify how coaches working at elite levels of performance (national level) effectively arrive at and deliver their decisions in the specific context of their practice.

Chapter 4:

Exploring the Delivery of Session-Level Intentions for Impact in Elite-Level Golf

Coaches

4.1. Introduction

As Chapter 3 highlighted, the generally short-term nature of golf coaching presents a situation in which the ability to develop and deliver structured coaching choices and plans are somewhat challenged; a predicament that is often overlooked by the technique-dominated professional training programs (Professional Golf Studies, 2017). Indeed, despite the accepted value in coaching and performance literature of working toward integrated, longer-term goals (Culin, Tsukayama, Angela & Duckworth, 2014), Chapter 3 revealed that the majority of international/national level golf coaches believed 50-100% of their players have a quick fix mentality and, if requested to alter what is being worked on in a session, these coaches will generally meet this request 50-100% of the time. Overall, these and the other findings in Chapter 3 suggest that coaches are regularly altering their sessions with players, or *deviating from their original intentions for impact*, even when they believe that the pre-planned approach is best suited for the players. These findings also suggested that to deliver (or ‘land’) their intentions for impact, coaches must therefore work to: 1) recognise and manage their players’ short termism, 2) recognise and manage their players’ power, and 3) continually frame work against the players’ long-term objectives to sell the message. As such, the purpose of this study was to examine the ways in which elite level golf coaches might manage these challenges to deliver sessions that remain nested within medium and long-term agendas. In other words, how do coaches get their pre-planned intentions for impact to continually ‘land’ with their players in order to ‘stick to the plan’?

4.2. Method

4.2.1. Design

Against my aim to explore how coaches get their pre-planned intentions for impact to continually ‘land’ with their players, a multi-case study was selected as a suitable study design. This approach was chosen over a single case study as multiple case studies can help researchers to identify patterns that may shed a more accurate light on the activities of larger groups (Baxter & Jack, 2008; Frawley et al., 2018; Stake, 2013; Hsia, 2015), through the opportunity to gather a broader range of representative information (Andrew & Pedersen, 2018; Nagel, Schlesinger, Bayle & Giauque, 2015; Van Der Roest, Spaaij & Bottenburg, 2015). More specifically, I decided to select a multiple case study design that revolved around observation and analysis of three coaches and their work with national level players over multiple coaching sessions.

As well as the benefits described thus far, multiple case study research allows for observed reports of real-world context in which they arise (Baxter, 2008; Yin, 2014) and contrasts across these cases to establish consistent patterns of action (Stake, 2006; Ruoranen, Clausen, Nagel, Lang, Klenk, Giauque, Bayle & Schlesinger, 2018). Indeed, case study research is particularly suitable for answering ‘how’ and ‘why’ questions (Schwandt, 1997; Stake, 2013). As such, this method was consistent with my aim to identify *how* coaches working with national level golfers over a series of lessons recognise and manage their players’ short termism, recognise and manage their players’ power and continually frame work against the players’ long-term objectives to sell the message. Or, in other words, *how* coaches get their intentions for impact to continually ‘land’ with their players. Importantly, and recognising the implications of focusing on one case (i.e., one coach-player pair), this multiple-case

study approach presented the opportunity to identify some tools that were being used across a number of golf coaches to help land their intentions for impact.

4.2.2. Participants

Table 4.1 Participant demographics.

Coach	Age	Professional Experience	Nationality	Golfer Skill Level
Coach1	63	41years	British	National
Coach2	55	30years	British	National
Coach3	41	15years	British	National

Participants in this study were three male British professional golf coaches (see Table 4.1), all of which currently coached a golfer competing at national level. All participants were British PGA qualified and had between 15 and 41 years of coaching experience.

4.2.3. Recruitment

Purposeful sampling, a technique widely used in qualitative research (Smith, 2017; Patton, 2002) and one that targets individuals that are especially knowledgeable about or experienced with the subject interest (Ames, Glenton & Lewin, 2019; Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood, 2015; Smith, 2017) was used as a means for participant recruitment. The reason for taking this approach was that the participants within the study would be appropriate to help identify useful tools coaches can use to help land their long-term intentions for impact. In addition, purposeful sampling is often used when selecting individuals that would be available to complete the research study (Amex, Glenton, & Lewis, 2019). As a result, a number of golf coaches already known to myself were contacted via e-mail invitation

to participate in this study and received an open letter explaining what the study intended to explore along with the required commitment. More specifically, participant suitability was based on two criteria: 1) they currently coached a golfer who was performing at national/elite level (please note the term “elite” is associated to the level of performance of the golfer and not to be confused for the coach’s level of expertise discussed in Chapter 2); and 2) the coach and his/her golfer could commit to take part in the study given the need to be available for data collection over three consecutive coaching sessions. A number of six coaches were shortlisted to be considered for data collection, but after consideration of a number of characteristics, such as travel distance, timing and dates of coaching sessions, three coach-player pairs and players were confirmed as participants for the study. Although the participants had been reduced to half the original shortlist, this did not influence the rationale of the study, which was to identify *some* tools or techniques that golf coaches might use to help land their intentions for impact in the face of player power and player short termism. Of course, any tools that were subsequently identified were therefore not to be taken as the most effective or most used tools by most coaches. Rather, the rationale remained simply to uncover *some* tools that could be used by coaches to help land their intentions for impact.

4.2.4. Data Collection

The University of Central Lancashire granted ethical approval for the study, with all participants reading and signing a consent form for participation (See Appendix B). Having completed this phase, data collection was focused on three consecutive sessions between the recruited coach and their national level player; primarily due to the fact that one-off sessions would not provide the data needed to address the areas of interest. Indeed, the key feature of this study was to identify how

coaches working with national level golfers get their *intentions for impact* to continually 'land' with their players. Whilst reflecting on potential data collection methods for those coaching sessions, it was noted that qualitative researchers are not expected to gather data from participants with every form of variety; instead forms of variety should be chosen in relation to the study goal (Levitt, Wertz, Marrow & Ponterotto, 2016). To best meet the purposes of this particular study, three data collection methods were therefore selected to be used at these coaching sessions, as based on their relevance and effectiveness for capturing not only the live session but also the participants' thinking and responses (Battaglia & Glasgow, 2019). These data collection methods were; 1) interviews before and after the coaching sessions; 2) video recording of the coaching sessions; and 3) field notes recorded by myself during the coaching sessions.

More specifically, before each session began the golf coach underwent a semi-structured interview to identify their intentions for impact and how the session was set up, through classical decision-making processes, to achieve the session goals. The pre-session interview guide can be found in Appendix B. After the pre-session interview with the coach, the session between the coach and the player was then video recorded and observed. During this observation, I recorded field notes relating to how the coach was working to deliver their intentions for impact and, in particular, managing the player's potential power and short-termism. Finally, once the coaching session was finished, separate semi-structured interviews were then conducted with the player first and then the coach (see Appendix B). For each player, this post-session interview involved exploring their perceptions of (and reactions to) the coach's actions throughout the session; therefore providing an opportunity to validate the approaches used by the coach to get their intentions for impact to 'land' with the

player. For each coach, the post-session interview involved exploring their reflections on how they felt that their actions had helped or hindered them to ‘land’ their intentions for impact. In this way, both pre- and post-session interviews optimised the accuracy of the data, with recall in the post-session interview also aided by use of video playback. More specifically, the pre-session interview with the coach presented the opportunity to compare the coach’s intentions against their actual actions. Additionally, the interview with the player assisted with validating the effectiveness of the coach’s actions; in other words, did the coach’s intention actually work from the coach and player’s perspective?

4.2.5. Analysis

A two-stage analysis process was used as recommended in multiple-case study literature (e.g., Stake, 2006). Initially, within-case analyses were undertaken to identify unique patterns of action in each case (i.e., what did each coach do to deliver their intentions against the challenges identified in Chapter 3) (Maura et al., 2018). As part of this process, I enhanced my familiarity with the data by watching back the videoed sessions and reading and re-reading the field notes and the interview transcripts; termed “in-dwelling” (Maykut & Morehouse, 1994; Richards & Hemphill, 2017). From this point, the video, transcripts, and field notes for all the sessions were then examined for data which described or conveyed how the coaches recognised and managed any tendency for short termism, recognised and managed their players’ power; and continually framed their work against the player’s long-term objectives to sell their message. Such data were then developed into initial codes, as outlined by a number of qualitative literature and research studies (Braun & Clarke, 2006; Gibbs, 2018; Flick, 2018; Richards & Hemphill, 2017). Once the data for each single case study had been analysed, a cross-case analysis was then completed (Jones et al., 2018;

Brown et al., 2018). In this process, the individual data sets were compared against each other to see if any similarities existed in the ways that the coaches delivered their intentions for impact (cf. Swann et al., 2015). From this process, a set of collective themes were ultimately generated that described the actions that helped the coaches to land their intentions for impact with their players (Stake, 2006).

4.2.6. Quality and Trustworthiness

Usually, the term *trustworthiness* has been used by qualitative researchers to describe approaches that aim to optimise quality in their work, and as this case study is based on qualitative data (i.e., interviews), a number of steps were taken to enhance trustworthiness (Smith & McGannon, 2017). In terms of data collection, a pilot test was conducted with a coach and player of equal standard to those participating in the study reported in this chapter; a process that helped me to refine the flow of interview questions and my delivery of the procedure. For the study itself, the process of pre- and post-session interviews, supplemented by the coaching session also being recorded and observed, enhanced the quality and accuracy of the data (i.e., by providing a depth of information for me to work with). Additionally, caution was taken during the pre-session interview not to influence the coaches in terms of how they would deliver their sessions. Specifically, the interview questions were designed in such a way that questions were non-leading and open ended (Josselson, 2013), and deliberation was given to the social dynamics between the participants and myself over how this might influence the data collected (Gilligan, 2015; Rogers, 2000). For example, the coaches were actively encouraged to complete the coaching session as regularly as possible and reminded that there was no need to engage with the researcher during the live session. To further manage any impact of my presence, I observed all coaching sessions from an area within the coaching grounds that did not

catch either the player's or coaches' eye sight. To expose and manage my own biases in the data analysis procedures, I also opted to use a reflective diary to increase transparency in the research process (Ortlipp, 2008). Additionally, the use of a critical friend (my director of studies) was also employed throughout this study, primarily due to the reason that I would benefit from someone who could act as a research advisor, resource provider, writing consultant and an evaluation advisor (Kember, Ha, Lam, Lee, NG, Yan & Yum, 1997).

4.3. Results

This study served to better understand how golf coaches working with national level golfers deal with the challenges to their PJDM identified in Chapter 3. To reiterate, the findings in the prior chapter suggested that a golf coach's ability to deliver longer-term, robust and player-owned improvements is often impaired by: (a) players' typical short-term outlook; (b) players' relative power in the coaching process; and (c) coaches' flaws in conceptualising issues and selling their message with coherent actions (e.g., uncritically switching focus on the golfer's request). On the basis that issue conceptualisation at the programme-level would appear to be a more straight-forward process for coaches to address based on already available literature (cf. Abraham & Collins, 2011), this study consequently focused on *how* coaches work on a *session*-level to *deliver their intentions for impact against* the remaining key challenges. For clarity, the purpose of this study was to therefore explore how coaches work within coaching sessions to deliver their intentions for impact against three anticipated challenges: (a) the player's tendency for a short-term outlook; (b) the player's relative power in the coaching process; and (c) the coach's need to continually sell their message. The rest of this section will now introduce and

describe the ways in which coaches were found to keep their players working towards longer-term intentions in the face of these three challenges.

Specifically, the findings of this study revealed that coaches worked to ‘land’ their intentions for impact with players through *chronic effects*, *acute effects* and *regulatory effects*. Chronic effects were those that came from coach actions which provided players with a continual, ‘lower intensity’ reminder or frame of what they were trying to achieve in the long-term. These effects included the use of *coherent plans*, setting *coherent expectations* at the start of a session, and engaging in *coherent conversations* during a session. Conversely, acute effects were those that came from coach actions that provided players with a sharper, ‘higher impact’ reminder or frame of what they were trying to achieve in the long-term; in other words, “aha moments”. These effects included the facilitation of *intellectual insight* and *kinaesthetic insight*. Thirdly, regulatory effects were those that came from coach actions that helped players to maintain or regain focus and control in a way that supported the impact of chronic and acute effects. Finally, the findings also revealed that to deliver the three types of effects described thus far, coaches used time and space as a mechanism to optimise the coherence and consistency of their PJDM and actions. More specifically, coaches created time and space to increase the likelihood that their decisions *within* the session (i.e., on when, where, and how to deliver a chronic, acute or regulatory effect) were adapted to align with the unfolding situation (e.g., a player struggling with a certain activity). In this way, coaches used this mechanism to optimise the fit between their naturalistic decisions (i.e., those made *in* the session) and their long-term intentions for impact (i.e., those made *before* the session through classical decision making processes). Each of these themes will now be described and illustrated with quotes and observations on positive cases (i.e., when positive impact

occurred after one or more of the effects were delivered) and negative cases (i.e., when negative impact occurred when one or more of the effects were missing).

4.3.1. Chronic Effects

As described above, chronic effects were those that came from coach actions that provided players with a continual, ‘lower intensity’ reminder or frame of what they were trying to achieve in both the observed session and the longer-term. As mentioned above, these effects included the use of *coherent plans*, setting *coherent expectations* at the start of a session, and *coherent conversations* during a session. Each of these subthemes will now be described, with emphasis placed on how they helped the coach to facilitate a player’s progress towards their longer-term goals (i.e., how they helped the coach to land their intentions for impact).

4.3.1.1. Coherent Plans. Throughout the data collection process, all three coaches indicated that they had a longer-term objective to achieve with their player but, in order to reach that goal, a number of sequenced shorter-term goals had to be reached beforehand. For example, when Coach 1 was asked to explain the long, medium and short-term goals for Golfer 1, he highlighted that there was a clear major goal to be achieved, but in order for that to be accomplished a sequence of shorter-term goals must first be reached:

We have a few goals we are looking to achieve, mainly looking at building a more robust golf swing. To do this the impact position needs to improve, [Golfer 1] needs to increase the shaft lean and this will happen by altering his right elbow position. However, we can’t get to that yet without altering the knee, hip and elbow movement in the backswing. So right now we are on the

legwork to help get the movement going in the pelvis (Coach 1: pre-session 1 interview).

Furthermore, this plan was evident throughout the observation of Coach 1's sessions and his pre- and post-session interviews. Indeed, this thread remained clear during the interview before the second and third sessions:

Next step is to now focus directly on the pelvis. Like I mentioned last time, this is really the middle stage of technical goals for [Golfer 1]. If we can get the pelvis in a stronger position, so the pelvis turned more and side bending more at the top of the swing, we can then get onto the last part which is getting the arms down in front of him to help improve the impact position. (Coach 1: pre-session 2 interview)

Now we can get to work on the right elbow, assuming the pelvis is still in the right working order. We can start to adjust where the elbow is placed now. (Coach 1: pre-session 3 interview)

Importantly, when Golfer 1 was asked to share his views across the sessions, he also highlighted a clear understanding that working on the knee flex alteration was the *first* objective to achieve and that this goal would assist him in achieving other goals within the swing (i.e., related to his hip and then his elbow) and ultimately the final performance objective:

Overall the lesson was really good. [Coach 1] explained that working on the legs is the first thing we had to work on, and working on this would help me achieve other things in the swing. But for now this is what I'm focusing on. (Player 1: post-interview session1)

Yeah, I liked that lesson it was really good. I can tell my ball striking is getting to a higher level now. I know I have to put some focus on the hip turn and actually working on the legs first kind of makes sense that they work together. But yeah today just working on the hip turn and getting them on the right angle really was good. (Player 1: post-session 2 interview).

As shown, the coach's ability to work from a coherent plan was clearly a useful tool for keeping players on-board with working towards their long-term goals. Indeed, these quotes indicated how coherent plans could manage the potential interaction of the player's short-termism and power. However, and in contrast to the positive outcomes from the first two sessions, Coach 1 did encounter difficulties with keeping the player working toward the long-term goal in the final session. These difficulties will be described in the *regulatory effects* theme. For now, it is worth an early note that the effectiveness of one mechanism (in this case, chronic effects through coherent plans) could be derailed or hampered when other mechanisms weren't able to support it (e.g., regulatory effects).

Regarding the use of coherent plans by Coach 2, a similar approach of clearly identifying the longer-term objective was evident:

We have a few ball flight goals we want to achieve. Ideally [Golfer 3] needs to be in a position where he can hit multiple shaped shots. But right now because of his swing characteristics he struggles to hit a draw and a highball flight. Ultimately he needs to have the shaft in a flatter plane to allow him to hit out on the ball more. But first the backswing needs to be worked on, he has the shaft too flat too early in the swing, which then causes him to come over the top with a steep shaft plane. (Coach 2: pre-session 1 interview)

Moreover, the session observations and later interviews with Coach 2 again highlighted that there was a sequence of events to be achieved in each session, which all related to the longer-term objective:

Today we are going to look to see if we can improve how the downswing loading works. Basically if the backswing is looking strong we can start to adjust the downswing wrist movements and get the club shaft to flatten out.
(Coach 2: pre-session 2 interview)

Since [Golfer 3] has made some great alterations in the backswing and the early downswing is looking pretty good now, we can start to tidy up exactly how much the shaft shallows out. If he does it too much then it's too much.
(Coach 2: pre-session 3 interview)

Golfer 2's views indicated that he also had a clear view of how sessions were interrelated to achieve the long-term objective. Notably, he recognised that the backswing alteration was the *first* alteration and that the *second* alteration would be the downswing adjustment:

I enjoyed that lesson [and] I hit the ball very well at times. [I] Still have to tell myself what to do, as it's not natural yet, so that's a bit annoying. But I'm really getting the feeling of this takeaway position now so I will just keep working on that (knee flex change) until the next lesson. (Player 2: post-session 1 interview)

The lesson was all right, I hit the ball ok, and it could have been much better though. But the swing changes are starting to take place now. So today I had to get the shaft to shallow out in the downswing, and that's going to help me

hit it better pretty much. I just know the feelings to go away with mainly.
(Player 2: post-session 2 interview)

As presented, the coach's coherent plan's assisted with keeping Golfer 2's focus towards the longer-term goals, although it was also apparent that Golfer 2 was expecting or looking for something else from the lesson (e.g., better ball striking). Indeed, the final session was characterised by Golfer 2 focusing on an area that was not directly related to the coach's coherent plans. More specifically, the player started to focus on areas such as weight transfer and hip turn in the transition, which was in contrast to the intention of refining the extent to which the club shaft was shallow in the downswing:

This session was good. I was hitting it pretty nicely at one part of the session. [Coach 2] was helping me quite a bit. I mainly felt like turning my hips more on the way down helped quite a bit, this was something that was new for me.
(Player 2: post-session 3 interview)

Obviously you could see how [Player 2] was focusing on areas like weight transfer and transition movements, and although they do have their place, this was not where I wanted him to place his focus. (Coach 2: post-session 3 interview)

Once again, the effectiveness of coherent plans appeared to be hampered through additional mechanisms not being implemented. Indeed, and based on the observation data, this example suggests that the player might have benefitted from more reminders throughout the session (i.e., *coherent conversations*) of what the session intention was and how it related to the long-term objective.

Regarding Coach 3, the analysis also revealed that coherent plans based on well-defined and systematic goals were valuable for sustaining focus on the longer-term intentions for impact. When asked to explain the long, medium and short-term goals for Golfer 3, he highlighted the intended sequential alterations which all related to the major goal:

[I'm] looking to build in some specialty shots that he can call upon during certain rounds. The punch stinger is the shot we are looking to build in. So to do that a few areas need adjusting. Firstly, we need to get the attack angle and balance that up with the swing direction. Then once the path is pretty straight we can then match up the face angle with the path. So there is a sequence of alterations that needs to be completed. (Coach 3: pre-session 1 interview)

This plan was once again outlined before each session commenced through the pre-session interviews:

We now have to get him swinging far enough left, last session he was hitting down more than enough but now he needs to swing more left. (Coach 3: pre-session 2 interview)

He needs to have the face to path much more in line and of course have the face direction as straight as possible to the target line. So that's what we are pushing on. If he gets this then that low stinger is within touching distance. (Coach 3: pre-session 3 interview)

Overall, these selected quotes again highlight how coaches had a clear longer-term objective which would be reached through the completion of a number of sequential shorter-term objectives; therefore reflecting a coherent plan.

4.3.1.2. Coherent expectations. As another means to promote and protect the golfer's focus on their long-term objectives, all coaches regularly set the scene for the lesson by making the golfer explicitly aware of what the session intention was and how it related to the longer-term objectives. Logically, this event took place at the start of the session, which gave the golfer a clear understanding of and what the coach was expecting from them (and vice-versa). Typically, this type of conversation was initiated by the coach and at times away from the hitting area (e.g., at a computer desk). For example, Coach 1 initiated each session by explaining to the golfer what the session focus would entail but with clear links to the prior session and/or the longer-term goals:

Right, for us to get the impact alignments we are after and to create the overall consistency, we need to push on with working on the legwork now. So today lets have a good session on working on that and getting it on the right track. (Coach 1: pre-session 1 interview)

Ok so today we have to get some work done on improving the pelvis movement in the backswing. Last session we worked on the knee action and that actually helped set up the work on the pelvis. Can you see how the leg movement has improved? So now we can look at altering the pelvis movement. (Coach 1: pre-session 2 interview)

See how the knee work has altered and how this also helps improve the pelvis position. So now we need to alter how the right elbow moves in the

backswing, we cant have it get stuck behind us from here. (Coach 1: pre-session 3 interview)

The impact of Coach 1's coherent expectations was highlighted throughout Golfer 1's post-session interview quotes. Indeed, it was clear that Golfer 1 started the sessions with a coherent view, as facilitated by Coach 1:

We started off by just talking over what needed to improve, it was good because I was clear straight from the off what I had to work on to get better. (Player 1: post-session 1 interview)

Talking over how the legs had improved really got me excited about the progress, and then [Coach 1] pointed out that we were working on the hip movement today. So I had a good view of what we were working on. (Player 1: post-session 2 interview)

Yeah, at the start we had a talk about the good work we had done and I was pretty happy with it and also I could see how this session works nicely with the last few. So yeah I was really clear that working on the elbow position was the session focus. (Player 1: post-session 3 interview)

As shown, the coach's ability to build coherent expectations at the start of the coaching session appeared to significantly assist with directing the golfer's area of focus away from any less-relevant points and towards the session intention. Indeed, these quotes indicate how coherent expectations could help to manage the golfer's player power whilst continuing to sell the message on how longer-term objectives were to be best attained.

Regarding the use of coherent expectations by Coach 2, again a period of time was invested to set the scene of each session and direct the golfer's area of focus towards the session intention. Throughout all three sessions, Coach 2 set coherent expectations whilst showing Golfer 2 his swing via a computer, therefore removing the distraction of hitting golf shots whilst Coach 2 talked:

So today we need to address how the wrists work in the backswing, the downswing is coming over the top but it's because of how the wrists are moving in the backswing. So this has to be altered first, then we can talk about how the downswing will work. (Coach 2: pre-session 1 interview)

Ok cool, so look how now the wrists are not loading too early. From here we can now start to let them load in the downswing, which will help shallow out the downswing and give us that high draw we want. (Coach 2: pre-session 2 interview)

Yeah, so let's push on how much we flatten the shaft now, it's looking really good and you're making the movement we want. Now its just about controlling how much we do it. (Coach 2: pre-session 3 interview)

Once again the positive impact of the coherent expectations was expressed through Golfer 2's clear understanding of what the session focus was at the start of the sessions:

When I think about it now, at the start of the lesson I was really clear on what to think of. (Player 2: post-session 1 interview)

We started off looking at the video footage and it was pretty cool to see how big the changers were and then straight away I knew that I was going to be working on the shallowing part today. (Player 2: post-session 2 interview)

Yeah, again we started the lesson off by reviewing the progress and I was making the movements in general, I just had to control it a little better so that was what I was thinking about to start with (Player 2: post-session 3 interview)

The selected quotes and field notes above help to illustrate how coaches were setting coherent expectations on what was to be targeted at the start of each session, which resulted in the golfer having a clear focus point for the session. Notably, this clear focus point was coherent with the coach's long-term plans.

Before the lesson started we had a briefing of what we would be working on today. So I was right on it really, I was clear that I had to stop the hip slide in the transition. (Player 3: post-session 1 interview)

[Coach 3] had me sit down whilst he discussed how pushing down more was more important for me than moving towards the target in the transition. So straight away I was focused on this (Player 3: post-session 2 interview)

Great session. [Coach 3] talked me through how we had to get the release matching up with the improved pivot. So to start with I had my main focus on how the wrists move in the follow through. (Player 3: post-session 3 interview)

4.3.1.3. Coherent conversations. Throughout the observed sessions, all three coaches also engaged in conversations (to varying extents) that were coherent with

their session intentions and attainment of longer-term goals. Typically, these conversations were used to simply further emphasise the session intentions or, in other cases, to redirect the golfer's attention. The impact of this mechanism was highlighted by in-session conversations (as recorded on video and in my field notes) and the golfers' post interview quotes. For example, in the middle of session 1, Golfer 1 talked about an area not relevant to the session focus; Coach 1 interrupted Golfer 1 and explained why focusing on the leg work was important and how it was "the first step" towards achieving the longer-term goals. Golfer 1 then replied with a response that suggested that he understood that the legwork was important and that he had a degree of short-termism with regards to achieving the longer-term goal:

Right, yeah, ok. I can see why I've got to get the legs first. I guess I am just eager to get to hitting solid strikes again. (Golfer 1: in-session 1)

Furthermore, moments later following the previous conversation, Golfer 1 found himself discussing his desire to perform well for an event a number of months down the line. He then proceeded to hit shots whilst thinking of irrelevant focus points. Coach 1 provided a reminder and subsequently explained to Golfer 1 that he had to achieve this session goal first in order to achieve any longer term agendas:

It really is important that we get the legwork done first; I can't see you improving the other areas until this is sorted. (Coach 1: in-session 1)

Yeah ok I get that, lets stick to working on the legs then. (Golfer 1: in-session 1)

During the post-session interview, Golfer1 explained that the coherent conversations throughout the session had helped redirect his attention back towards the session intention, therefore highlighting the impact of coherent conversations:

There were times I was thinking about other parts in the swing. It is difficult not to, especially when you just want to hit the ball well. But [Coach 1] explained that I had to get the legs working right first. (Golfer 1: post-session interview 1)

Interestingly, Coach 1 used fewer coherent conversations throughout session 3 than in the previous two sessions, which occurred in a session where Golfer 1's focus was directed to numerous irrelevant technical issues with less time spent on the session intention. Notably, the post interview from Golfer 1 suggested he felt the session was a poor one from a performance perspective, including having too many thoughts (most of which were incompatible with the session's intention):

I didn't perform my best in that lesson. I tried thinking of too many things like the shaft shallowing out and my weight transfer, as well as the stuff Coach 1 wanted me to think of. (Golfer 1: post-session 3 interview)

Similar to Coach 1, Coach 3 also faced moments when the golfer's area of focus drifted throughout the coaching session. Again, Coach 3 therefore provided coherent conversations throughout the session, the impact of which was highlighted within Golfer 3's post-session interviews:

Now I understand [after the conversation] why we had to use the attack angle and then adjust the swing direction. I wasn't wrong with saying the

face was important [but] it was something we are going to work on later on.

(Golfer 3: post-session 1 interview)

This selected quote once again highlights that on top of coaches setting coherent expectations at the start of the session, they also had to use coherent conversations during the session to redirect the golfer's focus away from less relevant points and back towards the session intentions.

4.3.2. Acute Effects.

As earlier described, acute effects were those that came from coach actions which provided golfers with a sharper, 'higher impact' reminder or frame of what they were trying to achieve in the long-term. These effects included the facilitation of *intellectual insight* and *kinaesthetic insight*. Each of these subthemes will now be described, with emphasis placed on how they helped the coach to facilitate a player's progress towards their longer-term goals.

4.3.2.1. Intellectual insight. Throughout the coaching sessions, not only did coaches engage in conversations with their golfers to consistently frame their actions against the long-term intentions, but they also used tools that delivered a clearer and 'sharper' understanding in *the golfer* on what they were trying to achieve within the session and why. One of these acute effects was intellectual insight, whereby the coach worked in a way that helped the player to gain a greater understanding of *why* they were doing what they were doing. For example, during session 1 Golfer 1 appeared to struggle with the concept of knee flex change and regularly focused on non/less-relevant areas (i.e., head lifting up). In this instance, Coach 1 encouraged Golfer 1 to explain the reasons for why changing the knee flex was so important. As Golfer 1 was verbally explaining the concept, it appeared that he was then more

clearly recognising the session intention and how it related to the longer-term objectives. To clarify, whilst answering the question, Golfer 1 was also working out *why* and *how* particular time-framed sequential goals relate to each other, and essentially convincing himself that the session intention was the important aspect:

Talk me through why changing the knee flex is important (Coach 1: in-session 1)

Ok well it's going to give me more distance in my shots, because it will help with the hip movement. And ... well it will help with improving the whole swing really... I need it to be consistent and working on the leg work will help with this. (Golfer 1: in-session 1).

When Golfer 1 was asked to share his views of these events after the observed session, he highlighted how *he* arrived at the conclusion that focusing on the session intention alone was the most important factor towards achieving the longer-term goals. This suggests his level of understanding of the importance of focusing on the session intention had improved and, therefore, combatted the challenge of short-termism identified in Chapter 3:

At this point I was thinking the shaft position wasn't right, it just didn't feel right or comfortable. So I hit a few [shots] just to see if that worked but no it didn't! Ha-ha! I should of just carried on working on what Coach 1 was saying (Session 1 Golfer 1)

Both Coach 2 and Coach 3 faced similar situations whereby golfers encountered moments of struggle and confusion relating to the session intention. Through the coach's stimulation of intellectual insight, however, the golfers strongly recognised

and improved their understanding of how and why the focal technical adjustments related to one and other. The selected quotes from post-session interviews with golfer 2 and golfer 3 highlights the impact of intellectual insight:

I was a bit confused with how the wrists move in the downswing, I mean I had it at the start of the session but then lost it. But we had a talk and it clicked I got how that if I roll the wrists early then I can shallow the shaft in transition. Coach 2 asked me to explain it and this lead to me talking more about it and getting it. (Golfer 2: post-session 2 interview)

After we had this conversation it did make more sense and I got the picture for how the attack angle alters the path. So it made more sense. I should just focus on what Coach 3 is saying if I want to get it (Golfer 3; post-session 1 interview)

As shown by these quotes, the coaches' ability to entice greater understanding *in the player* for how to complete an alteration and why it related to the longer term goal, especially in moments when the players was struggling, was an important mechanism to help the golfer buy into the coaching process and as a result, combat their potential short-termism.

4.3.2.2. Kinaesthetic insight. Throughout the coaching sessions, all golf also engaged in moments where kinaesthetic insight was facilitated to help achieve their session intentions. Indeed, moments where golfers indicated a greater understanding of the intended feeling of a movement were apparent; for example, through statements such as “ah, so this is the feeling” (Player 2, in-session 1) or “right, that feels different” (Player 3, in-session 2). As a result, it was found that the

golfer would move closer to achieving the session intentions that the coach had proactively set up.

For instance, during session 3 Golfer 1 explained his confusion as to how the elbow position was going to improve. He suggested the feeling was not correct and in this instance Coach 1 stepped in and explained that the work done previously had paved the way to working on this section of the swing. He then progressed to assist Golfer 1 to create a swing feeling that closely matched the session intention:

I'm not really getting how the arm is going to get down in front though, [it] still feels like it's getting stuck behind me (Golfer 1: in-session 3)

Well watch how when you don't turn your hips it makes the elbow get stuck even more behind you. But now look what happens when the hip turn increases whilst keeping the tilt. It gives you room to keep it in front of you in the backswing. How is that feeling for you now? (Coach 1: in-session 3)

Ah, right, ok. Yeah I can feel it now. It never should go behind the right hip any way so that's how it won't get stuck anymore. (Golfer 1: in-session 3)

Importantly, the interview with Golfer 1 after this session highlighted that the insight gained on how the movement should feel helped his level of understanding and commitment to the coach's intentions:

I just didn't get how it would work, then [Coach 1] talked me through it and basically I understood it and it all started to fall into place really. The feeling started to basically feel right and more natural and then I really understood what we wanted to do. (Golfer 1: post-session 3 interview)

Similar instances were apparent with both Coach 2 and Coach 3. For example, during session 2 Golfer 2 indicated that a particular swing felt completely unique. In this moment, Coach 2 pointed out that the feeling Golfer 2 had produced also coincided with the best attempt of the session goal. This resulted in Golfer 2 associating that unique feeling (with a unique phrase) to improving and moving along the goal ladder:

Yeah I really felt that one, it almost feels a little like Jim Furyk (Golfer 2: in-session 2)

And that was the swing where you made the best combination of not rolling the wrists too flat too soon and then in the downswing allowing it to shallow (Coach 2: in-session 2)

Ok I think I have got the feeling now, lets just see if I can repeat it now (Golfer 2: in-session 2)

In this instance, Golfer 2 explained in his post-session interview that the unique key phrase (i.e., Jim Furyk) associated with the new kinaesthetic insight was a sign that he was closer to achieving his longer-term goals:

Well the best feeling I got from today was basically to feel like I am Jim Furyk. I have a good few feelings going at the moment and [Coach 2] says it's right and to be honest when I look at it on camera it definitely looks much better (Golfer 2: post-session interview)

Similarly, Coach 3 encountered an instance where the golfer associated the unique feeling with a key phrase. This phrase was enticed through questions initiated

by the coach, which was also backed up by the coach as a good attempt for the session intention:

Wow! That one was a bullet! (Golfer 3: in-session 2)

Yes, that's basically what we are after, on that shot you matched it all up perfectly. You got the amount down and across really good and kept the face straight. What did that feel like to you? (Coach 3: in-session 2)

Ok I've got it now, that felt really good. I felt my left side pulling the club down and left (Golfer 3: in-session 2)

Ok good stick with that feeling of down and left (Coach 3: in-session 2)

When Golfer 3 was asked to share his views across the session, he highlighted a clear association to the new feeling and golfer-generated phrase, which he understood to be associated to achieving his goals:

Yeah, what stood out for me here was the feeling of pulling down and left, it's almost hard to put in words but I can feel it and [Coach 3] said it's right so I'm just going to keep on this feeling for now (Golfer 3" post-session 2 interview)

Notably, there were moments throughout the coaching sessions where coaches integrated both an increase in the golfer's intellectual insight and kinaesthetic insight. The following post-session interview quote highlights one of the coach's awareness of their golfer's struggle in both intellectual and kinaesthetic insight and how it resulted in them consciously intervening:

I decided to step in here because, yeah, clearly [Golfer 1] was struggling with the movement albeit he was judging the success from the ball flight, which is not a good idea. But basically if he is struggling and frustrated it is absolutely paramount that he understands the concept and he himself believes in it. Because if he doesn't then when he is struggling its easy for him to bin it. But if he believes in the idea then he will stick at it until he is blue in the face to make it work. So yeah I had to step in there, let him chill out, but most importantly sell the concept to him even more. Then I got to work on helping him find the right feeling for him which matched up with what I wanted to see going on (Coach 1: post-session 1 interview)

The impact of Coach 1 stepping in and intervening was apparent through Golfer 1's response when asked to expand on this incident. Golfer 1 suggested that he not only gained intellectual insight but also his feelings for the movement had also improved:

Well, yeah, at first I was pretty much clueless on it to be honest. I thought I had the feeling of it but the shots were really poor. So then I decided to completely forget the outcome and just listen to what [Coach 1] was saying, and ultimately I had to understand why I had to make the changes with the legs. I get now that the legs will influence how my elbow position is at the top of the swing. So having that chat at this point in the swing was good because it was nice and clear of why I need to do it. I then started to really get the feeling of what I need, and this really was from [Coach 1] coming in and helping me feel the sequence of knee bend change.

4.3.3. Regulatory Effects

Throughout the sessions, and as indicated in the findings so far, coaches also engaged in moments where they managed and regulated their golfer's emotional responses to events that took place throughout the session in order to promote and protect their intentions for impact. Generally speaking, golfers were either experiencing helpful (e.g., joyful, excited) or unhelpful (e.g., frustration, anger) emotions that had an influence on the attainment of the session intention. Interestingly, mechanisms arose which appeared useful towards combating negative consequences and the three challenges identified in Chapter 3, with *disrupting the moment* and *encouraging the moment* emerging as the two types of regulatory effects.

4.3.3.1. Disrupting the moment. Throughout sessions, coaches encountered situations where the player's emotional state was that of a negative and frustrated nature. In these moments, the golfer's clarity of focus as well as where that focus was placed was often non-productive and not in line with the session intention. To combat these occasions, coaches used a number of mechanisms to help manage the golfers emotions and as a by-product entice clearer thinking. Most often, this included stopping the golfer from hitting further shots and removing the player from the task; an approach that gave the golfer a 'break away' period to regulate his emotions and clarify his thinking. For example, during session 3 Golfer 1 started to struggle with the concept Coach 1 was proposing; clear frustration within Golfer 1 was apparent and in this moment Coach 1 stepped in to break up the practice. His post-session interview highlighted why he decided to step in and intervene during this moment:

[Golfer 1] was all over the place. I was just observing him and it was clear as day how angry he was getting. It was basically a downward spiral. He was getting more and more frustrated and his focus was everywhere, except for

where I wanted it. So I had to get him to calm down and get back to a clearer view. (Coach 1: post-session interview 3)

Likewise, Coach 3 encountered similar situations where the emotional state of the player was that of a frustrated nature and resulted in Coach 3 stepping in to disrupt the emotional state/distress of the player during the session. In particular, and very much like Coach 1's reasons for stepping in, Coach 3's reason for intervening during session 3 once again suggested both regulating the emotional state and was important for maintaining focus on the session intention:

He was getting so angry with himself that he just wasn't in a clear place to work on it. I had to give him not only a description of what to do but also just give the lad a breather. And get his head back in the game and then go on from there. As a rule I always try and stop the player from working on it if they are mentally not there, and if they are in a clear frame of mind allow them to keep working on it without really disrupting their practice. (Coach 3: post-session 1 interview)

In addition to the actions of Coach 1 and Coach 3 described above, which served the purpose of removing the golfer from the situation to regulate their emotions, Coach 2 used a strategy of directing the player to complete an alternative task:

He was really struggling with it to be honest; it's a tricky move. The more shots he was hitting the more frustrated he was getting and moving further away from what we wanted. So I thought lets just have a little break from it [and hit some wedge shots instead]. (Coach 2: post-session 2 interview)

Golfer 2 expressed in his post-session interview that initially he was frustrated with the break but, on reflection, recognised that his emotions had altered in a positive manner because of it:

Today was really frustrating for me; I just couldn't get it to start with. Then [Coach 2] asked me to hit wedge shots and that actually made me more frustrated... Then after 10 or 15 minutes we went back to full swings and, to be fair, [Coach 2] did point out something that made a difference and I felt better about it. (Player 2: post-session 2 interview)

Reflecting on the quotes above, it is clear to see that managing negative emotions was useful for providing clarity over what the session intention was and increasing the likelihood of achieving it. Indeed, through disrupting the moment, coaches were able to defuse the golfer's emotional state and manage moments where the potential negative impact of the player's power and short-termism was heightened.

4.3.3.2. Encouraging the moment. Quite opposite to managing negative emotions (disrupting the moment), coaches also helped players to harness positive emotions and encourage them to continue practicing and stay in the moment. The following post-session reflection from Coach 2 highlighted how and why the coach encouraged the moment in relation to achieving their session intention:

I could see that [Golfer 2] was happy about the improved ball flight and how the swing was looking. So this was a good time just to let him just hit balls in the moment of feeling good. I didn't want to disrupt that moment because one he was making good repetitions, and two, he was enjoying it also. (Coach 2: post-session 3 interview)

Interestingly, Golfer 2 associated the kinaesthetic insight that he gained in this session to this instance of ‘staying in the moment’:

I have a good few feelings going at the moment... *mainly from a spell in the lesson where I got to hit a load of shots one after the other*. It helped make the feel right and it was great to hit so many good ones after each other.
(Golfer 2: post-session 3 interview; emphasis added)

Similarly, Coach 1 and Coach 3 engaged in similar actions whereby short reassuring phrases, as an indicator of good practice, were used to encourage the moment: “Nice swing mate, that was a good one” (Coach 1); “You’ve got it now” (Coach 1); “Love it mate” (Coach 1); “Good” (Coach 3); “Perfect” (Coach 3); “Keep at this” (Coach 3). Notably, however, there were also a number of occasions where the coach did not provide encouraging phrases during positive moments in the session. This often resulted in the golfer stopping to question if what he was doing was correct. For example, an incident between Coach 1 and Golfer 1 during session 2 suggested that if the coach did not provide encouraging phrases during moments where the player was experiencing positive emotions, and in fact moving towards the session intention, then this might in fact disrupt the moment! The following in-session quotes and post-session interviews highlighted how the player’s ‘in the moment’ focus was disrupted and, as a result, a loss of kinaesthetic insight occurred:

So is this right? (Golfer 1: in-session 2)

Yeah, how come buddy? (Coach 1: in-session 2)

It’s just I thought because you didn’t say anything in those last bunch of swings I thought it wasn’t right. (Golfer 1: in-session 2)

Oh no bud, it's looking really good. I was actually just thinking about the short game and how we will put some time in on that soon. (Coach 1: in-session 2)

There was a moment in the lesson where I thought I was doing quite well, but [Coach 1] didn't say much so I ended up questioning myself so I had to ask. Then when I went back to it I kind of lost it a little, just couldn't quite get the same feeling going. (Golfer 1: post-session 2 interview)

I kind of slipped up a bit mid way through, [Golfer 1] was making great progress and he was enjoying the time of hitting good shots also. So I just let him do it and started thinking about how we need to get some work done on his yardages. But then he stopped and started questioning himself. Then he lost it a little. Which I guess isn't the end of the world but I could have been a little more aware of the situation really. (Coach 1: post-session 2 interview)

4.3.4. Creating Time and Space

Having considered the effects that coaches delivered to achieve their intentions for impact in each coaching session, the final theme covered in Results section reflects a mechanism by which coaches made decisions on these effects *within the session itself*. More specifically, throughout the observed sessions all three coaches took themselves out of the dynamics of the coaching environment to formalise their thoughts on how the session was going and what they needed to do next to achieve their intentions. In this way, the coaches were found to create some space between themselves and the player to use as thinking time, with each coach having their own unique method for doing this:

I just stood back and was watching him trying to work it out. I was thinking [that] he understands the concept behind why we want this movement [so] I just need to try and help him on this. So the alignment stick caught my eye and I remember using the drill with a previous student so I thought it would do the trick and it did (Coach 1: post-session 1 interview)

He was really struggling with it to be honest, it's a tricky move. So I thought, let's just have a little break from it, and as he was hitting the wedge shots something came to mind I wanted to check out. So I looked at the video footage and decided we needed to push more on the internal arm rotation in the backswing (Coach 2: post-session 3 interview)

At this point here [Golfer 3] was struggling with working on controlling the clubface and I had to basically think of an alternative drill. So I said to him to just hit me 10 shots with a few practicing swings in between each swing. This basically gave me some time to think about what we can try next. (Coach 3: post-session 3 interview)

Notably, these quotes highlighted how the coaches felt the need to remove themselves from focusing on the coaching environment in order to buy some thinking time and formulate their decisions, as often enabled by decoys or tools to keep the player occupied. The impact of decisions made in this way can be seen in the post-session interviews with the golfers.

This drill [that the coach introduced after a break in the session] really was a good one, it definitely helped with the feeling of the right moves. It allowed me to feel when the legs should start to move; I wasn't doing it early enough in the swing (Golfer 1: post-session 1 interview)

Today was really frustrating for me, I just couldn't get it to start with. Then [Coach 2] asked me to hit wedge shots and that actually made me more frustrated because that's not where my issue was, and I wanted to work on it. Then after 10 or 15 minutes we went back to full swings and, to be fair, [Coach 2] did point out something [after taking the time out to think] that made a difference and I felt better about it (Golfer 2: post-session 3 interview)

At this point here I guess [Coach 3] was just giving me time to try and get it, I was finding it hard to do. Then after about 20 shots [while he was thinking] he suggested an alternative drill and that for me helped me get the feeling I needed (Golfer 3: post-session 1 interview)

Evidently, the coach's ability to create some time and space from the player in order to make decisions was a useful tool for helping to combat the chances of the session intention being altered or not being reached in full.

4.4 Discussion

To be effective in their practice, the findings of Chapter 3 suggested that golf coaches must work to: 1) recognise and manage their players' typically shorter term outlook, 2) recognise and manage their players' power, and 3) continually frame work against the players' long-term objectives to sell their message. These findings also suggested that coaches might be regularly altering their sessions with players, or *deviating from their CDM-based intentions for impact*, even when they believe that their pre-planned approach is best suited for the player. As such, the purpose of the study presented in this chapter was to explore how elite level coaches manage these challenges to deliver their intentions and remain consistent with their medium and

long-term agendas. It was subsequently found that coaches working with national level golfers managed the aforementioned challenges through the application of four key themes: 1) Chronic Effects, 2) Acute Effects, 3) Regulatory Effects and 4) Creating Time and Space. This section will now link these four themes to previous relevant literature before the strengths and limitations of the study are considered. Finally, the next step for the thesis is identified.

4.4.1. Integrating the Findings with Previous Literature: Why Might the Effects Help?

As mentioned above, it is important to consider why the effects found in this study were useful for promoting and protecting the coach's intentions for impact within their sessions. In terms of chronic effects, the impact of these on the player seemed to match up with principles from literature on behaviour change, such as Prochaska, DiClement, and Norcross' (1992) transtheoretical mode of change. More specifically, these authors' spiral pattern of change suggests that throughout the course of change (i.e., working towards a new goal), reverting to previous stages of development is a common challenge (Archer, Langhinrichsen-Rohling & Blejwas, 2018) and this was a feature experienced by some of the coaches observed throughout this study. In this respect, the use of coherent plans, expectations and conversations all seemed to help the coach limit the chances of such regression in their players as they worked towards new goals (or behaviours). Secondly, coherent expectations and coherent conversations closely match points made by Prochaska et al. (1992) that individuals who are in the contemplation stage of change are more likely to affectively reevaluate themselves as they become more conscious of the nature of their problem, and as a result move closer to achieving change. In other words, individuals talk more regularly and accurately about their desired area of change as they move closer towards actually achieving the goal. Notably, this process was

reflected in the coach's efforts to engage their player in regular conversations about their goals. Interestingly, principles of Rational Emotional Behaviour Therapy (REBT), specifically the ABCDE process (Turner, Ewen & Baker, 2018; Turner & Barkers, 2014; Wood, Baker, Turner & Sheffield, 2018), also appeared to have similarities with the coaches' facilitation of chronic and acute effects. Specifically, the disputing stage was particularly apparent, whilst golf coaches might not have directly asked the golfer to dispute their own thinking/focus, they did more subtly adjust the golfers thinking and focus area. For example, during session two Golfer 1 initially had his own thoughts on what required alteration; at the start of the session the Coach 1 presented to Golfer 1 his thoughts and recommendations; as a result Golfer 1 had his area of focus shifted due to the weight and validity of the points made by Coach 1 and coherent expectations are set. Furthermore, intellectual insight can also be linked with REBT and the ABCDE process (Turner & Bakers, 2014; Wood, Baker, Turner & Sheffield, 2018), where behaviour change (in this case, sticking to work on new goals) is enabled by individuals developing a greater understanding of themselves and how their thinking and behaviour matches up. Notably, the theory of planned behaviour also has close links with both chronic and acute effects, specifically with regards to the role played by the coach in facilitating intentions *within players* to change their behaviour (i.e., to commit to working towards their goals) (Treloar, Tidwell, Williams, Buys, Oliver, & Yates, 2017).

With regards to regulatory effects, links can be made with attentional control theory. Specifically, this theory describes how anxiety impairs attentional control (Ellmers & Young, 2018; Eysenck, Derakshan, Santos & Calvo, 2007; Sluis, Boschen, Neumann & Murphy, 2018) and how frustration also disrupts focus of attention. In this respect, coaches in this study used distraction as a mechanism to

disrupt the moment and regulate emotions/thinking to help ensure focus remained on the coach's intention (Eysenck, Derakshan, Santos & Calvo, 2007). In addition to this, theories on emotional inhibition and learning (Gross & Levenson, 1997; Oliva, 2018) further link with the process of disrupting the moment used by the coaches. In short, individuals who experience unpleasant emotions often suffer decreases in cognitive performance (Chrouser et al., 2018; Gross & Levenson, 1997) and so it seems logical that the coaches' efforts to regulate their players' emotions were effective by protecting a focus on the 'job at hand'.

Finally, the findings on creating time and space align with recent work on adventure sports coaches (ASC), who have also been found to use a blend of pedagogical strategies to actively create time and space to facilitate PJDM (Collins & Collins, 2014). Similar to ASC, elite golf coaches used time and space during naturalistic moments to ensure the decisions made were coherent and consistent with the athlete's longer-term objectives. Collins and Collins (2014) make reference to how, at times, the ASC's appeared to be doing nothing practically but yet was highly cognitively occupied. This is highly similar to the actions of the elite golf coaches in this study; at moments they appeared to be avoiding the apparent issue by diverting the golfer to an alternative task, but when asked why this was the case, it was suggested this was used as a decoy to create time and space to think about the next action and how best to have their decisions 'land' with the athlete.

4.5 Strengths and Limitations of the Study

Regarding the strengths of this work, the study was coherent with my pragmatic philosophy (see Chapter 1) in that the chosen methods were appropriate for generating practically relevant insights into how golf coaches combat the identified

issues in Chapter 3; a key feature of methodological integrity (Levitt, Motulsky, Wertz, & Ponterotto, 2017). Furthermore, the use of multiple observations, a mixed methods approach, and a number of approaches to enhance trustworthiness also assisted towards gaining a breadth and depth of quality data. Of course, a number of limitations may have influenced the nature of the results presented and should be acknowledged as well. Firstly, given the coaches were being watched by myself, there is a chance that they might have acted somewhat differently than if I were not there observing (even in light of the efforts made to minimise my presence as described earlier). As a result of this, some of their actions and decisions might not have been what is normally considered ‘normal’ in their work. However, to an extent this is not a particular concern with regards to my findings given that I was interested in ‘what works’ in this area of golf coaching rather than ‘what’s true’ (cf. Chapter 1). Secondly, the data collection was limited to three coaches due to a combination of limited time to collect data and the potential for lessons to be selected on the same day or days that I could not observe/attend. Initially four coaches had been selected but after reviewing the scheduled coaching dates it was clear that sessions across participants may collide and, as a result, sessions across coaches not being observed. However, it should again be noted that the purpose of this study was to generate useful applied insights rather than develop any generalisable picture of coaching practice. As such, the primary assessment of this study should focus on the pragmatic question of ‘has this work made a useful contribution to practice?’ rather than ‘has this work explained practice?’ (cf. Chapter 1). Indeed, previous work has stressed that the evaluation of qualitative research cannot be achieved through rigid, standardised criteria (cf. Bergman, 2016; Kusch, 2017; Sankey, 2018; Smith & Hodkinson, 2005; Smith & McGannon, 2018; Sparkes & Douglas, 2007; Welch & Piekkari, 2017).

Instead, due to qualitative data having a unique blend of origins, circumstances and interpretations, the criteria listed above – and the processes described in the earlier trustworthiness section – are considered relevant to the assessment of this study and reflect a more relativistic approach to evaluating the quality of research (Kusch, 2017; Sparkes & Smith, 2009).

4.6 Summary and The Next Step

Overall, this study has shed light on how elite golf coaches make, and to a greater extent, deliver their intentions for impact in coaching sessions. Indeed, while much of the PJDM literature (Martindale & Collins, 2005; 2007; 2013) has focused on how decisions are made, this chapter placed greater emphasis on how decisions (i.e., intentions for impact) are effectively delivered in the specific context of golf (as established in Chapter 3). Indeed, the majority of the key themes that emerged throughout this study, specifically chronic effects (i.e., coherent expectations, coherent conversations), acute effects (intellectual insight, kinaesthetic insight) and regulatory effects (disrupting the moment, encouraging the moment), largely served as a tool to help the coach ‘land’ their intentions. Of course, the structure of how decisions are formed is critical for making coherent and consistent decisions leading towards a longer-term objective, but just as important, is the ability to deliver and execute the coach’s intentions. In other words, these effects, plus athlete’s area of focus towards the coach’s intentions for impact (as consistent with the player’s goals) throughout the entire coaching session. In sum, this study has addressed the idea that good decisions are not enough in golf coaching; you also need to be good at landing them!

However, whilst this study has shed light on how coaches make and, just as importantly, deliver their intentions for impact, it is unknown how the findings might relate to elite coaching in *tournament contexts*. Given that my personal area of interest lies with coaching at the highest level, specifically professional golfers competing on tour, I decided that my next step should be to consider how the ‘home based coaching’ effects described in this study might be transferred to tournament conditions. Therefore, the following chapter distinguishes in some detail how home-based coaching differs to tournament contexts.

Chapter 5:

Elite Tournament Support: Outlining The Challenge and What This Means for the Coach

5.1 Introduction

As stated in Chapter 2, golf coach literature has predominantly placed attention towards performers and the study and application of principles from fields such as biomechanics, psychology and physiology. Few studies have considered facets in the coaching process, including golf coach PJDM. As a result, Chapter 3 was designed to explore the broad context of golf coaches' PJDM and provide a base on which to explore the specific skills used by a specific subset of golf coaches in Chapter 4. From this first study in Chapter 3, the take home points related to the sliding scale from tour level coaches to club level, with coaches operating at higher levels of performance appearing to have: (a) a more considered approach when identifying their golfer's performance issue (albeit this still seemed to take place over a relatively short time period); (b) a consideration of more performance areas when assessing the golfer's presenting issues; (c) a greater preference to work towards longer time framed goals; and (d) a greater preference to gauge their effectiveness on the player's progress towards the attainment of longer term goals. However, it was also clear that these approaches and preferences were significantly shaped and limited by players' power over the precise direction and nature of interventions (i.e. what and how something should be worked on). In sum, these findings pointed to a situation in which the delivery of structured coaching appears somewhat restricted or at least difficult to deliver. More specifically, it was discovered that, to deliver coherent and consistent support over longer periods of time, golf coaches must have the ability to: (a) recognise and manage their players' short termism; (b)

recognise and manage their players' power; and (c) continually frame work against the players' long-term objectives to sell their coaching messages.

Reflecting on the results from Chapter 3, the purpose of Chapter 4 was to examine the ways in which elite level golf coaches manage these challenges to consistently deliver session intentions that are nested within medium and long-term agendas. In other words, how do coaches get their pre-planned intentions for impact to continually 'land' with their players? From the results, it was found that maintaining work on long-term intentions required the coach, within a coaching session, to deliver *chronic*, *acute* and *regulatory* effects. Chronic effects included *coherent plans*, *coherent expectations* and *coherent conversations*; all of which served to provide a 'lower intensity' reminder or frame of what the coach and player were trying to achieve in the long-term. In contrast, acute effects were actions delivered by the coach that provided golfers with a sharper, 'higher impact' reminder or frame of what they were trying to achieve in the long-term. Specifically, the mechanisms of *intellectual insight* and *kinaesthetic insight* were used to help the golfer to channel their focus and energy towards accomplishing the session intention and so further negate the potential for disruption from a player's short-termism and relative power in the relationship. Beyond these chronic and acute effects, coaches also used mechanisms to help manage players' emotions in a way that increased the likelihood of achieving the session intention; i.e., mechanisms that helped the chronic and acute effects to best 'land' with the player. Namely, *disrupting the moment* and *encouraging the moment* were the two key themes identified in this instance. Finally, this study also found that coaches *used time and space* to increase the likelihood that their decisions within the session (i.e., on when, where, and how to deliver a chronic, acute or regulatory effect) were adapted to align with the unfolding situation (e.g. a player struggling with a certain activity). In this way, coaches used time and space to optimise the fit between

their naturalistic decisions (i.e. those made *in* the session) and their long-term intentions for impact (i.e. those made *before* the session through classical decision making processes).

Despite Chapter 4 highlighting some useful principles that were used to deliver a coach's PJDM within effective 'home base' coaching, the relevance of these mechanisms to tournament level support is unclear. Indeed, this is largely due to the different and added demands that tournament level golf brings which are not experienced at 'home base' coaching. As such, before exploring the extent to which the findings from Chapter 4 may also be applicable within a tournament support context, it is important to firstly consider what features of tournament coaching differ from home based coaching? More specifically, it is important to consider the tournament player, the tournament coach, the tournament format, and the tournament environment; all of which will logically impact on the way that coaches need to deliver their intentions for impact when providing support at a tournament.

As an important qualification, the following commentary on each of these features is based primarily on my own experiences and understanding as a golf coach. Indeed, with part of the rationale for completing the doctorate being to further enhance my own professional practice, consideration of my own experiences and thoughts on particular differences/challenges was appropriate. Additionally, this approach was supported by the lack of literature and training on the differences between tournaments and training contexts within golf. Despite this dearth of available literature and lack of training, my commentary is of course still limited in the sense that it is delivered from my own perspective. However, to counter this as much as possible, these judgements are grounded against previously published literature from other domains and, based on my community of practice, what I feel is the common reality of tournament coaching.

5.2. The Challenges of Coaching at Tournaments

5.2.1. The Tournament Player

In terms of the ‘tournament player’, it is important to recognise that this individual is typically different to the player that the coach might work with in their home environment (Carlstedt, 2003; Papaioannou & Hackfort, 2004; Taylor & Wilson, 2005). Specifically, these differences are brought about by the nature of their schedule in the competitive season, the nature of their tournament focus, and the nature of performing in a multi-day golf event itself.

Firstly, the nature of the schedule for a touring golfer can be considerably fatiguing, as professional level golfers must deal with the travelling demands of touring life (Atkinson & Reilly, 1995; Hoggard, 2017). Players arrive at tournaments with an always-unique blend of freshness/fatigue (both physical and mental), emotions, worries, motivation, and confidence, all of which can be influenced through their travelling demands. This reflects the issues other professional athletes, such as national level footballers, face when travelling across long-haul for matches (Fullagar, Duffield, Skorski, White, Bloomfield, Kolling & Meyer, 2016). A player’s physical and mental condition on arrival at a tournament will of course then influence the decisions and actions that a coach might make when providing tournament level support. For example, a coach may outline a plan for the first practice day to consist of a number of activities and objectives, but due to the player’s stressful travelling experience they might not be in the appropriate state to complete the coach’s initially devised tasks. As a result, the demands of travelling will often alter the coach’s decision-making process and ultimately the interventions that s/he provides at the tournament practice days. Indeed, players often compete on a weekly basis and frequently expel high levels of energy doing so, which are then expected to be replenished by the time they reach their next event (i.e. during the stressful and often fatiguing period of travelling from one country to another). Interestingly, research in other sports such as rugby suggest that coaches must consider characteristics such as travel fatigue, injuries and athlete morale when deciding the

appropriate training for both weekly performances and longer term development when arriving at their tournament venue (Bird, Waller, Marchall, Aslop, Chalmers & Gerrard, 1998). Specifically, a range of transient effects, such as jet lag, will shape the decisions a coach makes upon arrival at their destination, so much so that the coach might be forced to prioritise significant time to helping the athlete recover from the travel demands over other performance related focus areas (Reilly, Atkinson, Edwards, Waterhouse, Akerstedt, Davenne, Lemmer & Wirz-justice, 2007).

In addition to the stresses of travelling, both player and coach will need time to acclimatise to their new surroundings (e.g., humidity, weather, food), whilst getting familiar with the venue (e.g., where the driving range is, where the first hole is, where the practice putting green is); all of which will again contribute to the added stresses and worries in the player (Branis & Vetvicka, 2010), which can again restrict or influence the decisions and actions a coach will make. For example, a coach and player might be scheduled to complete a training session, which integrates both tournament and longer-term goals, but end up needing to spend more time acquainting themselves with the local area and as a result have to cancel the session. The stressful or fatiguing demands of travelling and regularly competing also, of course, have to be considered against the player's primary desire for results throughout the season and at particular events.

Indeed, players will almost always want to perform at their highest level during a tournament; this is primarily due to their livelihood depending on their performances at tournaments. Often the next three years of tournament events in which a golfer can play in will be determined by the performances across tournaments they currently compete in today. Additionally, sponsorship deals are often made or broken depending on result outcomes at tournaments. Therefore, there is a requirement from the player's (and coach's) perspective to produce levels of results that will grant the golfer access to future tournaments that will

prolong their playing rights across a number of events (e.g., Q-school, major championship placements, mainstream tour events). As a common result of this, players might be tempted to focus too much on aspects of their technique as they try to control outcomes (i.e. their scores). So whilst golfers should to be focussing on minor tweaks only/playing with what they have got (Collins, Button & Richards, 2011), tournaments are pressurised environments and often lead to inappropriate focus if the player does not have clear pre-set goals (Auclair, 2016). Similarly, the demand and desire to perform week after week is apparent in other sports such as football and tennis, where players, coaches and managers are all typically judged upon their weekly performance with consequent impact on motivational, emotional and financial factors among others (Falter & Perignon, 2010; Jurejko, 2019).

As another significant influence on the golfer who coaches typically work with at events, immediate feedback on the golfer's performance/score is available through the leader-board, which often leads to the golfer attempting to 'fix' technical issues for the next day. For example, during a tournament a golfer might be in the transition from one technique to another (e.g., reducing the sliding motion of the pelvis throughout the downswing); the coach is happy with the golfer's movement when reflected against the longer term agendas, however due to a poor scoring performance and display of ball striking during the first day of the competition, the golfer is dissatisfied and heads to the practice range after the round to try and improve technique for the next day (rather than committing to the long-term progression that might offer more sustained rewards). As a result, this golfer may find themselves back sliding the pelvis, which momentarily assists with improving the ball striking but moves them further away from the attainment of their longer-term goals that can lead to greater and/or sustained success.

In sum, the golfer is typically a different 'beast' in tournament environments as compared to the home base training ground. The nature of their schedule, tournament

preparation, tournament focus and performing over multiple days all mean that the golf coach will encounter situations that are not the norm for a standard home-based coaching session.

5.2.2. The Tournament Coach

When reflecting on the tournament coach, it is important to recognise that this individual will also encounter a number of different circumstances that he/she might not face at the home venue. Specifically, these differences surround the nature of the relationship (i.e. how long since the coach and player had last worked together in person), the nature of coaching duties (i.e. how long the coach and player might work together on a given day), and the requirement for a focus on immediate performance over longer-term progress (i.e. the desire to perform well at a tournament).

When considering the nature of the relationship, it is important to note that some coaches will only see their players at tournaments and, as a result, both tournament level and longer-term goals must be considered throughout events. Similarly, a player who is ‘on the road’ for a lengthy period of time may not see their coach for a significant time period, therefore resulting in the coach being restricted in with what is coached and how. In this instance, the nature of the relationship will strongly influence the nature of the tournament goals. The player might in fact insist the focus point is directed solely towards performance/tournament-based goals, largely due to the player not seeing the coach for a prolonged period of time. This will of course influence the nature of the coaching duties (i.e. the time period the coach and player are working together).

A standard procedure for tournament level golf coaching may include the coach spending the entire week with the golfer, assisting them with preparation during practice rounds and providing additional support for tournament days. The time frame of a tournament day with regards to interaction with a player can vary between 1 and 7 hours per day,

depending on the coach and player's preferences/needs. At some events coaches may actually be limited in their interaction with the player during important preparation periods (e.g. a player requires some coaching on their long game but is required to complete a number of press interviews), which again may influence the decisions and actions made by the coach. As well as the nature of coaching duties, the focus adopted by the coach might also be influenced by the competition context. Indeed, the nature of focus at a tournament can often be biased towards performance over longer-term progress, not only from the player's perspective as previously mentioned, but also the coach might like to see their players perform to a particular standard which can give both immediate confidence, satisfaction and a rewarding financial fee. In this respect, it is also important to recognise that tournament support can potentially make or break an upcoming coach.

5.2.3. The Tournament Format and Environment

After reflecting on the tournament player and tournament coach, it is important to now consider the tournament format, which also brings a number of different factors that are different to home-based coaching sessions. Specifically, the nature of the competition times (e.g. what time the player will tee off in the day), the nature of tournament commitments (e.g. commitments to attending sponsor parties the night before tournament days), and the nature of group dynamics (e.g. the presence and interaction of competitors around practice areas) all play a role in shaping the unique context of tournament golf for the coach.

In addition to this, where the coach and player will do work can be much different to the usual 'home-based' environments. Specifically, the training grounds will not only be different with regards to what facilities are available, but also what additional individuals (i.e., caddies, players, coaches, fans) are within close proximity that could strongly influence the actions and decisions of the coach and player. The group dynamics can be related to not

only the practice area but also the hotel grounds, largely due to the coach providing coaching support in the hotel facilities.

In sum, the tournament format also presents a number of factors that are not the norm in a home-based coaching session. Specifically, the nature of the competing times, nature of the tournament commitments, and the nature of the group dynamics are all examples of such factors.

As a final key area, it is also important to consider how the general tournament environment is once again quite different from home-based coaching sessions. Indeed, the environment of tournament golf brings along a number of additional interpersonal influences, such as caddies, fans, family and other players who can easily impact on the coach's plans. For example, it is extremely common for other players and caddies to be in close proximity whilst coaches are providing support. In many cases, a coach and player may look to implement a particular strategy-based intervention during a playing practice round; however, other players or caddies may uninvitingly offer their opinion and sway/alter the coach and player's decision-making process. The close presence of other players and coaches may equally result in the golfer or coach comparing what they are doing against their peers with questions such as "are we doing as well as them/should we be doing what they're doing?"

As another challenge, golfers are often obliged to complete media duties (i.e., television interviews) when competing at professional level tournaments. This can at times be a very lengthy process, as players will have to wait for a number of broadcast companies to be ready for recording and interviewing. This duty of course is not the norm for a home-base coaching session and as a result the player and coach will have to consider this duty and work around it. This obligation can be classified as a distraction to performance and preparation;

however, as mentioned earlier, there are other distractions to consider such as managers or family members.

Indeed, what might appear as friendly encouragement from such individuals might actually serve as a negative influence in some circumstances. For example, during the preparation phases, a coach might have (in his/her opinion) installed the right blend of feelings for their player. However, moments before competing, the player engages in conversation with the parents or manager, who offer supportive words of wisdom, but which conflict with the coach's intentions. In short, the tournament environment is complex, dynamic, and ultimately hard to manage!

5.3. What This All Means for the Coach: Preparing and Performing as a Coach at Tournaments

As shown in the previous section, the tournament player, tournament coach, tournament format and tournament environment all contribute to a unique challenge for the coach as compared to a standard home-base coaching session. As such, this challenge will require the coach to work in a tournament-specific way when it comes to delivering the chronic, acute and regulatory effects that were identified in Chapter 4. The way in which a coach delivers chronic effects at a tournament would seem to be important as they can help to serve as a constant reminder of the focus required in the face of the many potential distractions or derailing events. Similarly, acute effects would equally seem to have a high degree of importance at tournament level support given that they can serve to provide a 'sharp reminder or understanding' of what the focus point is and how it relates to the tournament and longer-term objectives; something that again is complicated by the numerous challenges at tournaments. Finally, regulatory effects might arguably be the most important effect a coach can provide at a tournament, largely due to their influence on the coach's

ability to provide both chronic and acute effects in an environment that might bring high levels of emotions. Indeed, the tournament conditions might provide distractions and negative influences that impact this effect the most, some of which the coach will have very little influence over.

So, in order for a coach to deliver appropriate and effective chronic effects, acute effects and regulatory effects at a tournament, what might help coaches with their preparation of these? In other words, what can help the coach to deploy the right effect at the right time in tournament conditions? One part of the answer would seem to be creating time and space, as found in Chapter 4. Indeed, this strategy also seems particularly relevant for tournament contexts given that the challenge of keeping a player ‘on track’ (as per Chapter 4) has even more moving parts. However, this strategy is clearly most relevant to support ‘in the moment’ PJDM (i.e., the naturalistic decision making style described in Chapter 2). So, what else might help the coach to limit their need to create time and space and make decisions under relative time pressure? As one option, the use of *systematic analysis* would seem to offer a particularly suitable match (cf. Martindale & Collins, 2013). A focus on this process alongside creating time and space would also fit within the scope of my thesis and the need to set up a manageable rather than idealistic step forward in the following chapter.

When it comes to roles that require a high level of thinking and decision making, such as coaching at tournaments, systematic analysis has been acknowledged as a central feature for effective practice (cf. Martindale & Collins, 2013). Specifically, this process can help professionals to carefully consider options for action through reflection against their client’s needs and the unfolding situation (cf. Martindale & Collins, 2013); or, in other words, the classical decision making style described in Chapter 2. Particularly helpful for planning and reviewing actions, systematic analysis involves slowed-down, deliberate thinking and is considered to be a way in which to improve the rapid, naturalistic decisions that are typically

required in complex situations, such as coaching at tournaments. In essence, systematic analysis helps to provide a map or reference point (that ‘runs in the background’) against which rapid, naturalistic decisions can be informed (Kahneman, 2011). In the context of coaching at a golf tournament, systematic analysis might therefore offer a route by which coaches can make effective decisions on the delivery of chronic effects, acute effects, or regulatory effects.

To support such decision making through systematic analysis, routines that gather relevant information are therefore crucial (Nash et al., 2012). Indeed, routines also help to maintain control over performance/actions whilst under pressure (Wilson & Richards, 2011). In terms of coaching at tournaments, the need for routines that constantly gather information is clear due to the constantly evolving context. For example, coaches might spend extensive time diligently contrasting and comparing potential options on how to work with their player leading up to the event and intend to deliver coaching sessions at a particular time, in a particular way and for a particular reason. However, these plans can all be thrown up in the air if the coach doesn’t gather information on arrival at the tournament. Indeed, if key information is missed out at this point, such as the player turning up physically exhausted due to their travel commitments, the coach is then left to make more naturalistic decisions under greater pressure; a situation which increases the likelihood and scale of errors. Therefore, having some sort of routine that assists towards checking that all conditions are accurate for the coach to proceed with their original, classically-derived decisions would be useful.

When the tournament is underway, routines that continue to gather information also seem necessary. For example, the coach might engage in conversations with the player on the mornings of practice and competition days to further monitor and check the relevance of their planned actions. The ‘chats’ between coach and player might also happen throughout the day as information and situations constantly change given the dynamics of tournament

competition. In addition to this, the coach might regularly check other sources of information that will impact on their work (e.g., weather forecasts) to further ensure that their plans are accurate and impactful. Once information has been gathered, literature on systematic analysis would also suggest that coaches at tournaments should take advantage of mental simulation as a key PJDM tool. Indeed, mental simulation has been widely documented by decision-making researchers (Cohen, Freeman & Wolf, 1996; Klein, 1998; Klein & Crandall, 1995) and involves mentally rehearsing a sequence of events to consider possible outcomes (Einhorn & Hogarth, 1981). In line with this, progressive deepening is considered a deeper level of mental simulation, as it not only involves considering the potential outcome of one decision, but also what the next decision might need to be and, most importantly, how they all relate to the bigger picture (Degroot, 1965).

5.4. Summary and The Next Step

This chapter has shed light on how ‘home-based’ coaching is quite different to tournament coaching contexts. More specifically, the tournament formant, tournament environment and the tournament player further add to the complexity of making decisions and ensuring that these decisions ‘land’ with the player. Therefore, the purpose of Chapter 6 was to develop and test a tool that could assist with my delivery of chronic, acute and regulatory effects in dynamic and challenging coaching environments. This tool would be underpinned by systematic analysis, particularly through the use of routines and mental simulation.

Chapter 6:

Applying and Refining PJDM Principles at Tournaments

6.1 Introduction

In Chapter 4, the aim was to explore how golf coaches work in coaching sessions with national level players to deliver longer-term intentions for impact against three common challenges: (a) the player's tendency for a short-term outlook; (b) the player's relative power in the coaching process, and (c) the coach's need to continually sell their long-term message. It was found that coaches achieved this through delivering chronic effects, acute effects, and regulatory effects. Chronic effects proved effective by providing a constant and sometimes subtle reminder of the longer-term intentions. Acute effects served as a sharper reminder or triggered a new awareness / understanding of the session intention and how this would help serve towards obtaining the longer-term goals. Regulatory effects were effective in managing the golfer's emotions to allow the chronic and acute effects better land. Finally, creating time and space was found to be a useful supporting mechanism by allowing the coach to, at a more classical level, consider what decisions to make *within* a session; thus helping the coach to adapt to the evolving situation but remain coherent and consistent with their longer-term objectives.

However, the ability to simply transfer such strategies from a standard 'home coaching session' to a tournament context was unclear. As discussed in detail within Chapter 5, the added demands and variation in coach-player interactions due to the 'tournament player' (Carlstedt, 2003; Papaioannou & Hackfort, 2004; Taylor & Wilson, 2005), 'the tournament coach', 'the tournament format' and 'the tournament environment' (Atkinson & Reilly, 1995; Hoggard, 2017) present a somewhat different challenge in relation to the coach's ability to deliver action that is consistent and

coherent with their prior, classically-delivered decisions. As such, the purpose of this study was for me to apply and refine the principles that have been found to help coaches deliver actions that are coherent and consistent with their longer-term intentions for impact (as per Chapter 4), but in a *tournament* rather than *home practice* context. More specifically, this study primarily aimed to validate and question the effectiveness of a tool that might help golf coaches to deliver chronic, acute and regulatory effects, as related to their coaching intentions at tournaments. This tool was a ‘tournament support planner’ that I developed in response to the lessons learned from Chapters 3 to 5, including the value of coaches using systematic analysis *ahead of* coaching interactions and using time and space *during* coaching interactions. Given that there is no formal training on tournament decision-making throughout the golf coaching professional pathway in the UK (and elsewhere to my knowledge), this work has the potential to make a key contribution in terms of my own and others’ coaching in tournament contexts.

6.2. The Tournament Support Planner

After reflecting on the findings in Chapter 3 and Chapter 4, alongside the considerations in Chapter 5, a tournament planner was designed to assist my own work under tournament conditions. This planner is shown in Figure 6.1.

In line with the messages presented in this thesis so far, this planner was designed to help me to deliver actions at tournaments that were coherent and consistent with my long-term intentions for impact. More specifically, the sections of the planner were designed to help me deliver chronic, acute and regulatory effects (Chapter 4), as supported by systematic analysis and creating time and space (Chapter 4 and 5).

To facilitate chronic effects, the planner encouraged me to clearly identify the player's goals for the longer-term, goals for the medium-term (i.e., next month) and the goals for the short-term (i.e., both the practice and tournament days). As such, explicit links were made between what I planned to do with the player at the tournament and what I was trying to do with the player in the longer-term; or, in other words, to ensure that I had *coherent plans* (cf. Chapter 4). This approach was also designed to support the setting of *coherent expectations* and delivery of *coherent conversations* during the tournament (cf. Chapter 4). In this respect, the second section of the planner also required me to consider how and when I would reinforce these expectations for the event/session.

From here, a section was designated towards considering potential technical issues that might be brought up by the player therefore enabling me to consider what decisions to make if this was to occur. In this instance, I was therefore guided to use systematic analysis with mental simulation to identify potential issues (as per Chapter 5). From here, a number of 'go-to' responses were identified should the anticipated situation occur which was included to reduce the chances of needing to make such naturalistic decisions 'in the heat of competition' (when the number and scale or errors can be increased) (cf. Chapter 5).

Notably, the planning for each subsequent practice/tournament day was completed the previous night to give enough time for additional, relevant information to be gathered and considered (cf. the 'routines' described in Chapter 5) and therefore enable more classical, analytical thinking to occur. For example, if the planning for all practice and tournament days had been completed prior to the tournament then the complex and dynamic nature of the tournament context would probably not be well accounted for. Specifically, if a player, prior to the event, was focusing on a particular

swing 'feel' which is now less relevant given her progression along the goal ladder, then simply planning in to further emphasise this feel in later days might lead the golfer towards over-working their technique. Therefore, the planning of each day was intended to be completed the previous night to increase the chances that the decisions made were relevant to what that player needed on the following day.

Further reflecting the tendency for players to adopt a short-term outlook, plus their relative power in the coaching process, the planner also required me to identify what strategies might be best for keeping the player on track in moments of doubt, frustration, etc. In short, this encouraged me to think about how I might facilitate acute effects (i.e., kinaesthetic insight or intellectual insight), or regulatory effects (i.e., disrupting the moment or encouraging the moment), to help the player achieve the session/tournament intention(s). To deliver additional chronic (and possibly acute) effects, another section of the planner also encouraged me to consider what to stress during the reviewing procedures with players.

Finally, a section of planner was designed to give me the opportunity to identify where my thinking/analysis opportunities might be; in short, how I could create time and space to reduce the requirement to make 'on the spot' decisions. As stressed throughout this thesis, the ability to provide coherent and consistent decisions and actions in the face of player power, player short termism, and the added tournament demands/distractions seems to be a strong feature of effective golf coaching. Therefore, the use of time and space to help make decisions, in naturalistic settings, was clearly important to consider up front.

Figure 6.1. The Tournament Support Planner

TOURNAMENT SUPPORT PLANNER				
LONG-TERM GOALS				
AND GOALS FOR THE NEXT MONTH				
SO...GOALS FOR THE TOURNAMENT				
AND...GOALS FOR THE PRACTICE DAY(S)				
HOW / WHEN TO SET OR REINFORCE EXPECTATIONS FOR THE TOURNAMENT?				
	PRACTICE DAY 1	PRACTICE DAY 2	TOURNAMENT DAY 1	TOURNAMENT DAY 2
WHAT MOVEMENT / TECHNIQUE ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?				
WHAT STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?				
WHEN TO REVIEW SESSION/PERFORMANCE WITH PLAYER? WHAT POINTS TO STRESS?				
WHEN AND WHERE ARE MY THINKING / ANALYSIS OPPORTUNITIES?				

6.3 Method

6.3.1. Design

Building on the findings in Chapter 3 and 4, plus the considerations in Chapter 5, this study aimed to validate a tournament planner that aimed to facilitate chronic effects, acute effects, and regulatory effects in tournament level contexts. Notably, significant consideration should be given for when and why a particular research method should be used (Davis, Clayton & Broome, 2018; Gravetter & Forzano, 2018; Sparkes and Smith, 2013). Accordingly, an action-research design was considered an appropriate approach for this study because I wanted to apply and then refine the tournament planner, which would improve the delivery of principles identified in Chapters 4 and 5 in tournament contexts (Coghlan, 2019; Kemmis, McTaggart & Nixon, 2014; Sparkes & Smith, 2013). Specifically, action research serves the purpose of applying and refining and further applying a theory or idea (Coghlan, 2019; Davis et al, 2018; Kemmis, McTaggart & Nixon, 2013; Sparkes & Smith, 2013). Given the anticipated challenges outlined in Chapter 5, this methodology was also a positive fit as it was predicted that the initial tournament support planner would require repeated alterations across the delivery of tournaments. In this respect, action research is a systematic approach to problem solving, with the view to finding effective solutions (Coghlan, 2019; Feldman, Altrichter, Poscha & Somekh, 2018; Hutter, Pijpers & Oudejans, 2016; Stringer, 2014). Essentially it involves: scheduling a change; acting; observing what happens following the change; reflecting on the impact the change has had on the situation; and refining the change for future application; with the cycle continued until appropriate cycles of action and research have been completed (Bradbury, 2015; Coghlan, 2019; Merriam & Grenier, 2019; Robson, 2002). Notably, action research typically involves the researcher being

involved within the study itself, typically acting as a consultant or coach (Coppola, Holt & McHugh 2019; Sagnor & Williams, 2017; Taks et al., 2018). In the instance of this chapter, it was decided that the cycles of action research would be completed across three tournaments given that, at the time of preparing the study, I was scheduled to assist potential participants for three continual tournament events in Europe. Noteworthy, similar action research studies have been completed using three cycles that have provided impactful information upon completion (Mertler, 2016; Nyanjom, 2018).

6.3.2. Participants

Table 6.2. Participant demographics.

Golfer	Age	Professional Playing Experience	Nationality	Professional Tour
Golfer 1	25	5 years	British	Ladies European
Golfer 2	25	6 years	British	Ladies European
Golfer 3	24	4 years	British	Ladies European
Golfer 4	26	5 years	British	Ladies European
Golfer 5	27	6 years	British	Ladies European

As shown in Table 6.2., five female, full time professional golfers competing on the same tour (Ladies European Tour) aged between 22 and 27 were invited to participate in the study. All participants had competed professionally for a minimum of 4 years, with the longest competing player having 6 years of professional experience. The participants were purposely selected and, at the time of the research, received coaching and tournament support from myself. Consideration was given to using an alternative coach along with his/her touring professionals. However, after much reflection, relating to the practicality of attending all tournament events, practice sessions and interviews, along with ensuring participant responses were fair

and accurate rather than being influenced by a possible agenda to make their coach 'look good', it was deemed more appropriate to use my own touring professionals. Recruiting players who I worked with also reflected the overall goals of the doctorate degree (i.e., to advance my own practice). Of course, one priority when collecting data with golfers with whom I had established relationships with was to ensure that these relationships were appropriately managed so that the participants' voluntarily and freely decided to take part and then shared experiences of events and opinions were a fair and accurate representation of our work. To address this feature of data collection, the golfers were informed by myself before the study started that the volume and standard of coaching service that they would receive would not adversely effect them and that the purpose of the study was to, in fact, seek to improve the quality of service provided. In this manner, each player was informed that their opinions, when questioned during the interviewing stages, should be a true reflection of their experiences and not a forced answer that I (their coach) might like to hear, honesty would provide the best basis for improving our work together in the future. The University of Central Lancashire granted ethical approval for the study, with all participants reading and signing a consent form ahead of their participation.

6.3.3. Data Collection

As stated above, an action research design was used for data collection throughout this study. The purpose of this was so that data may be collected, reviewed, refined and then be applied again at the next event; a cycle that would be repeated over three consecutive tournaments.

More specifically, two qualitative data capture methods were selected: 1) my own direct observations and field notes; and 2) post-tournament interviews with all participants (conducted individually). Regarding the live observations and field notes,

these were used to track my perceptions of the delivery and perceived impact, limits, and challenges of the tournament planner and the principles from Chapter 4 (Ng, Baker, Cristancho, Kennedy & Lingard, 2018; Phillippi & Lauderdale, 2018; Robson, 2002). Regarding the post-tournament interviews, these were also used to help identify the extent to which the tournament planner and my subsequent actions helped to facilitate chronic, acute and regulatory effects. It was decided not to include any quantitative measures at this stage due to the qualitative nature of the effects that were being targeted, in short, the perceived *experience* of chronic, acute and regulatory effects. Indeed, using tournament results (e.g., individual scores or final positions) as an indicator of the effectiveness of the tournament planner was perceived to be of limited relevance at this stage, as performance outcomes could have been influenced by many characteristics that I had no reasonable influence over (e.g., other golfers' performances, weather conditions, course conditions). Additionally, the goals that were targeted by each player did not suit quantitative or outcome/score measurement. This is not to say the players' goals were incapable of being measured quantitatively; for example, the use of biomechanical systems could have been used to quantitatively measure improvements/alterations. However, given the tournament context it was not appropriate or practical to use such measuring devices on a daily basis.

Returning to the data collection methods that were used, live observations and field notes allowed me to record moments where either the tournament planner appeared to assist towards landing session intentions or instances where barriers appeared to surface (Flick, 2018). The post-tournament interviews (all of which were recorded by Dictaphone) then served to identify the impact the tournament planner and decision-making tools (e.g., creating time and space) towards landing the session/tournament intention from the players' perspectives. The interview guide was

semi-structured and gave a consistent focus point (i.e., coherent questions related to the impact made by the tournament support planner had) across all participants (Bolling, Barboza, Mechelen & Pasman, 2019; David & Sutton, 2004; Holloway & Wheeler, 2010; O'Halloran, Littlewood, Richardson, Tod & Nesti, 2018), but also allowed the flexibility to entice more in-depth answers where relevant (Bolling et al., 2019; Breg, 2009; Robson 2002;). When developing the questions, consideration was given towards the intention for the interview (Roulston, 2018; Willis, 2004), which was to identify the impact that chronic, acute and regulatory effects had on the players across the tournaments. Naturally, a number of questions were drafted up, and through discussion with a critical friend (my director of studies), these were narrowed down to 7 questions - found in Appendix C - that directed the participants' attention towards the interview intention without leading the participant to give certain answers. More specifically, these questions were based on action research principles, such as the participant being involved in the alteration/refinement process themselves (Kemmis et al., 2014; Phillippi & Lauderdale, 2018). Therefore, questions were designed to encourage the participant to give their own perspective on how further refinements might improve the subject area of focus. In addition, particular consideration was given to the terminology used throughout the interview to ensure the participants clearly understood what the question was asking (King et al., 2018; Roulston, 2018; Willis, 2004). In other words, using terminology that the participant would understand but equally staying relevant to the focus area. For Example, asking the participant 'what were your goals heading into this tournament?' was more appropriate, rather than asking 'what was the nature of your goal?', which might confuse the participants.

Through these individual interviews I attempted to obtain a thorough account of the players' experiences and thoughts on how effective they felt the coaching support was throughout the tournament. Specifically, questions were also designed to be open and not closed so that participants were encouraged to provide descriptive answers that might lead to more in depth insights to the events that unfolded. Additionally, efforts were made to achieve a skilful management of silence along with the use of probing questions to encourage the participant to elaborate on relevant information were used (Plas & Kvale, 1996; Handy, 2003; Holloway & Wheeler, 2010). Once again, often the improvements and alterations made throughout an action research project are formed through the participants within the study themselves (Davis et al., 2018; Feldman et al., 2018; Kemmis et al., 2014); as a result questions were developed with this in mind (i.e., designed to entice the opinion of the participants).

6.3.4. Data Analysis

Given that this study aimed to explore and validate pre-established principles (i.e., those from Chapter 4), all of the data were deductively analysed. This process allowed me to start with a set of categories (i.e., chronic, acute and regulatory effects) and to code the data against these features (Flick, 2018; Gibbs, 2018; Hyde, 2000). In this manner, all of the field notes and interviews were transcribed, relevant quotes were converted to raw data units, and then these data units were categorised, where appropriate, as a chronic effect, acute effect or regulatory effect (Gibbs, 2018; Miles, Huberman & Saldana, 2018; Robson, 2002; Rogers, 2018). As well as coding the positive impact of the tournament planner, it was also important to recognise the issues that arose throughout the day/week: in other words, aspects that the support planner had not helped. As such, an entirely separate inductive content analysis was

conducted on the data related to perceptions of sub-optimal or negative effects; a process which involved the conversion of raw data units into themes by creating tags and then grouping similar tags together (Côté et al., 1993; Gibbs, 2018; Miles et al., 2018; Robson, 2002; Rogers, 2018). This deductive and inductive procedure was conducted after each tournament in order to support new ‘action’ before the next block of ‘research’ at the following tournament.

6.3.5. Quality and Trustworthiness

Generally, the term *trustworthiness* has been used by qualitative researchers to describe methods aiming to optimise the quality of their work (Smith & McGannon, 2017) and, as this study was based primarily on qualitative data (i.e., interviews and field notes), a number of steps were taken to establish trustworthiness. Regarding the data collection process, participants were informed that the study would not interfere with their normal competition approaches and routines; alongside the relationships that I had already established with the participants, this therefore worked to protect the legitimacy of the events observed. Additionally, to ensure that post-tournament interviews were not influenced or interrupted by others, these were conducted in a private room or area. Triangulation of data through live observations, field notes, and post-session interviews was also used to increase the accuracy of the conclusions drawn. Additionally, the semi-structured questions also helped to keep the interviewing consistent across all participants and the tournaments, whilst also giving the participants the freedom to expand on their answers when prompted (Bolling, Barboza, Mechelen & Pasman, 2019; David & Sutton, 2004; Holloway & Wheeler, 2010; O’Halloran et al, 2018).

It was also important to ensure trustworthiness during the analysis process. With regards to the post-tournament player interviews, audio recordings presented the

opportunity to listen and re-listen to the answers provided by the players and to select the points that were relevant towards the study's objectives. The use of a critical friend (my director of studies: Faulkner & Sparkes, 1999; Miles et al., 2018; Smith & McGannon, 2018) was also employed throughout this study, primarily due to the reason that I was 'fresh' to action research and would benefit from someone who could act as a research advisor, resource provider, writing consultant and an evaluation advisor (Kember, Ha, Lam, Lee, NG, Yan & Yum, 1997). For example, after careful analysis of the data from the first tournament, my director of studies assisted with the refinement stage of the action-research cycle. This was completed during lengthy discussions relating to both my own experiences and the players' interview responses. To expose and manage my own biases, I also opted to use a reflective diary to increase transparency in the research process (Ortlipp, 2008; Wallin & Adawi, 2018). Additionally, member checks were completed at the end of each tournament with the participants; this was to ensure the transfer of data from participant to researcher was a fair and balanced description of the individual's thoughts and perception of events (Cho & Trent, 2006; Iivari, 2018; Smith & McGannon, 2018).

6.4 Results

The purpose of this study was to apply and refine the principles that have been found to help coaches deliver actions that are coherent and consistent with their longer-term intentions for impact (as per Chapter 4) but in a *tournament* rather than *home practice* context. More specifically, the study aimed to validate the effectiveness of a 'tournament support planner' that might help golf coaches to deliver chronic, acute and regulatory effects, as related to their coaching intentions at tournaments.

Aligning with my action-research approach, the study's findings are presented tournament-by-tournament and in three parts. More specifically, each subsection starts with an example of the action taken (i.e., a completed 'tournament support planner' for one player). Second, the impact that the support planner had on the delivery of chronic effects, acute effects, and regulatory effects across all players is presented in the form of a summary table (i.e., the products of the deductive analysis). For parsimony, this summary table provides two examples for each of the targeted effects (i.e., chronic effects, acute effects, regulatory effects); more specifically, this covers my action to deliver the effect, the player's specific response to this action, and my own reflection on my action. It is important to note here that the evidence presented in the tables does not therefore include quotes or field notes / observations for every golfer; instead, I have provided 'exemplar episodes / impacts' where the tournament support planner was perceived to have helped to deliver chronic, acute and regulatory effects. Third, and finally, issues or challenges with the delivery of chronic, acute and regulatory effects are presented (i.e., the products of the inductive analysis), along with descriptions on how the tournament support planner was subsequently refined for the following event. This three-part structure is then repeated for the second and third tournaments.

6.4.1. Tournament One

Figure 6.3. Tournament one completed planner

TOURNAMENT SUPPORT PLANNER				
LONG-TERM GOALS	To increase long game distance and accuracy through better ground reaction forces. Make golfer more self-reliant.			
AND GOALS FOR THE NEXT MONTH	To adjust the hip-tilt at the top of the swing. More pelvis lateral bend needed.			
SO...GOALS FOR THE TOURNAMENT	To encourage the desired knee movement to help towards improving the hip position.			
AND...GOALS FOR THE PRACTICE DAY(S)	Primarily focus is on the right knee extending as the lead knee flexes more.			
HOW / WHEN TO SET OR REINFORCE EXPECTATIONS FOR THE TOURNAMENT?	It is important that the goals and focus areas for this player are reinforced and laid out away from other players/caddies. Distractions must be kept to a minimum as she can be easily influenced. Complete this before the session starts			
	PRACTICE DAY 1	PRACTICE DAY 2	TOURNAMENT DAY 1	TOURNAMENT DAY 2
WHAT MOVEMENT / TECHNIQUE ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?	As she works on the right knee she might over straighten the knee joint.	Chance she might over turn the hips.	Needs some help working on the hip tilt. This might pop up through her practice.	Need to monitor the right knee flex. Still over extending it.
WHAT STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?	If this occurs then using an alignment stick to ensure it only straightens the desired amount would help.	Give her a way to scale (1-10 feel drill) how much the hip turns. Use alignment sticks on the ground to help.	Same drills as yesterday also use her belt as a guide to how much tilt is being produced.	Keep asking her to monitor it. Keeping the feel of it staying flexed longer.
WHEN TO REVIEW SESSION/PERFORMANCE WITH PLAYER? WHAT POINTS TO STRESS?	Stress how much the hip movement has improved. Push her focus away from the performance outcome of today and more towards the improved leg/hip work.	Point out the progression of the knee flex change and the hip turn/tilt. Relate this to helping her achieve the next technical alteration.	Point out good work put in over the past few days. Keep her focused on how this step is helping her achieve the next stage. Complete this after the round back at the hotel.	After the round away from the course, stress the improved sections.
WHEN AND WHERE ARE MY THINKING / ANALYSIS OPPORTUNITIES?	When she stops for a lunch break I can think over her next steps and assess how effective the work being done is.	She will be spending time on the green in the evening. This is a key moment to think about any refinements.	Whilst she is out playing I can use this time to reflect and think about next steps.	Whilst she is out playing I can use this time to reflect and think about next steps.

Table 6.3. Tournament one deductive summary table

	Chronic Effects		Acute Effects		Regulatory Effects	
	Coherent expectations	Coherent conversations	Intellectual Insight	Kinaesthetic Insight	Disrupting the moment	Encouraging the moment
My action to deliver effect (as prepared in tournament support planner)	1. Make sure to spend time with [Golfer 1] before she starts the session, talk through the focus being on the hip tilt. Stress importance of not letting others influence her focus.	1. [Golfer 2] needs to be focusing solely on her wrist loading. So when having conversations be sure to relate back to this.	1. When having lunch with [Golfer 2], make sure to engage conversation relating to how her wrists work in the takeaway and then into transition.	1. When [Golfer 1] executes the desired hip tilt, I need to make her aware of any feelings she can associate to the correct movement, and equally when she performs the incorrect execution (i.e., level hip turn)	1. If/when [Golfer 3] gets too frustrated I need to step in and have her cool off, I will show her how the movement should be performed and describe how it's going to help her long term. This will help regulate her emotions and thinking .	1. Important to encourage [Golfer 1] to continue the practice if she is successfully executing the session intention. Use persuading words to keep her in the moment.
	2. Start of the day I spent time with [Golfer 4] and talked through how this session was related to the left arm position and how it is interconnected with the overall swing model we are looking for.	2. [Golfer 3] is easily distracted by other players mainly, so it's important to keep having regular chats about her focus points – focusing on how she shallows the shaft out in transition-	2. When [Golfer 4] executes the desired movement this is an opportunity to ask if she can explain why the left arm alteration is going to help her long term.	2. [Golfer 2] tends to not pick up on her poorly executed movement pattern (i.e., rolling takeaway on the inside). I need to make her aware of that feeling for poor executions.	2. If [Golfer 5] has a poor round and wants to rush into working on the range whilst emotionally frustrated, I need to break this up and allow her to cool off first. Ask her to go and have food or chat to fans first.	2. When [Golfer 4] shows good signs of moving towards the session intention literally tell her to keep going and not to stop. Be direct with the message so she is clear to keep working on it until I ask her to stop.
Linked player response (to my action)	1. <i>“I was clear from the get go what we were working on for day. Having the prep talk at the start was good for me.”</i> (Golfer 1)	1. <i>“This event was obviously quite tricky, didn't perform my best but it does feel like we are making some good changes. I like how we talk about only this one thing we are working on, and not on other areas. Otherwise I would be way too confused”.</i> (Golfer 2)	1. <i>“Ah right I'm getting it now, so the wrists are moving like this and it's helping me get the shaft shallower”.</i> (Golfer 2)	1. <i>“Well yeah that feeling was pretty good, I just felt my right hip get high which is not what I have felt in the past. So I know if I get that feeling I am on the right track”</i> (Golfer 1)	1. <i>“There was a moment out there when we were practicing I just wasn't getting it. I was getting a bit upset about it because obviously I have to go out there and play, plus I just wasn't getting it. But once we had that break and you hit some shots and shown me how it's done I kind of just relaxed up a little and it clicked”</i> (Golfer 3)	1 <i>“Overall that practice session was great, I was in the zone, I was hitting it very well and just kept it simple with a feeling I could rely on.”</i> (Golfer 1)

	2. “Yeah I liked the lesson, I felt clear with what we were working on. Its cool to have that review before we start work so I know right from the start what we are dealing with.” (Golfer 4)	2. “It’s important for me to have that reminder, I just find myself getting distracted so much out here.” (Golfer 3)	2. “I’m liking it all, it’s all starting to fall into place. So if I have this right the left arm comes in and then over almost, that’s how I thinking of it, and that’s going to help shallow out the club in the downswing.” (Golfer 4)	2. “Obviously I made a few bad swings on the range and its good that I can feel what I was doing there so I can stop it.” (Golfer 2)	2. “In truth I was very disappointed and annoyed with how I played today. I wanted to get working on it but like you said I was just wasting my time. Yeah I get it you can’t work on it when your head is like that, so it was good I just had a chill out break before working on it. It was a good session after the break though I got the feel I needed and we are back on track now for tomorrow” (Golfer 5)	2. “Yeah got it, the pitching session we had was nice. It just all felt so easy and in place. I liked that I just got to work on it and get a number of good shots under my belt on the range. That gave me some confidence for tomorrow”(Golfer 4)
Linked field note/reflection (to my action)	1. [Golfer 1] initially questioned the focus area but then once we set the session focus she got straight to it.	1. [Golfer 2] performed poorly, usually in this instance her area of focus is more scattered. But she did stay more consistent with her focus (focusing on her takeaway)	1. Chatting during lunch seemed to allow [Golfer 2] to stay more focussed on her session intention (adjusting the wrist movements). Very little focus distraction/misplacement	1. [Golfer 1] really got the feeling for the hip tilt. It was a good idea to make sure she was really aware of the feeling of the good executions	1. Stepping in at this moment really did help regulate [Golfer 3]’s emotions. She was able to think more clearly without allowing her emotions to direct her focus to other areas.	1. Great session. Keeping her working on her action in the moment helped not only move towards the session intention but also gave her good confidence for the tournament days upcoming.
	2. Player was direct with her focus, she initially was clear on what the session would entail	2. [Golfer 3] really does tend to be distracted by her friends/competitors. But I noticed the more we spoke about her own goals and intentions the more focussed she remained on them	2. I really did see a noticeable difference when I asked [Golfer 4] to talk through how the left arm movement works. From this point onwards she seemed to click intellectually on how it relates to her downswing piece also.	2. Throughout the day [Golfer 2] was quick to pick up on the poor take-away movements. This all came from making her aware of the initial feeling of rolling the club on the inside too soon.	2. Getting [Golfer 5] to have a break after her round was a great way to get her to calm down. She was fired up and in no state to focus clearly on her areas.	2. Giving [Golfer 4] the job to complete a number of good executions worked well as it was enough to get enough good executions under her belt to mover her closer to achieving her session intention.

6.4.1.1. Refinement of Planner

From my analysis of the data that related to sub-optimal or negative effects of my decisions and actions, refinements to the tournament planner were made to accommodate for these moving forward. The following refinements indicate what issues arose along with how the planner was adjusted to combat the interference.

6.4.1.1.1. Refinement 1 - Increase checklist of potential disruptions.

Firstly, throughout the tournament there were a number of occasions when I had to adjust some of the pre-set plans I had arranged for players in order to combat challenges that arose (which were not considered before the tournament began). The following field notes highlight some situations experienced throughout the tournament.

Planned to work with [Golfer 2] on the range, which would give me time to see [Golfer 4] before lunch. But a space had become available in the 'physio' room and [Golfer 2] decided to take it, which reduced the amount of time I could allocate to her.

Looking at working with [Golfer 4] on the range but it was over crowded. We ended up waiting around for 20mins that could have been used more valuably.

[Golfer 5] had been requested to complete some media interviews, which coincided with our scheduled practice time. We ended up missing the session, which proved costly the next day.

In order to help anticipate and prepare for incidents such as those described, I decided that the tournament support planner needed to help extend my systematic analysis process before the tournament and also consider greater contingency planning. As such, a section was created to detail precisely what additional influences should be considered, along with a checklist at the bottom of the planner as a reminder of potential influences/challenges (therefore supporting mental simulation and systematic analysis before the tournament began: cf. Chapter 5). These refinements can be seen in Figure 6.3.

6.4.1.1.2. Refinement 2 - Greater consideration of player's needs/requests from previous event.

Secondly, players requested to complete tasks in a way that differed from the original plan on a number of occasions throughout the tournament. In these instances, and despite my efforts to deliver relevant chronic, acute, and regulatory effects, I sometimes had to either completely alter the decisions that were originally planned for or modify my approach; all of which required more 'on the spot' decisions which felt pressurised and under some time restraint. The following field notes, and player quotes highlight that player needs/requests needed to be considered more.

"I just really feel I need to spend some time on the course, I have to get to know it to be able to play it" (Golfer 2)

"I think I have to prioritise the speed of the green for this event, can we spend more time on this?" (Golfer 4)

Conversation with [Golfer 5] leads towards a heated debate over spending time on the course (particularly the greens). Must try and get her on the course if she feels she needs it and it does not take us away from the goals.

(Field note)

After reflecting on both the players' experiences and field notes, it was clear that the likelihood of golfers wanting to pursue different goals / preparation strategies to what was expected or planned could be high (again reflecting a generally short-term, reactive perspective). As such, it was decided that coherent expectations could be better set by including the player more in discussions and decisions on what the following day would comprise. As such, a second amendment was made to the planner by adding a section that encourages me to think about how/when to consider the golfer's needs for the event.

6.4.2. Tournament Two

Prior to tournament 2, the two refinements previously mentioned were added to the tournament planner with the intention to improve my systematic analysis and reduce the requirement to make 'on the spot' decisions. Below is an example of a completed version of tournament planner-version 2 (Figure 6.4.) and then the summary of positive effects derived from this version (Table 6.4.).

Figure 6.4. Tournament two completed support planner

TOURNAMENT SUPPORT PLANNER				
LONG-TERM GOALS	Increase distance of all full swing shots. Driver by 20yards and irons by going 2 clubs up (i.e., where once hitting 6iron now hitting 8).			
AND GOALS FOR THE NEXT MONTH	Have a greater x-factor stretch and rate of recoil in place			
SO...GOALS FOR THE TOURNAMENT	Work towards increasing the x factor stretch in transition. Limiting/reducing hip turn in backswing			
AND...GOALS FOR THE PRACTICE DAY(S)	Consistent focus towards reducing the hip turn, encouraging the feeling of starting the hip turn as the torso continues to move backwards in backswing			
INFO TO GATHER BEFORE PLAYER ARRIVES AT TOURNAMENT? WHAT / WHEN / HOW?	Go over the checklists attached below. Consider the importance of how well this golfer must perform in this event.			
HOW / WHEN TO SET OR REINFORCE EXPECTATIONS FOR THE TOURNAMENT?	The night before each session, sit down with the golfer and discuss what the longer term objective is and how the following days session intention is going to help her move towards obtaining that goal. Also mention that she will have some time prioritised towards the tournament performance also, but there must be a balance between the two, which very rarely moves her further away from her longer term goals.			
HOW / WHEN TO CONSIDER THE GOLFERS NEEDS FOR THE EVENT?	The night before each session and during the time of setting the session expectations. Ask the golfer what she feels needs time spent on to help her prepare for the event.			
	PRACTICE DAY 1	PRACTICE DAY 2	TOURNAMENT DAY 1	TOURNAMENT DAY 2
WHAT MOVEMENT / TECHNIQUE ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?	[Golfer 3] starts to under turn her hips in the backswing. This then alters the hip tilts etc	[Golfer 3] might not increase the separation in transition, might need to give her more clarity as to why this is important	Player not having a sequence/feel that allows her to perform for the day whilst moving towards tournament goal	[Golfer 3] suggested she was struggling not getting the hips going soon enough. This is something that requires focus and helping her with a feel to stick with.

WHAT OTHER ISSUES/CHALLENGERS MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE? USE CHECK LIST BELOW AS A REMINDER...	Check if the player has spoken with other competitors about her progress/session focus	Practice ground tends to be busy on this day. If so use the golf course, or at worst case have the golfer mentally simulate tomorrows events and have real clarity over her thinking and focus points	[Golfer 3]'s tee times might restrict her time to be able to create a feel that gives both long term development and the ability to put in a performance for today.	Weather is scheduled to be bad when [Golfer 3] is warming up for performance. This might hamper our time given to work on this.
WHAT STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?	Keep using kinaesthetic insight to highlight desired and undesirable hip movements	Use intellectual insight and coherent conversations throughout the day regardless of what sessions get complete.	Work on increasing kinaesthetic insight	Have to get a greater kinaesthetic insight going, if we do encourage the moment.
WHEN TO REVIEW SESSION/PERFORMANCE WITH PLAYER? WHAT POINTS TO STRESS?	Stress the strength of her focus levels for remaining consistent of <i>her</i> session intentions.	Stress either how much she has moved towards the physical attainment of her tournament goal. Or at least praise her for continuing to stick towards that focus area. If she has not worked towards the tournament focus then more intellectual insight and coherent conversations are needed.	Review tournament performance back at hotel. Stress how well she has done for sticking with area of focus, or stress that she must remain focused on the tournament intentions.	Review tournament performance back at hotel. Stress how well she has done for sticking with area of focus, or stress that she must remain focused on the tournament intentions.
WHEN AND WHERE ARE MY THINKING / ANALYSIS OPPORTUNITIES?	Best to complete this away from the opportunity to go and practice what is discussed, especially if the session has not been planned	[Golfer 3] will be completing media obligations as well a spending time working on the greens.	When [Golfer 3] is out performing	When [Golfer 3] is out performing
CHECK LIST FOR POTENTIAL INFLUENCES WHEN PLANNING COACHING SESSION				

- How is the player feeling physical/mentally?
- Weather forecast?
- Player tee times
- Media obligations
- Practice ground too busy
- Fans
- Is the golfer ill or injured?
- Has the golfer spoken with other players or coaches whilst at the event?

Table 6.4. Tournament two deductive summary table

	Chronic Effects		Acute Effects		Regulatory Effects	
	Coherent expectations	Coherent conversations	Intellectual Insight	Kinaesthetic Insight	Disrupting the moment	Encouraging the moment
My action to deliver effect (as prepared in tournament support planner)	1. Include [Golfer 3] in the planning the night before. Make sure she is clear on what the session focus is and if she has any questions to make them apparent now not tomorrow	1. When having food with [Golfer 3], keep referring back to her area of focus. Don't allow her to talk much about other areas, especially if they are not related to her longer-term goals.	1. During the session, important to ask [Golfer 2] questions to entice a greater understanding for why she needs the backswing steeper.	1. When [Golfer 4] executes the desired movement it is important I make her aware of her feelings for that particular movement pattern for the left arm.	1. Important to step in and disrupt the moment if [Golfer 5] is struggling. Get her hitting some wedges or working on a different area of the game whilst she composes again.	1. Keep using encouraging words to keep her in the moment if she is successfully executing the desired movement.
	2. When including [Golfer 1] in the planning the night before, consider her thoughts and requests. Last tournament she really felt she needed more time on the greens and this was neglected.	2. When in the practice round, [Golfer 5] will be prone to being distracted by her playing partners and what they are working on. It is important to keep talking to her about her own goals and areas of focus	2. Keep referring to why working on the hip tilt is going to help the right arm relationship.	2. [Golfer 1] is sliding her hips too much; she needs to keep the pelvis back longer as she squats more. Having her associate a feeling to staying over the right leg longer will help her stay away from sliding the hip	2. [Golfer 1] needs extra work on her chipping so this is a useful tool to use to help disrupt the moment if needed	2. Ask [Golfer 1] to listen to music as a tool to stop her being distracted by the noise of the fans and playing partners. Only use this if she needs to stay in the moment.

Linked player response (to my action)	1. <i>"Well yeah our chat the night before was good and it just gets me clear on what we are working on."</i> (Golfer 3)	1. <i>"Out chat at dinner was good, it's nice to just talk over it all as it keeps my mind on check with what is right for me now, I know I tend to think about too many things and most of them aren't right either "</i> (Golfer 3)	1. <i>"Yeah got that, I was a little confused but after the session today I've got it, I understand now that it needs to be steeper in the backswing so going too flat in the takeaway isn't going to help that"</i> (Golfer 2)	1. <i>"I couldn't get it going at first but towards the middle of the session I got that feeling of where the left arm should be at the top. When you said that was the one I just got the feeling of it, it just felt right for me and you were happy with it right?"</i> (Golfer 4) <i>"Phenomenal round! That feeling and position is just right for me, I am hitting it so good. I'm actually excited now to get to work on the next bit of the swing"</i> (Golfer 4)	1. <i>"I was seriously frustrated I just didn't want to be there to be honest. It was a good idea just to chill out and I like how you just were straight with me and didn't beat around the bush. When we got back to it, it was better it started to click a little, still not where I want it, but much better"</i> (Golfer 5)	1. <i>"I really had a good time hitting shots and working on that takeaway position. It was quite enjoyable actually because I was hitting it well also, but as you said the swing was looking good also"</i> (Golfer 3)
	2. <i>"I just felt I had to get on the course, especially after our last event. I felt my swing was in a good place but I didn't know the course enough. So today was great because we had a good blend of both worlds. I was clear that the main focus point was working on my hip movement but of course getting ready for the event has some level of importance"</i> (Golfer 1)	2. <i>"The practice round was nice, and I do get that we need to stay on track with my game and not jump about. It's just so hard out here with everyone wanting to get involved."</i> (Golfer 5)	2. <i>"Right I'm starting to see how the movement of the hips is going to help alter the position of my right elbow in relation to my hips. I am seeing now that as the hips turn and tilt the elbow won't get as stuck behind."</i> (Golfer 1)	2. <i>"I really liked the feeling of sitting into the right leg. That for me was a good feel and it also allowed me to actually hit the ball well also"</i> (Golfer 1)	2. <i>"Got there in the end, obviously starting off was painful, it just wasn't happening. I couldn't get how the hips were meant to move. But we had that break when you got me chipping for a bit and then it clicked and I got the feel"</i> (Golfer 1)	2. <i>"I liked putting some music on when I was working on it correctly. It helped block out any distraction and just get to work on it."</i> (Golfer 1)

Linked field note/reflection (to my action)	1. Including [Golfer 3] the night before really helped get the questions she had answered the night before and not on the actually practice range. We got to work on the session intention much quicker as a result.	1. This worked well mainly because [Golfer 3]'s focus was at times drifting away to areas that were relevant but for later dates. Just constantly referring back to her current focus point helped re-direct her focus area.	1. One particular moment stood out where I questioned [Golfer 2] about the takeaway, and she got it. She explained that getting the takeaway is the first goal, which then will help her shallow it out (2 nd goal).	1. Making Golfer 4 aware of the good left arm movement and asking her to associate a feeling to it helped her successfully execute a number of good repetitions of the desired movement.	1. In relation to adjusting her emotions, [Golfer 5] was much calmer and level headed as she returned back to the session. This made it much easier to land the acute effects.	1. The light encouragement helped keep [Golfer 3] in the moment. This proved effective in keeping her focus solely on her session intention.
	2. This was great, we got to work towards the tournament intentions, whilst also allowing [Golfer 1] to get a feel for the course which is something she felt she really needed to do.	2. This was effective. Her focus was directed towards her own session focus even though her playing partners spoke to her quite often about their focus areas.	2. When [Golfer 1] successfully produced the desired hip movement I asked her to talk me through her thoughts on why this is going to help. The result was her relating the improved hip movement to influencing the right elbow position (2 nd area of focus)	2. After asking [Golfer 1] to stay on her right leg longer she started to create a distinct feeling she could relate to which helped her move closer towards achieving the session focus.	2. This really helped clear her confusion and frustration. When she returned she got a feel going that was good enough for the movement I was looking for.	2. This was a great tool, [Golfer 1] was able to shut out the distractions whilst working towards her session intention.

6.4.2.1. Refinement of Planner

From the analysis of tournament experiences along with the field notes and player interviews, two distinct challenges emerged throughout the event that required action moving forward.

6.4.2.1.1. Refinement 1 - Cues/Quotes/Analogies to prioritise process thinking. Firstly, often players would find themselves thinking about the outcome of the event/shot or trying to over force the result/quality of shot when we were working together. This resulted in the golfer becoming more frustrated with her performance whilst also causing her to break away from her practice. For example, the selected pairs of field notes and quotes below highlight how, throughout the event, I had to reassure two golfers that sticking to the process was the correct thing for her despite the struggle and frustration:

During practice day 2 [Golfer 4] questioned the work we were doing. She mentioned because the results are not showing as quickly as she would like; she was unsure it was the right move to make (Field note).

Yeah we had a moment didn't we, I just got so lost in it all. Not hitting it how I want to is the hard part. It all sounds good in theory but if it's not giving me the results now then how do I know it's right? (Golfer 4: post-tournament interview)

Practice day 2: [Golfer 1] started focusing on areas of the swing which were further down the goal ladder. She mentioned that when she focuses on it she hits it much better. Which was correct but the timing and sequence of

alteration was not right for her. This was tricky to get across to her especially when she performed better focusing on the exit position. (Field note Golfer 1)

“I honestly didn’t get this, I mean surely I want to be playing my best all the time right? And when I am thinking of the follow through it’s helping me hit it better.” (Golfer 1: post-tournament interview)

Overall, it was clear to see that without having a number of proactively set phrases/cues (or ‘tools’) to deliver chronic, acute or regulatory effects, it was difficult to get the golfer to remain consistent with her pre-competition thoughts and ultimately stick with the tournament intentions, which were nested within the longer-term agenda. As such, I decided to extend my preparation for tournaments by considering which phrases/cues would be useful to use when/if such challenging situations occur and attaching them to the bottom of the support planner as a reminder (cf. mental simulation: Chapter 5). This extension can be seen in Figure 6.4.

6.4.2.1.2. Refinement 2 - Increase list/strategies to help create time and space.

Secondly, throughout the event I found myself still feeling that I needed to make a number of important decisions ‘on the spot’, despite having no necessity to act in this way. More specifically, and despite being aware that my key thinking opportunities were to be found in moments away from the golfer, I struggled to create this time and space. This was mainly due to the demand from the player to continue working on her issue beyond the anticipated timescale, along with the pressure that the tournament situation naturally provided. As examples, the following field notes highlight how, at times, I was forced to make naturalistic decisions which, on reflection, were not completely coherent with the longer-term agenda:

On the range with [Golfer 3] during practice day two, she started to hit big push fades. [Golfer 3] was due to tee off for a practice round with ten minutes remaining. She was eager to sort the direction of her shots, which resulted in me having to make decisions ‘on the spot’ relating to an unexpected performance issue. She suggested she needed to actively release/flip the hands through the hitting area to square up the face. This helped her perform better now but did not match up with the desired longer-term movement pattern. (Field note)

Practice day 2, [Golfer 5] started striking the ball fat; she got frustrated as the day was closing towards an end. She insisted we stay and try to “figure it out”. The situation was intense, as [Golfer 5] got more frustrated. I was unable to disrupt the moment or direct her attention to an alternative area of the game (Field note)

[Golfer 4] completed the round dissatisfied with her driving performance and requested we went to the driving range to “fix it”. The situation was pressurising, as other golfers were aware and watching on. In this moment I was finding myself standing there having to assess the situation and make a decision as to what should be adjusted to not only help her performance but also remain coherent with the long-term goals. (Field Note)

Based on these reflections, it was clear that I needed to develop a further set of mechanisms to help create time and space to undertake greater deliberate analysis (cf.

Chapter 5) and make more decisions in a classical style. In this respect, I decided that developing a list of specific ‘buying time’ mechanisms in advance of the tournament could help to reduce the need to think of ideas to create the time and space on the spot! This amendment to the tournament support planner is also shown in Figure 6.5.

6.4.3. Tournament Three

Before tournament three commenced, the two refinements previously mentioned were added to the tournament planner (Figure 6.5) and the summary table of positive effects derived from this then follows (Table 6.5.).

Figure 6.5. Tournament three completed support planner

TOURNAMENT 3 SUPPORT PLANNER				
LONG-TERM GOALS	Increase distance of shots,			
AND GOALS FOR THE NEXT MONTH	Create more negative beta torque			
SO...GOALS FOR THE TOURNAMENT	Improve the left arm position in the backswing and transition. Lead arm must be more inwards at p.3 and more outwards at p.5			
AND...GOALS FOR THE PRACTICE DAY(S)	Work towards keeping the lead arm inwards whilst having the shaft get steeper by p.3			
INFO TO GATHER BEFORE PLAYER ARRIVES AT TOURNAMENT? WHAT / WHEN / HOW?	How important is this event to golfer4? What is the balance between performance and longer-term development?			
HOW / WHEN TO SET OR REINFORCE EXPECTATIONS FOR THE TOURNAMENT?	The night before the coaching session, sit down with the golfer and discuss her needs for the next day. Together plan out the day’s events and more importantly session focus. Reinforce the session intention the morning before the session starts.			
HOW / WHEN TO CONSIDER THE GOLFERS NEEDS FOR THE EVENT?	Must complete this at the start of the tournament, along with each night prior to the coaching day. If their requirement is consistent with the performance intentions and will help her prepare for the event then this will be included in the session planning.			
	PRACTICE DAY 1	PRACTICE DAY 2	TOURNAMENT DAY 1	TOURNAMENT DAY 2
WHAT MOVEMENT / TECHNIQUE ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?	Golfer 3 tends to take the left arm outwards in the backswing and fans the club shaft too shallow by p.3. This needs to be altered	Left arm coming inwards but not getting the shaft steep enough. This will cause her swing to be too flat too soon, most likely causing the shaft to get steeper in transition (essentially taking her in the reverse direction to where we want it to be)	Golfer 3 still not getting shaft steep enough by p.3. She needs to keep on the umbrella cue/feel	Golfer 3 was moving right elbow too far behind herself whilst trying to get the lead arm in more by p.3
WHAT FEEL CUES / STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?	Needs the feel cue of left arm moving towards right hip. “shaft upwards” . Need to use plenty of coherent conversations and intellectual insight	Give the feel cues of ‘umbrella’ to help her get the shaft steeper.	Asking the player to talk through why it’s important to stick with this regardless of performance. This will have her buy into the process regardless of the result.	Using alignment stick to help generate a feel that keeps her on track with the desired movement.

WHAT OTHER ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?	Media obligations might alter the planning of the session	Busy practice area, media obligations.	Other players suggesting she should not alter her swing	Golfer 3 suggested she felt physically tired. Might need to monitor how this alters her ability to stay focused on the session goal.
WHAT STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?	Kinaesthetic insight- ask player what it feels like when she makes the desired movement, and equally when she makes the incorrect movement pattern.	Use the process quotes/cue/analogies to help keep her on track and sticking with the process	Important to further enhance the players understanding for why the alterations are necessary	Ensuring the player is clear on what the focus area is despite the performance outcome.
WHEN TO REVIEW SESSION/PERFORMANCE WITH PLAYER? WHAT POINTS TO STRESS?	Complete this back at the hotel. Stress the attainment towards short-term goals; stress how they are interrelated with the longer term.	Complete this back at the hotel. Stress the attainment towards short-term goals; stress how they are interrelated with the longer term.	Praise player for sticking to her process thoughts/feels as this is moving her closer to obtaining her longer-term goals. Stress that she needs to remain strong with these thoughts and not to let her attention wonder.	Praise player for sticking to her process thoughts/feels as this is moving her closer to obtaining her longer-term goals. Stress that she needs to remain strong with these thoughts and not to let her attention wonder.
WHEN AND WHERE ARE MY THINKING / ANALYSIS OPPORTUNITIES?	Use the completed creating time and space options to create thinking time. Analysis can be complete when player is working on her course preparation (i.e., getting the speed of the greens)	Use the completed creating time and space options to create thinking time. Analysis can be complete when player is working on her course preparation (i.e., getting the speed of the greens)	Use the completed creating time and space options to create thinking time. Analysis can be complete when player is working on her course preparation (i.e., getting the speed of the greens)	Use the completed creating time and space options to create thinking time. Analysis can be complete when player is working on her course preparation (i.e., getting the speed of the greens)
CHECK LIST FOR POTENTIAL INFLUENCES WHEN PLANNING COACHING SESSION	CUES/QUOTES/PHRASES TO PRIORITISE SESSION INTENTION AND PROCESS		OPTIONS TO HELP CREATE TIME AND SPACE	

<ul style="list-style-type: none"> • How is the player feeling physical/mentally? • Weather forecast? • Player tee times • Media obligations • Practice ground too busy • Fans • Is the golfer ill or injured? 	<ul style="list-style-type: none"> • Road map analogy • Planting and growing a tree • Where are we now in relation to our goals? • Are you in this for the long run? • Stick with the process • Gym analogy • Jigsaw puzzle box 	<ul style="list-style-type: none"> • Inform player why at times I need to remove myself from the situation to make more classically arrived decisions • Ask player to work on alternative part of game • Inform player you need to make a call/deal with something first before completing the session • Ask player to spend 10 minutes on their own to work it out, whilst you use mental simulation etc
---	--	---

Table 6.5. Tournament three deductive summary table

	Chronic Effects		Acute Effects		Regulatory Effects	
	Coherent expectations	Coherent conversations	Intellectual Insight	Kinaesthetic Insight	Disrupting the moment	Encouraging the moment
My action to deliver effect (as prepared in tournament support planner)	1. Sit down with [Golfer 5] and review her thoughts whilst considering potential challenges. Build the session intentions around any potential influences.	1. If [Golfer 1] starts to focus about goals further down the line then ask her bluntly “is she in this for the long haul?” This will help start the process to direct her attention and conversation back to the current goal.	1. When the time is right ensure I question [Golfer 1] as to why getting the pelvis tilt in the desired position will help with the next stage (creating greater vertical ground forces).	1. Question [Golfer 4] on how the work of controlling the shaft plane and body pivot feels	1. If [Golfer 2] starts to struggle throughout practice, I need to break it up for her. Allow her emotions and thoughts to regulate.	1. If [Golfer 4] is successfully executing the movement and enjoying the session then encourage her to continue using short prompts.
	2. After discussing the thoughts of [Golfer 3], I decided to allow her to worm on the course but to	2. If [Golfer 5]’s focus is directed too much towards the outcome, which has been the case in moments	2. Ask [Golfer 2] if she can see how loading the 3 rd accumulator at p.3.9 will be the desired timing	2. Keep making [Golfer 1] aware of her feels when she successfully executes the pelvis movement.	2. If the round performance is not what [Golfer 1] wants, and her emotions are high it is	2. Keeping [Golfer 5] in the moment when she is performing the desired movement is important.

	then complete a short session on the range working more diligently on her wrist movement.	throughout the previous tournaments, refer the road map analogy.	to help shallow the shaft out		important to have her chill out. Request she has food or signs autographs	Use encouraging words, keep them short, try not to disrupt her when encouraging.
Linked player response (to my action)	1. <i>"I'm glad we didn't go to overboard on the session today, it was a good balance for me. I had to get myself feeling good for tomorrow, but also needed some work done for the event."</i> (Golfer 5)	1. <i>"I did feel that question was a bit of an eye opener for me. I was feeling quite down about my game and it just shocked me a little. But it worked because I was thinking stupid things, like wanting to give up playing ha-ha. But yeah I am in this for the long term and just need to keep telling myself that. But it's so hard when you have all these people (fans, competitors, managers, sponsors, media) around you as well. I'm glad we spoke about it"</i> (Golfer 1)	1. <i>"right, yeah so when I get this hip tilt in place, it's going to help me push harder downwards in the transition, right?"</i> (Golfer 1)	1. <i>"It's feeling good really, I'm confident with what we are working on here. I like how it will all fall into place, once I've got this transition then I get opening the chest and hips up more"</i> (Golfer 4)	1. <i>"As much as I didn't want to have a break from working on it, it did really help."</i> (Golfer 2)	1. <i>"The round was pretty good, but like I said I didn't really have the feels or thoughts I needed. But now after that practice I've got it, the swing is looking good, I understand it better now and I can feel it also."</i> (Golfer 4)
	2. <i>"Today was good, it was important for me to get out on the course. We got some good feels going and the session after it was a good finisher for me"</i> (Golfer 3)	2. <i>"Your right on the road map stuff, the more I think about the end destination the more frustrated my car journey is going to be. I just need to keep working on what I'm doing now"</i> (Golfer 5)	2. <i>"ah right so when I get the loading right it's easier for me to shallow the shaft at this point in the swing? I am starting to see how that works now".</i> (Golfer 2)	2. <i>"I'm getting this feel of sitting into the right in transition now, it's more like down the outside of the right leg, that's my feel anyway"</i> (Golfer 1)	2. <i>"It was a tough day out there today. I did want to get on the range and sort it out because I couldn't play like that again. But I know the little break in between helped clear my head"</i> (Golfer 1)	2. <i>"We had a good little session going. It was great to have a spell of hitting it so well and moving forward. It has given me some good confidence moving forward for the week"</i> (Golfer 5)
Linked field note/reflection (to my action)	1. Considering [Golfer 5]'s thoughts when planning and setting the session expectations was valuable in this instance.	1. Great result. Although it was a harsh way to go about it, it really did re-direct her attention and conversation back to her	1. [Golfer 1] could see how her pelvis being positioned on such a tilt will help her push harder vertically into the ground,	1. This was good because half way through the session she used the feel she identified throughout the day to continue	1. Breaking [Golfer 2] away helped her regulate her emotions and thoughts leading to the acute effects landing more successfully.	1. Good result here. [Golfer 4] had a great spell working on her development. Some good time feeling confident and

	She explained she was physically tired so we got work complete on the range also.	current goal.	which is her next goal/step	moving towards the desired movement.		putting in some good quality work.
	2. This was good, [Golfer 3] was able to get a feel for the course but we also got enough work complete on the range to work on her longer-term work.	2. Knowing to refer to the road map analogy beforehand made it much easier to call upon as a tool to help make the point that focusing on her current goal will help her achieve her end destination/goal.	2. This was good, in this moment she could see how because she hadn't loaded 3 before p.3 she could then do it in transition much easier/more	2. Making [Golfer 1] aware of her feels was again important, she kept her focus on that as a guide towards achieving the desired hip movement.	2. Getting [Golfer 1] to calm down first was important, she was really upset/frustrated with her performance and going straight to work would have been really difficult having not planned a session with next to no CDM	2. [Golfer 5] had a moment where she worked precisely on her area of focus and this helped build her confidence. Using short words helped give her the cue to continue as she was practicing.

6.4.3.1. Refinement of Planner

Upon reflection of the tournament experiences and post session interviews, one future alteration to aid the support planner did appear appropriate.

6.4.3.1.1. Refinement 1 – Consultation Section.

Throughout the tournament, specifically during moments where I was considering potential decisions relating to what was best for players for the following day, I consulted with various members of my support team to assist with my intention(s) for impact. However, the notes gathered from these consultations were not collected alongside my own notes, which were recorded within the support planner. As a result, there were times during the delivery of sessions where my consultation notes were not at hand for reference (i.e., not recorded in my support planner). This resulted in me having to recall conversations that I had the previous night during the live dynamics of a tournament coaching session. Naturally this resulted in some of my decisions being even more naturalistic in nature, which created some degree of doubt over the decisions made. The following field notes and post session interviews gathered across the tournament days highlight such moments of uncertainty during coaching sessions.

On the range with Golfer 2, I remember talking with Support Member 1 about a particular feel/cue for her to focus on. But I don't have the notes on my planner and cannot remember what the feel/cue was. As a result, I had to substitute the specific feel/cue identified last night as the most effective with another – the impact of which was that the work complete was not as effective had we used the cue's discussed the previous night. (Field Note)

On the course with Golfer 4, I discussed her tactical decisions and shot shaping- which aligned with a conversation last night with Support Member on how to play a particular hole on the course. Again the notes recorded are not on the support planner and I cannot remember what the exact decision was. This meant I had to think on the spot about to what the best decision was for this particular hole. Could have been avoided if the notes were here with me. (Field Notes)

Obviously hole 6 was tricky today, as we couldn't figure out what the best tactical option was. I am still not sure on what is best (Golfer 4 – Post Tournament Interview)

Based on these reflections, it was clear that the tournament support planner could again be further developed to support the decisions made throughout the tournament. The option to use support members is a feature of classical decision making which helps to increase the chance that later decisions are coherent and consistent with my intentions for impact. However, the notes on this CDM process needed be accessible and available during the dynamics of the tournament coaching sessions to optimise the accuracy and confidence in my subsequent decisions. The following version of the tournament support planner (Figure 6.6.), highlights where the consultation notes section can be attached (written in blue text, below the section that asks “when and where are my thinking / analysis opportunities?”).

Figure 6.6. Final refinement of Tournament Support Planner

TOURNAMENT SUPPORT PLANNER				
LONG-TERM GOALS				
AND GOALS FOR THE NEXT MONTH				
SO...GOALS FOR THE TOURNAMENT				
AND...GOALS FOR THE PRACTICE DAY(S)				
INFO TO GATHER BEFORE PLAYER ARRIVES AT TOURNAMENT? WHAT / WHEN / HOW?				
HOW / WHEN TO SET OR REINFORCE EXPECTATIONS FOR THE TOURNAMENT?				
HOW / WHEN TO CONSIDER THE GOLFERS NEEDS FOR THE EVENT?				
	PRACTICE DAY 1	PRACTICE DAY 2	TOURNAMENT DAY 1	TOURNAMENT DAY 2
WHAT MOVEMENT / TECHNIQUE ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?				
WHAT FEEL CUES / STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?				

WHAT OTHER ISSUES MIGHT BE BROUGHT UP? OR POTENTIALLY COME TO THE FORE?				
WHAT STRATEGIES MIGHT BE MOST RELEVANT FOR ADDRESSING THE ISSUES / KEEPING THE PLAYER ON TRACK?				
WHEN TO REVIEW SESSION/PERFORMANCE WITH PLAYER? WHAT POINTS TO STRESS?				
WHEN AND WHERE ARE MY THINKING / ANALYSIS OPPORTUNITIES?				
CONSULTATION NOTES – KEY POINTS THAT MIGHT BE NEEDED DURING DELIVERY OF COACHING				
CHECK LIST FOR POTENTIAL INFLUENCES WHEN PLANNING COACHING SESSION	CUES/QUOTES/PHRASES TO PRIORITISE SESSION INTENTION AND PROCESS		OPTIONS TO HELP CREATE TIME AND SPACE	

<ul style="list-style-type: none"> • How is the player feeling physical/mentally? • Weather forecast? • Player tee times • Media obligations • Practice ground too busy • Fans • Is the golfer ill or injured? 	<ul style="list-style-type: none"> • Road map analogy • Planting and growing a tree • Where are we now in relation to our goals? • Are you in this for the long run? • Stick with the process 	<ul style="list-style-type: none"> • Inform player why at times I need to remove myself from the situation to make more classically arrived decisions • Ask player to work on alternative part of game • Inform player you need to make a call/deal with something first before completing the session • Ask player to spend 10 minutes on their own to work it out, whilst you use mental simulation etc
---	--	---

6.4 Overall Reflections

The purpose of this study was to apply and refine the principles that have been found to help coaches deliver actions that are coherent and consistent with their longer-term intentions for impact (as per Chapter 4) but in a *tournament* rather than *home practice* context. More specifically, this study primarily aimed to validate the effectiveness of a tool that might help golf coaches to deliver chronic, acute and regulatory effects, as related to their coaching intentions at tournaments, while building in time and space for more ‘on the spot’ naturalistic decisions. This tool was a ‘tournament support planner’ that I developed in response to the lessons learned from Chapters 3 to 5.

Overall, the tournament support planner was helpful with planning how I would use chronic, acute and regulatory effects to land my tournament/session intentions as highlighted by the summary tables across three tournaments. The designated sections helped me to engage in systematic analysis, with mental simulation and information-gathering routines, which was an inherent part of my preparation and action (cf. Chapter 5). In this respect, despite the tournament conditions being much more complex and dynamic in comparison to home-based training, I also felt that the tournament support planner increasingly reduced my need to make ‘on the spot’ decisions in the face of tournament demands/distractions, player power and player short termism; as well as limit the scale of errors when I did have to engage in these ‘on the spot’ moments. Interestingly, this approach is similar to the processes used by the emergency services when attending to a crisis. More specifically, paramedic services (Aehlert, 2011; Armstrong, Langlois & Siriwardena, 2019), fire-fighters (Poplin, Griffin, Porter & Chengcheng, 2018; Shelley, Cole & Markley, 2007) and the police (Kane, Evans, Mitsch, Jilani, Quinlan & Cattell, 2018;

Oakley, 2013) will all collect data (i.e., information relating to the emergency crisis) before attending the scene (Gordon, 2002). In this way, individuals can start to mentally simulate potential steps that may be required upon arrival (Gordon, 2002). Indeed, those emergency services who arrive at the scene with no or little supporting information are more inclined to take longer dealing with the situation due to concerns about making mistakes or having to dig out the information at the scene (Stering, 2005). Similarly, teachers working in education have been found to appreciate the positive implications of efficient planning towards not only *what* will be taught, but also *how* this information will be delivered in the often dynamic and chaotic classroom environments (Ali, 2018; Capel, 2004; Stronge, 2018). Dealing with the mixture of personalities and learning preferences amongst students, the teacher must consider up-front what approaches would likely allow their intentions for impact to land best (Stronge, 2018). Of final note from a sport-specific perspective, coaches in sports such as football (Carling, Williams & Reilly, 2005) and hockey (Gilbert, Trudel & Haughian, 1999) have also been found to make in-game tactical adjustments not only due to the in-game dynamics but also based on their contingency planning prior to the game. Indeed, before the game coaches can diligently compare and contrast multiple decisions that might need to be made during the dynamic game (Bloom, Durand-Bush & Salmela, 1997). In sum, the processes of gathering and assessing information prior to the event (i.e., emergency crisis, education lesson or sporting match) along with careful consideration as to what steps might be taken is a key feature for helping individuals better manage the dynamic and often chaotic environments in which they work in. This, of course, mirrors the processes taken when completing the tournament support planner studied in this chapter.

6.4.1. Future Refinements of the Tournament Support Planner

Of course, in order to capitalise on *all* the benefits that systematic analysis and CDM provides, the support planner could arguably encourage even more analysis before heading to a tournament (e.g., consulting with support coaches). For example, one of the key features of CDM is the opportunity to consult with other coaches who act as a support role in the decision making process. Moving forward, I believe it would be valuable to accommodate a section within the support planner that facilitates the opportunity for the coach to consult with their network of support coaches (if the situation requires) when making any decisions and plans.

Additionally, the support planner could also have a section that allows the coach to not only document the numerous initial potential avenues that have been considered, but also how those initial decisions might further develop as the golfer progresses. Of course, this would encourage further mental simulation, in particular progressive deepening, as deeper chains of decisions are considered (DeGroot, 1965). In other words, the coach can record the first potential step/decision and, whilst using progressive deepening, document the predicted outcomes for the mentally simulated next steps/decisions.

Interestingly, when coaching at a tournament it is common for a coach to provide support to a number of golfers (e.g., between 2-14 golfers). As a result, the coach must divide their time appropriately between the numbers of players they are supporting. Therefore, there will be moments when the player is not in the company of the coach, but yet exposed to the opportunity of having their focus misdirected through the distractions/influences of tournament level golf identified in Chapter 5. This might result in the player moving further away from achieving the session/tournament intentions. Therefore, providing the player with his or her own

player friendly support planner, which essentially acts as a chronic effect, to provide a subtle reminder of what *their* session focus is could also be a valuable tool in addition to the coach version.

6.4.2. Study Strengths and Limitations

Regarding the strengths of this study, the action research approach proved effective in terms of the enhancing the practical relevance of the process and my eventual output (i.e., the refined tournament support planner). More specifically, this methodology was well matched to helping me firstly assess the successes and challenges presented at each tournament, and then, secondly, provide an alternative/refined approach to overcoming the obstacles identified moving forward (Stringer, 2014). Additionally, multiple observations (i.e., observations taking place across tournament-tournament and day-day) helped towards ensuring the data collected was not an anomaly, and was in fact events that accrue over somewhat consistently. Furthermore, a mixed methods approach, and a number of additional approaches to enhance trustworthiness also assisted towards gaining a breadth and depth of quality data (Andrew & Pedersen, 2018; Robson, 2002).

However, this study was not without limitations. Firstly, the study did not use any quantitative measures to monitor the performance outcome of golfers throughout the tournaments. As such, questions might surface relating to the extent to which my use of chronic, acute and regulator effects had an impact on the golfer's actual performance levels. To address this question, it is important to remember that this initial study was focused on how I could deliver my intentions for impact, whatever they might have been for each player, through the use of chronic, acute and regulatory effects. Now support towards the impact the tournament support planner can have has been presented, a next step for future research would be to evaluate the association

between these effects and a range of performance markers. In addition to this, I could have included the perceptions of significant others (e.g., caddies, managers, parents, etc) to further add to the validity of how impactful the chronic, acute and regulatory effects were. It should also be recognised that the tournament support planner could have been used across more than three tournaments to enable further refinements to occur. Of course, only a handful of instances might have occurred across the three events, whereas additional/different circumstances might have surfaced across more tournaments, resulting in additional/different refinements being made to the support planner. Furthermore, relating to trustworthiness, previous work has stressed that the evaluation of qualitative research cannot be achieved through rigid, standardised criteria (cf. Bergman, 2016; Kusch, 2017; Sankey, 2018; Smith & Hodgkinson, 2005; Smith & McGannon, 2018; Sparkes & Douglas, 2007; Welch & Piekkari, 2017). Once again, due to qualitative data having a unique blend of origins, circumstances and interpretations, the criteria listed above – and the processes described in the earlier trustworthiness section – are considered relevant to the assessment of this study and reflect a more relativistic approach to evaluating the quality of research (Kusch, 2017; Sparkes & Smith, 2009).

Chapter 7

Summary of Findings, Implications and Conclusions

7.1. Summary of Findings

To advance professional practice in my own domain and generate important PJDM-relevant insight across all performance levels, but specifically elite-performance, this thesis has presented: (a) an overview of the nature and parameters of golf coach PJDM across a broad spectrum of performance levels, (b) identified principles that help golf coaches to deliver their intentions for impact in home-based coaching sessions, and (c) provided a tool in the form of a tournament support planner to help golf coaches make and deliver their intentions for impact at tournaments. This was achieved through a series of studies that moved progressively from an initial broad consideration of golf coach PJDM to an elite performance-specific viewpoint.

More specifically, Chapter 2 set the scene and laid the foundations for the whole thesis. Essentially, this chapter recognised that expertise in coaching is a chiefly *cognitively* based skill, which is defined by criteria that lean towards the *process of* and *thinking behind* coaching. From this base, the critical role of decision-making in coaching practice was highlighted, along with Abraham and Collins' (2011) nested model for combining classical and naturalistic styles. This of course led towards the initial study in Chapter 3, which identified three primary challenges that coaches must tackle if they wish to promote and protect their longer-term agendas with players. Specifically, this study found that coaches must have the ability to recognise and manage their players' tendency for short termism, recognise and manage their players' relative power in the relationship, and continually frame work against the golfer's longer-term objectives. Notably, the current training pathway in place for golf coaches in the UK does not explicitly equip trainee coaches with: 1) the

awareness of such challenges; and 2) the skills and tools to effectively manage the named challenges. As such, Chapter 4 identified how coaches might effectively deliver their session intentions in the face of the challenges that were discovered in Chapter 3. Firstly, it was found that coaches delivered chronic effects (i.e., coherent planning, coherent conversations and coherent expectations) to provide a constant and subtle reminder for the golfer as to what their session intention related to and how it would help them to achieve their longer-term objectives. Secondly, coaches also delivered acute effects (i.e., intellectual insight and kinaesthetic insight) to provide a sharper, ‘higher impact’ reminder or new awareness of what the session intention related to and how it would help them in the long-term. Additionally, regulatory effects were identified as another means by which the coaches managed their golfers’ emotions and clarity of thinking; an effect which ultimately facilitated the delivery of chronic and acute effects. Specifically, regulatory effects involved encouraging the moment, when the golfer was successfully achieving the session intention, or disrupting the moment, when the golfer was insufficiently moving towards the session intention. Finally, the use of time and space was identified as a useful supporting mechanism during times where naturalistic decisions were required to be made. In this instance, coaches removed themselves from the chaos and dynamics of the coaching session to use tools such as mental simulation to make in-session decisions that remained coherent and consistent with their longer-term objectives.

At this stage, and reflecting the fact that many elite level players receive much of their coaching support on the road, my focus shifted to *how* chronic, acute, and regulatory effects could be delivered in a tournament context. As such, Chapter 5 presented a discussion on the unique challenge of coaching at golf tournaments as well as a consideration of what might be required on the part of the coach; all

culminating in the design of a tournament support planner that I sought to validate in Chapter 6. Reflecting on the results highlighted in Chapter 6, the evidence gathered suggests that the delivery of chronic, acute and regulatory effects were effectively supported the completion of this planner. Of course, this planner was not without limitation and, throughout the final study, the tournament planner had to be refined and adjusted from each tournament to help combat the demands and influences that tournament level golf provides.

7.2. Implications

7.2.1. Implications for Golf Coaches

As driven by pragmatic philosophy (Chapter 1), my aim in this thesis has been not only to study an important applied topic but, more importantly, to develop findings that could advance the practice of myself and others. In this respect, I believe that practical implications have been generated by each of the studies I have undertaken. Firstly, the findings from the survey presented in Chapter 3 provided a number of general messages regarding the ways in which I and my fellow golf coaches need to operate. More specifically, these messages encourage golf coaches to be more aware of the players' power and short termism when they are constructing their intentions and planning/delivering coaching sessions. Notably, this has also been shown to be an effective factor with sport psychologists, who have been advised to consider the short-term outlook their athletes may have whilst working towards longer term agendas (Martindale & Collins, 2005).

As well as raising awareness of these factors, another implication is that, as far as the results from my sample suggest, many golf coaches might lack sufficient understanding and/or skills when it comes to *managing* the challenges presented by the typical golfer. For example, most reported an extremely short issue

conceptualisation process and a tendency to react to the golfers decisions on what to work on, where, when, and how. However, issue conceptualisation has been shown to be an important feature with regards to identifying the performance challenge and building the base to plan development and set the pace in relation to when goals might be achieved (Martindale & Collins, 2005, 2007). Notably, individuals, coaches in particular, will do well to triangulate their findings to ensure the performance area they are observing is an accurate representation of the events that are occurring (Robson, 2002).

Of course, the importance of player ownership has been well documented in previous literature (Cleary & Zimmerman, 2001; Gagne, Ryan & Bargmann, 2003; Mageau & Vallerand, 2003; Nicholls, Levy, Polman & Crust, 2011; Zagorska & Guszowska, 2014). However, the results of the survey suggested that coaches often allowed the player to lead on key parts of the coaching process not for ownership purposes but because: (i) they wanted to keep their client or income; (ii) they lacked enough understanding or skills to develop and ‘sell’ a coherent and consistent programme of work; or (iii) some combination of these factors plus others (e.g., because the culture of golf coaching is to work in a shorter-term, more reactive basis). Of note, the second of these suggestions is consistent with previous work, where researchers have recognised that sports coaches are more than just a subject specialist (Squires, 1999) and do not exist in a social vacuum (Cross & Lyle, 1999). In other words, it is not enough to simply have a degree of knowledge in a chosen specialist area; the coach must have the skills to engage and manage the social engagement between themselves and the athlete(s) if they are to be optimally effective (Cushion, Armour & Jones, 2000). Reflecting on these points, and to take appropriate control over the coaching process whilst delivering benefits that are in the player’s *long term*

interests, my findings therefore suggest that golf coaches would benefit from a greater focus on the PJDM constructs reviewed in Chapter 2; especially around issue conceptualisation and nested programme design. Certainly, these CDM-based processes play a crucial role in delivering NDM that continually locks into and supports a coach's longer term objectives (Abraham & Collins, 2011; Martindale & Collins, 2005).

Focussing on the skills needed by coaches in relation to players' tendency for a shorter-term outlook and their relative power in the coaching relationship, the results identified in Chapter 4 give golf coaches a head start in not only being able to recognise player power and short termism but also practical ways through which they can manage the named challenges in Chapter 3. More specifically, chronic effects, acute effects and regulatory effects have been evidenced as effective tools for allowing a coach to deliver their intentions for impact within a coaching session that were coherent and consistent with their longer term goals with the player. More specifically, my findings encourage coaches to prioritise (or avoid overlooking or downplaying) the creation of well thought through coherent plans that are then consistently followed up with coherent expectations and coherent conversations within a session. Additionally, coaches are also encouraged to target acute effects through enabling intellectual and kinaesthetic insight, as well as encouraging or disrupting the moment when it comes to delivering regulatory effects. Regarding the latter, another implication of my work is that coaches would do well to upskill themselves in principles and techniques from professional psychology when it comes to their work. Indeed, the majority of golf coaching is focussed on or requires behaviour change in the player, as well as the ability to help golfers to manage their emotions. As such, golf coaches would do well to specifically equip themselves with

techniques and mechanisms that can help them to monitor emotions and increase the likelihood of landing the intentions for impact. For example, coaches being trained and educated to better use distraction techniques could improve their ability to regulate the golfers emotions when required (Eyesenck et al., 2007). However, given that every golfer has their own unique blend of goals, personality, psychological skills, and influences, golf coaches are encouraged to be creative in their methods for managing the player power and short termism through this range of effects. For example, there are likely to be a multitude of ways to set coherent expectations (e.g., a text or email the day before a session) or facilitate intellectual insight (e.g., observation of another player).

Moving from the home-based coaching to tournament coaching, my thesis also encourages coaches to engage in systematic analysis ahead of such work; including the use of mental simulation to test and expand on their decisions and plans. In this respect, other coaches might also benefit from using the tournament support planner that Chapter 6 presented, to identify, through classical decision making processes, how to best deliver their chronic, acute and regulatory effects for their individual clients. Although not considered in this thesis, the support planner could also be adjusted for use during home-base coaching sessions to help coaches to land their chronic, acute and regulatory effects, as well as prepare for how they might create time and space to make on the spot, naturalistic decisions.

7.2.2. Implications for Golf Coach Education

Now that light has been shed on the current PJDM parameters of golf coaching, specifically the impact that the player power and shot termism can have in golf, golf educators are encouraged, at the very least, to start making coaches aware of what player power and short termism might look like, so that coaches can be

conscious of how their decisions might be altered through the player's input. This might be achieved in a number of ways. Firstly with regards to player power, trainee coaches could be tasked to observe live coaching sessions with the intent being to focus on how the golfer might adjust or sway the session focus either through their interpretation of what is being asked or quite simply because they feel the session needs to go in this new direction. Secondly, having trainees observe live coaching sessions focusing on moments where the golfers focus or actions represent an attempt to achieve the goal at a shorter time frame of the coaches preference will help make trainee coaches aware of the player short termism.

In addition to this, golf educators are encouraged to raise awareness of the need to deliver chronic, acute and regulatory effects, as well as systematic analysis and creating time and space, to ensure the coaches intentions for impact better land with golfers. This may counter the level of impact that a player's power and short-term outlook has with regards to the coach's ability to land their intention for impact. However, merely being aware of the tools that are effective does not equip an individual with the skills to apply them effectively within a session. Educators ought to be training coaches with the skills required to land chronic, acute and regulatory effects, along with systematic analysis and creating time and space, which will equip coaches with the tools required to land their intentions for impact. This might be done through giving as much weight and respect to these skills as there currently is to the modules already established within the training programmes (e.g., golf coaching swing technique, sport science). Second to this, providing some continuing professional development courses on the development and application of the identified tools would be helpful. Furthermore, golf education ought to be placing more time and attention on educating and training coaches with the skills on

behaviour change and emotion regulation. Specifically, education on approaches to emotion-oriented support, such as the principles of rational emotional behavioural therapy (Turner & Baker, 2014), could equip coaches with some valuable tools and mechanisms to help players to regulate emotions and ultimately be in a more ‘learning’ than ‘reflecting’ frame of mind during coaching sessions (Gross & Levenson, 1997). To compliment this, there is a need to train coaches on issue conceptualisation, in order to provide them with the understanding and skills required to deliver robust issue conceptualisation processes during coaching sessions.

As part of this push from what golf coaches can do (i.e., technical direction) towards how they can do it, coach education systems could also recognise and reward coaches who deliver nested, longer-term support; through the channels of magazine articles and awards as this appears to be the ‘in flavour’ approach to being recognised (and therefore influencing the coaching community). Currently golf coaches are often rewarded and recognised as being ‘more expert’ largely through their procedural knowledge base and win/success records (“Top 25 Golf Coaches”, n.d.). Specifically, golf coaches are often identified as the ‘best in the UK’ through popular mainstream magazines using criteria that focus on the achievement of goals over short time periods and give little to no consideration of the coach’s cognitive or PJDM skills, as well as their ability to work towards longer term agendas (Tappin, 2016). Additionally, the appreciation and recognition of work towards longer-term agendas could be complimented through website and social media platforms stressing the importance and exposing the benefits of players having longer-term work programmes. Adjusting these area of attention and recognition would really assist towards ‘shaking’ up the culture of golf coaching! Specifically, social media (Kizgin, Jamal, Dey & Rana, 2018; Colicev, Malshe, Pauwels & O’Connor, 2017) along with

magazine publications (Afzal & Khan, 2015) are a vital means of culture change and a driver of acculturation strategies and consumption choices. Noteworthy, Golf Digest (2019), which is a worldwide golf publication available for the public, actively encourages golfers to invest time in consuming more quick fix interventions to improve their performance levels. This type of marketing and publications will make the golf coaches role of adjusting the golfers mind-set much harder.

7.2.3. Implications for Golf Coach Research

Reflecting on the implications for golf coach research, the findings from Chapter 3 highlighted that the influence of player power and short termism was characteristic across all performance levels. From this position, assumptions based on practical experience can be made for why the trend exists in the first place. For example, it is natural to assume that players might have lower level of declarative knowledge on the complexity and difficulty of skill development. However, as obvious as this may appear, these assumptions might be only part of the reason and therefore further research on the perceptions and expectations of golfers, specifically *why* they feel they should/aught to be achieving their goals in such short time period, can lead to identifying the individual and cultural influences on the short termism perspective across all performance levels. Additionally, it is clear from the findings that coaches conceptualise the performance issue and start the alteration process under extremely short time periods. This not only questions the accuracy of the coach issue conceptualisation process but also sets the tone for working quickly without laying the foundations for longer-term considerations. As a result, further research into the process behind golf coach issue conceptualisation, specifically identifying the *thinking* behind effective processes.

Additionally, the chronic, acute and regulatory effects identified in Chapter 4 encourage researchers to further investigate the multitude of ways coaches might be successful in delivering the named impact effects. For example, coherent planning, coherent expectations and coherent conversations are just three possible applications of chronic effects, whilst coaches might be delivering equally effective, but different, strategies. Furthermore, the findings from Chapter 6, along with the considerations from Chapter 5, have brought awareness to the challenge coach's face when working in tournament conditions. Despite the tournament support planner proving valuable in starting to manage these challenges, ways in which a player's area of focus can be managed when the coach is not present at the tournament are unknown in current literature. Notably, it is common for players to in fact attend long stretches of tournaments without the company of their golf coach, often only speaking to them remotely, so this is an important feature in tournament support that requires further research.

7.3 Final Reflections and Moving Forward

Before embarking on this professional doctorate degree, my perspective on improving as a golf coach was one that heavily rested with accumulating as much declarative knowledge as possible, specifically in the realms of technique and biomechanics. I, like many of the golf coaches who pass through the current professional training system, fell victim to being naïve to the importance of PJDM. Of course, this naivety started diminishing as I researched deeper into the topic, specifically when relating it to my personal contexts as a golf coach.

Moving forwards, I aim to further expose the benefits and importance of PJDM to the masses of frontline coaches through various available channels. Initially, my thoughts navigate towards the impact social media platforms have within the golf

coaching world, particularly due to the large number of individuals using such media streams. Specifically, exposing the benefits of PJDM and the impact of chronic, acute and regulatory effects, along with systematic analysis and creating time and space can have in 'home' and 'tournament' coaching through linking up with social media influences and creating specific social media accounts. To compliment this approach, I also aim to make contributions to magazine, book or coaching publications as well as converting some of the chapters in this thesis into papers for submission to academic journals. Additionally, presenting my work at coaching conferences such as the Open Forum at the PGA show of America, I believe, would bring high levels of exposure due to the large numbers of attendance and large social media coverage/interest. Finally, I will of course continue to use the findings from this thesis throughout my own personal coaching practice, whilst encouraging my influential touring professionals to assist in exposing the benefits of longer-term development.

Reference List:

- Abraham, A., Collins, D., & Martindale, R. (2006). The Coaching Schematic: Validation Through Expert Coaching Consensus. *Journal of Sports Sciences*, 24, 549-564.
- Abraham, A. & Collins, D. (2011). Effective Skill Development: How Should Athletes' Skills Be Developed? In D. Collins, H. Richards, & A. Button (Eds.), *Performance Psychology: A Practitioner's Guide*. Kidlington: Elsevier.
- Aehlert, B. (2011). *Paramedic Practice Today: Above and Beyond*. United States of America, Jones & Bartlett Learning.
- Afzal, S. & Khan, J.R. (2015). Impact of Online and Conventional Advertisement on Consumer Buying Behaviour of Branded Garments. 4 (1). P.125-135
- Ali, S.K.S. (2018). Teachers' planning and preparation for lesson plan in the implementation of forum 4 physical education for the physical fitness strand, *Malaysian Online Journal of Educational Sciences*, 1 (4). Pp.38-47
- Andrew, D.P.S. & Pedersen, P.M. (2018). Research methods and design in sport management. *Human Kinetics*. London.
- Amex, H., Glenton, C., & Lewin, S. (2019). Purposive sampling in a qualitative evidence synthesis: *A worked example from a synthesis on parental perceptions of vaccination communication*, *BMC Medical Research Methodology*, 19 (26).
- Archer, S., Langhinrichsen-Rohling, J., & Blejwas, E. (2018). Beyond the manuscript: *Developing a productive workgroup within a community coalition: Transtheoretical Model processes, stages of change, and lessons learned*. 12 (1). Pp. 73-79

- Armstrong, S., Langlois, A., & Siriwardena, N. (2019). PP8 paramedic views and experiences of the ethical considerations in ambulance based clinical trials: *An interview study, Emergency Medical Journal*. 36 (1).
- Atkinson, G. & Reilly, T. (1995). Sport, Leisure and Ergonomics. Great Britain, Chapman & Hall. *Asian Journal of Management Sciences & Education*.
- Auclair, T.J. (2016). Golf Tips: How to stay calm in a pressure situation. [Accessed Online]. Available at URL: <http://www.pga.com/golf-instruction/golf-buzz/golf-tips-how-stay-calm-in-pressure-situation> (Accessed 10/11/2017)
- Battaglia, C. & Glasgow, R. (2019). Pragmatic dissemination and implementation research models, methods and measures and their relevance for nursing research, *Nurse Outlook*.
- Bassey, M. (2003). Case study research, In J. Swann, & J. Pratt (Eds.), *Educational Research in Practice* (pp. 111-124). London: Continuum
- Belger, T. (2017). Little Boy Blue: *The Poignant Detail You Won't Have Noticed While Watching*. The Liverpool Echo 18th September 2017
- Bergman, M (2016). Relativism. *The International Encyclopaedia of Communication Theory and Philosophy*, pp.1-5
- Bird, Y.N., Waller, A.E., Marshall, S.W., Alsop, J.C., Chalmers, D.J., & Gerrard, D.F., (1998). The New Zealand rugby injury and performance project: V. Epidemiology of a season of rugby injury. *British Journal of Sports Medicine*. 32, 319-325.
- Bloom, G. A., Crumpton, R., & Anderson, J.E., (1999). A Systematic Observation Study of the Teaching Behaviours of an Expert Basketball Coach. *Sport Psychologist*, 13, 157-170.

- Bloom, G.A., & Durand-Bush, N. (1997). Pre-and post competition routines of expert coaches of team sports. *Sport Psychologist*, 11,127-142.
- Bloom, G.A., Durand-Bush, N. & Salmela, J.H. (1997). Pre- and Post Competition Routines of Expert Coaches of Team Sports. *The Sports Psychologist*, 11, 127-141
- Boeije, H. (2002). A Purposeful Approach to the Constant Comparative Method in the Analysis of Qualitative Interviews. *Quality & Quantity*, 36, 391-409.
- Bolling, C., Barboza, S.D., Mechelen, W.V., & Pasman, H.R. (2018). How elite athletes, coaches, and physiotherapists perceive a sports injury. London, John Wiley & Sons.
- Bourdon, P.C., Cardinale, M., Murray, A., Gustin, P., & Kellmann, M. (2017). Monitoring athlete training loads: *Consensus statements, International Journal of Sport Physiology and Performance*. Pp. 161-170
- Bradbury, H. (2015). The Sage Handbook of Action Research. London, Sage.
- Branis, M. & Vetvicka, J. (2010). PM10, Ambient Temperature and Relative Humidity during the XXIX Summer Olympic Games in Beijing: Were the Athletes at Risk? *Aerosol and Air Quality Research*, 10, 102-110
- Brannen, J. (2017). Mixing Methods: *Qualitative and Quantitative Research*. London, Routledge.
- Braun v., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101
- Braun, V., & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. London: Sage.

- Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, 26, 1802–1811.
- Bourgain, M., Hybois, S., Thoreux, P., Rouillon, O., Rouch, P., & Sauret, C. (2018). Effect of shoulder model complexity in upper-body kinematics analysis of the golf swing, *Journal of Biomechanics*, 75. Pp. 154-158
- Brown, C.J., Webb, T.L., Robinson, M.A., & Cotgreave, R. (2018). Athletes' experiences of social support during their transition out of elite sport: *An interpretive phenomenological analysis*, *Psychology of Sport & Exercise*. 36. Pp. 71-80
- Brough, P. (2018). Advanced Researched Methods for Applied Psychology: *Design, Analysis and Reporting*. London, Taylor & Francis.
- Brown, S.J., Selbie, S.W., & Wallace, E.S. (2013) The X-Factor: An Evaluation of Common Methods Used to Analyse Major Inter-Segment Kinematics During the Golf Swing. *Journal of Sports Sciences*, 31, 1156-1163.
- Bryant, A. (2009). Grounded theory and pragmatism: The curious case of Anselm Strauss. *Forum: Qualitative Social Research*, 10(3): Art. 2.
- Butler, R.J., & Hardy, L. (1992). The performance profile: Theory and application. *The Sport Psychologist*, 6, 253-264.
- Callister, R. & Lubans, D.R. (2011). A Systematic Review of Strength and Conditioning Programmes Designed to Improve Fitness Characteristics in Golfers. *Journal of Sports Sciences*. 29, 933-943.
- Carling, C., Williams, A.M. & Reilly, T. (2005). Handbook of Soccer Match Analysis. United States of America, Routledge.

- Capel, S. (2004). *Learning to Teach Physical Education in the Secondary School: A Companion to School Experience*. United States of America, Routledge.
- Carlstedt, R.A. (2003). *Evidence-Based Applied Sport Psychology: A Practitioner's Manual*. United States of America. Springer.
- Carson, H & Collins, D. (2011). Refining and Regaining Skills in Fixation/Diversification Stage Performers: *The Five-A Model*. *International Review of Sport and Exercise Psychology*, 4, 146-167.
- Carson, H. J., Collins, D., & MacNamara, A. (2013). Systems for Technical Refinement in Experienced Performers: The Case From Expert-Level Golf. *International Journal of Golf Sciences*. 2, 65-85.
- Cho, J. & Trent, A. (2006). Validity in Qualitative Research Revisited. *Qualitative Research*, 6, 319-340.
- Claxton, D.B. (1988). A Systematic Observation of Successful and Less Successful High School Tennis Coaches. *Journal of Teaching in Physical Education*, 7, 302-310.
- Chrouser, K.L., Xu, J., Hallbeck, S., Weinger, M.B., & Partin, M.R. (2018). The influences of stress responses on surgical performance and outcomes: *Literature review and the development of the surgical stress effect (SSE) framework*. *The American Journal of Surgery*, 216 (3). Pp.573-584
- Cleary, T. J., & Zimmerman, B. J. (2001). Self-Regulation Differences during Athletic Practice by Experts, Non-Experts, and Novices. *Journal of Applied Sport Psychology*, 13, 185-206.
- Coghlan, D. (2019). *Doing Action Research in Your Own Organization*. London, Sage

- Cohen, M., Freeman, J., & Wolf, S. (1996). Metacognition in Time-Stressed Decision Making: Recognising, Critiquing, and Correcting. *The Journal of the Human Factors and Ergonomics Society*. 38, 206-219.
- Cole, M.H. & Grimshaw, P.N. (2016). The biomechanics of the modern golf swing: *Implications for lower back injuries, Sports Medicine*, 46 (3). Pp. 339-351
- Colicev, A., Malshe, A., Pauwels, K., & O'Connor, P. (2017). Improving Consumer Mind-Set Metrics and Shareholder Value through Social Media: *The Different Roles of Owned and Earned*. American Marketing Association Journal of Marketing.
- Collins, D., Button, A., & Richards, H. (2011). Performance Psychology: *A Practitioner's Guide*. China, Elsevier.
- Collins, D., Burke, V., Martindale, A., & Cruickshank, A. (2014). The Illusion of Competency Versus the Desirability of Expertise: Seeking a Common Standard for Support Professions in Sport. *Journal of Sports Medicine*, 45, 1-7
- Collins, L. & Collins, D. (2013). Decision Making and Risk Management in Adventure Sports Coaching. *Quest*, 65, 72-82.
- Coppola, A.M., Holt, N.L., McHugh, T.F.L. (2019). Supporting indigenous youth activity programmes: *A community-based participatory research approach, Qualitative Research in Sport, Exercise and Health*. Pp.1-17
- Corbin, J., & Strauss, A. (2008). Basics of qualitative research: *Techniques and procedures for developing ground theory* (3rd ed.). London: Sage.
- Cote, J. & Gilbert, W. (2009). An Integrative Definition of Coaching Effectiveness and Expertise. *International Journal of Sports Science & Coaching*, 4, 307-323.

- Cote, J., & Sedgwick, A. (2003). Effective Behaviours of Expert Rowing Coaches: A Qualitative Investigation of Canadian Athletes and Coaches. *International Sports Journal*, 7, 62-77.
- Cote, J., Salmela, J.H., & Russell, S. (1995). The Knowledge of High-Performance Gymnastic Coaches: *Competition and Training Considerations*. *The Sport Psychologist*, 9 (1) 76-95
- Cross, N. & Lyle, J. (1999). Preface. In N. Cross & J. Lyle (Eds.), *The coaching process: Principles and practice for sport* (pp. vii-x). Oxford: Butterworth-Heinemann.
- Cruickshank, A. (2013). A Professional Judgment and Decision Making (PJDM) Approach to Consultancy with an Elite Junior Jude Player. *Sport & Exercise Psychology Review*, 9, 15-23.
- Cruickshank, A. & Collins, D. (2017). Beyond 'Crude Pragmatism' in Sports Coaching: Insights From C.S. Peirce, William James, and John Dewey: A Commentary. *International Journal of Sports Science & Coaching*, 12, 70-72.
- Culin, K.R.V., Tsukayama, E., Duckworth, A. (2014). Unpacking Grit: Motivational Correlates of Perseverance and Passion for Long-Term Goals. *The Journal of Positive Psychology*. 1-7.
- Cushion, C., Armour, K.M., & Jones, R.L. (2000). Critically mapping coaching research: Understanding socially dynamic practice. Manuscript submitted for publication.
- Cushion, C.J., Armour, K.M., & Jones, R.L. (2003). Coach Education and Continuing Professional Development: Experience and Learning to Coach. *Quest*, 55, 215-230.

- Cushion, C. (2007). Modelling the Complexity of the Coaching Process. *International Journal of Sports Science & Coaching*, 2, 395-401.
- Davis, L., Clayton, C. & Broome, J. (2017). Thinking like researchers: *Action research and its impact on novice teachers' thinking*. *Educational Action Research*. Pp. 1-16
- De Groot, A.D. (1965). Thought and Choice in Chess. The Hague: Mouton.
- De Menezes, J. (2016). Jose Mourinho Sacked Live: Latest Updates From Chelsea with Guss Hiddink Set to Take Over. The Independent. Thursday 17 December 2015. Available at: URL: <http://www.independent.co.uk/sport/football/premier-league/jose-mourinho-sacked-live-latest-chelsea-manager-dismissed-a6777091.html>
(Accessed 20/08/2016)
- Eakin, J. M. (2016). Educating critical qualitative health researchers in the land of the randomized controlled trial. *Qualitative Inquiry*, 22, pp.107–118.
- Eccles, D.W. & Tenenbaum, G. (2004). Why an Expert Team is More than a Team of Experts: A Social-Cognitive Conceptualization of Team Coordination and Communication in Sport. *Journal of Sport and Exercise Psychology*. 26 (4), 542-560
- Einhorn, H.J. & Hogarth, R.M. (1981). Behavioural Decision Theory: Process of Judgement and Choice. *Annual Review of Psychology*, 32, 53-88.
- Ellmers, T.J. & Young, W.R. (2018). Conscious motor control impairs attentional processing efficiency during precision stepping. *Gait & Posture*, 63. Pp.58-62

- Eysenck, M.W., Derakshan, N., Santos, R., & Calvo, M.G. (2007). Nxiety and cognitive performance: *Attentional control theory*, *American Psychologist Association*.
- Falter, J. & Perignon, C. (2010). Demand for football and intramatch winning probability: an essay on the glorious uncertainty of sports. *Journal Applied Economics*. 32 (13).
- Finn, K. (2008). An Introduction to Using Mental Skills to Enhance Performance in Golf: Beyond the Bounds of Positive and Negative Thinking. *International Journal of Sports Science & Coaching*. 255-269.
- Fisher, K.M & Etnier, J.L. (2014). Examining the Time Course of Attention During Golf Putts of Two Different Lengths in Experienced Golfers. *Journal of Applied Sports Psychology*, 26, 457-470.
- Feldman, A., Altrichter, H., Poscha, P. & Somekh, B. (2018). Teachers investigate their work: *An introduction to action research across the professions*. London, Routledge, 4th ed.
- Flick, Y. (2018). An introduction to Qualitative Research. Great Britain, Sage 4th Ed.
- Franks, I.M., Johnson, R.B., & Sinclair, G.D. (1988). The Development of a Computerized Coaching Analysis System for Recording Behaviour in S porting Environments. *Journal of Teaching in Physical Education*, 8, 23-32.
- Fullagar, H.H.K., Duffield, R., Skorski, S., White, D., Bloomfield, J., Kolling, S., & Meyer, T. (2016). Sleep, travel, and recovery responses of national footballers during and after long-haul international air travel. *International journal of sports psychology and performance*. 11 (1). 86-95.

- Gagne, M., Ryan, R.M. & Bargmann, K. (2003). Autonomy Support and Need Satisfaction in the Motivation and Well-Being of Gymnasts. *Journal of Applied Sport Psychology*, 15, 372-390.
- Giacobbi Jr, P.R., Poczwardowski, A., & Hager, P.F. (2005). A pragmatic research philosophy for applied sport psychology. *The Sport Psychologist*, 19, 18-31.
- Giardina, M. D. (2017). (Post?)qualitative inquiry in sport, exercise, and health: Notes on a methodologically contested present. *Qualitative Research in Sport, Exercise and Health*, 9, 258–270.
- Gibbs, G.R. (2018). *Analysing Qualitative Data*. Great Britain, Sage.
- Gilbert, W.D. & Trudel, P. (2004). Analysis of Coaching Science Research Published From 1970-2001. *American Alliance for Health, Physical Education, Recreation and Dance*. 75, 388-399.
- Gilbert, W.D., Trudel, P. & Haughian, L.P. (1999). Interactive Decision Making Factors Considered by Coaches of Youth Ice Hockey during Games, *Journal of Teaching in Physical Education*. 18 (3), 290-311
- Gilligan, C. (2015). The Listening Guide method of psychological inquiry. *Qualitative Psychology*, 2, 69-77.
- Glanville, B. (2010). *Golf: The game of lessening failures*. United States of America, Trafford Publishing.
- Glaser, R. (1990). Expertise. In M. W. Eysenk, A. N. Ellis, E. Hunt, & P. Johnson-Laird (Eds.), *The Blackwell dictionary of cognitive psychology*. Oxford, England: Blackwell Reference.
- Golf Digest. (2019). 13 Swing Quick Fixes. Accessed Online: Available at URL: <https://www.golfdigest.com/gallery/photos-basics-swing-fixes>

- Gordon, E.E. (2003). *A Music Learning Theory for Newborn and Young children*. Chicago, GIA Publications.
- Gordon, J.A. (2002). *Comprehensive Emergency Management for Local governments: Demystifying Emergency Planning*. United States of America, Rothstein Associates Inc.
- Gravetter, F.J. & Forzano, L.B. (2018). *Research Methods for the Behavioural Sciences*. United States of America, Cengage.
- Gross, J.J. & Levenson, R.W. (1997). Hiding Feelings: The Acute Effects of Inhibiting Negative and Positive Emotion. *Journal of Abnormal Psychology*, 106, 95-103.
- Hoggard, R. (2017). Manager: *Matsuyama Not Hurt, Just Tired*. [Accessed online]. Available at URL: <http://www.golfchannel.com/article/golf-central-blog/manager-matsuyama-not-hurt-just-tired/> (Accessed 5/12/2017)
- Hughes, M., Hughes, P., Mellahi, K., & Guermat, C. (2010). Short-term versus Long-term Impact of Managers: Evidence from the Football Industry. *British Journal of Management*. 21 (2). P.571-589.
- Hutter, R.I., Pijpers, J.R., & Oudejans, R.D. (2016). Assessing competence in sport psychology: *An action research account*, *Journal of Sport Psychology in Action*, (2). Pp.80-97
- Hyde, K.F. (2000). Recognising Deductive Process in Qualitative Market Research. *An International Journal*, 3, 82-90.
- Iivari, N. (2018). Using member checking in interpretive research practice: *A hermeneutic analysis of informants' interpretation of their organisational realities*, *Information Technology & People*. 31 (1). Pp.111-133

- Jackson, J. (2014). Manchester United: *What Can They Expect From Manager Louis Van Gaal*. *The Guardian*. May 2014
- Jenkins, S. (2007). The Use of Swing Keys by Elite Tournament Professional Golfers. *International Journal of Sports Science & Coaching*, 2 (1), p.199-217.
- Jones, G.J., Edwards, M.B., Bocarro, J.N., Bunds, K.S. & Smith, W. (2017). A structural perspective of cross-sector partnerships involving youth sport non-profit organizations. *European Sport Management Quarterly*. Pp.1-23
- Jones, R., & Wallace, M. (2006). The Coach as ‘Orchestrator’: More Realistically Managing the Complex Coaching Context. In R. Jones (Ed.), *The Sports Coach as Educator: Reconceptualising Sports Coaching* (p.51-64). Abingdon: Routledge.
- Josselson, R. (2013). *Interviewing for qualitative inquiry: A relational approach*. New York, NY: Guilford Press.
- Jowett, S. (2017). Coaching Effectiveness: *The Coach-Athlete Relationship as its Heart*. *Current opinions in Psychology*, 16. P. 154-158.
- Jowett, S. & Cockerill, I.M (2002). Incompatibility in the coach-athlete relationship. In I.M. Cockerill (Ed.) *Solutions in Sports Psychology* (pp.16-31). London: Thomson Learning.
- Jurejko, J. (2019). Rafael Nadal beats Alex de Minaur in Australian Open third round. Accessed on Online. Availble at URL: <https://www.bbc.co.uk/sport/tennis/46918229>
- Kahneman, D. & Klein, G. (2009). Conditions for Intuitive Expertise: A Failure to Disagree. *American Psychologist*.

- Kane, E., Evans, E., Mitsch, J., Jilani, T., Quinlan, p. & Cattell, J. (2018). Police interactions and interventions wit suspects flagged as experiencing mental health problems, *Criminal Behaviour and Mental Health*, 28 (5). Pp. 424-432
- Kearney, R., Le., C., Cunniffe, & Heerey, J. (2018). Sports Medicine Highlights from Other Journals, *British Journal of Sports Medicine*. 52 (14)
- Kember, D., Ha, T., Lam, B., Lee, A., NG, S., Yan, L., & Yum, J. (1997). The Diverse Role of the Critical Friend in Supporting Educational Action Research Projects. *Educational Action Research*, 5 (3). p.463-481.
- Kemmis, S., McTaggart, R., & Nixon, R. (2013). The Action Research Planner: *Doing critical participatory action research*. London, Springer.
- Kimsey-House, H., Kimsey-House, K., Sandahl, P., & Whitworth, L. (2018). Co-Active Coaching: *The Proven Framework for Transformative Conversations at Work and in Life*. Untied Kingdom, John Murray Press.
- King, N., Horrocks, C., & Brooks, J. (2018). Interviews in Qualitative Research. United Kingdom, Sage.
- Kizgin, H., Jamal, A., Dey, B., & Rana, N. (2018). The Impact of Social Media on Consumers' Acculturation and Purchase Intentions. *Information Systems Frontiers* 20, p.503-514.
- Klenke, K. (2008). Qualitative Research in the Study of Leadership. United Kingdom, Emerald.
- Klein, G.A. (1998). *Sources of Power: How People Make Decisions*. Cambridge: MIT Press.
- Klopper, S. & Collier-Peter, S.V. (2018). Business Coaching Processes that Facilitate the Successful Implementation of Business Improvement Projects.

- International Journal of Evidence Based Coaching and mentoring*. 16 (2). Pp. 20-31
- Kuna, D., Brymer, E., Davids, K., & Marinkovic, D. (2018). *Task Constraints Patterns in Acquisition of the Basic Turn as Implemented by International Expert Ski Coaches*. *Kinesiologia Slovenica*, 24 (1). P. 28-34
- Kusch, M. (2017). Epistemic relativism, scepticism, pluralism. *Synthese*, 194 (12). Pp. 4687-4703
- Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing* (2nd ed.). Thousand Oaks, CA: SAGE.
- Levitt, H.M., Motulsky, S.L., Wertz, F.J., & Morrow, S.L. (2017). Recommendations for designing and reviewing qualitative research in psychology: *Promoting methodological integrity*, *Qualitative Psychology*, 4(1), pp.2-22
- Lyle, J. (2002). *Sports Coaching Concepts: A Framework For Coaches' Behaviour*. London: Routledge.
- Lyle, J. (2010). *Coaches' Decision Making: A Naturalistic Decision Making Analysis*. In J. Lyle & C.J. Cushion (Eds.), *Sport Coaching: Professionalisation and Practice* (p.27-41). London: Churchill Livingstone.
- Lyons, C.A. & Pinnell, G.S. (2001). *Systems for Change in Literacy Education: A Guide to Professional Development*. United States of America, Pearson Education Canada.
- MacNamara, A. & Collins, D. (2015). Profiling, Exploiting, and Countering Psychological Characteristics in Talent Identification and Development. *The Sport Psychologist*, 29, 73-81.
- Maffetone, P.B. & Laursen, P.B. (2019). Decision-making in Health and Fitness. *Frontiers in Public Health*.

- Mageau, G.A. & Vallerand, R. (2003). The Coach-athlete relationship: *A motivational model*, *Journal of Sports Sciences*. 21, 883-904.
- Martindale, A. & Collins, D. (2005) Professional Judgement and Decision Making: The Role of Intention for Impact. *The Sport Psychologist*. 19, 303-317.
- Martindale, A. & Collins, D. (2007). Enhancing the Evaluation of Effectiveness with Professional Judgement and Decision Making. *The Sport Psychologist*. 21, 458-474.
- Martindale, A & Collins, D. (2013). The Development of Professional Judgement and Decision Making Expertise in Applied Sport Psychology. *The Sport Psychologist*. 27, 390-398.
- Mauro, C.D., Fratocchi, L., Orzes, G., & Sartor, M. (2018). Offshoring and Backshoring: A multiple case study analysis, *Journal of Purchasing and Supply Management*, 24 (2). Pp. 108-134.
- Maykut, P. & Morehouse, R. (1994). Beginning Qualitative Research: A Philosophical and Practical Guide. The Final Press, London.
- McAllister, D., and Guidice, R.M. (2012). This is only a test: A machine-graded improvement to the multiple-choice and true-false examination. *Teaching in Higher Education*, 17 (2), 193-207
- Meister, D.W., Ladd, A.L., Butler, E.E., Zhao, B., Rogers, A.P., Conrad, J.R., & Rose, J. (2011). Rotational Biomechanics of the Elite Golf Swing: Benchmarks for Amateurs. *Journal of Applied Biomechanics*. 27, 242-251.
- Merriam, S.B., & Grenier, R.S. (2019). Qualitative research in practice: *Examples for discussion and analysis*. Great Britain, Wiley

- McNulty, P. (2016). Europa League Final: *What Next for Jurgen Klopp and Liverpool?* BBC Sport May 2016. Available at URL: <http://www.bbc.co.uk/sport/football/36326487> (Accessed 03/06/2017)
- McMillan, R. (1994). 365 One-Minute Golf Lessons: *Quick and easy stroke-saving tips*. United States of America, HarperCollins.
- Mongomery, H., Lipshitz, R., & Brehmer, B. (2005). Introduction: From the First to the Fifth Volume of Naturalistic Decision-Making Research. In H. Montgomery, R. Lipshitz, & B. Brehmer (Eds.), *How Professionals Make Decisions*. New Jersey: Lawrence Erlbaum.
- Miles, M.B., Huberman, A.M., & Saldana, J. (2018). *Qualitative data analysis: A methods sourcebook*. United kingdom, Sage.
- Nagel, S., Schlesinger, T., Bayle, E. & Giauque, D. (2015). Professionalisation of sport federations – a multi-level framework for analysing forms, causes and consequences. *European Sport Management Quarterly*, 15 (4). Pp. 407-433
- Nash, C. & Collins, D. (2006). Tacit Knowledge in Expert Coaching: Science or Art? *Quest*. 58, 465-477.
- Nash, C., Martindale, R., Collins, D., & Martindale, A. (2012). Parameterising Expertise in Coaching: *Past, Present and Future*. *Journal of Sports Sciences*, 30, 985-994.
- Nicholls, A.R., Levy, A.R., Polman, R.C.J., Crust, L. (2011). Mental Toughness, Coping Self-Efficacy, and Coping Effectiveness Among Athletes. *International Journal of Sport Psychology*, 42, (6), p.513-525.
- Nesbit, S. (2005). A Three Dimensional Kinematic and Kinetic Study of the Golf Swing. *Journal of Sports Science and Medicine*. 4, 499-519.

- Ng, S.L., Baker, L., Cristancho, S., Kennedy, T.J., & Lingard, L. (2018). 29
Qualitative Research in Medical Education: *Methodologies and Methods*,
London, Routledge.
- Lockerbie, A. & Tate, D. (2012). Ski Instructors Handbook: *Teaching Tools and
Techniques*. United Kingdom, Salomon.
- Oakley, P. (2013). Learn how to become a police communications officer (999
emergency call operator) with this 100-page insiders career guide. . United
kingdom, How2become Limited.
- O'Halloran, L., Littlewood, M., Richardson, D., Tod, D., & Nesti, M. (2018). Doing
descriptive phonological data collection in sport psychology research. *Sport in
Society*, 21 (2). PP.302-313.
- Oliva, M. (2018). Attention and Learning through the Eyes of the Emotional Brain.
Lund University Cognitive Studies.
- Ortlipp, M. (2008). Keeping and Using Reflective Journals in the Qualitative
Research Process. *The Qualitative Report*, 13, 695-705.
- Palinkas, L.A., Horwitz, S.M., Green, C.A., Wisdom, J.P., Duan, N., & Hoagwood,
K. (2015). Purposeful sampling for qualitative data collection and analysis in
mixed method implementation research, *Adm Policy Mental Health*, 42 (5).
P.533-544
- Parkes, J. & Zimmaro, D. (2016). Learning and Assessing with Multiple-Choice
Questions in College Classrooms. London, Routledge.
- Papaioannou, A.G., & Hackfort, D. (2004). Routledge Companion to Sport and
Exercise Psychology: *Global Perspectives and Fundamental Concepts*. New
York, Routledge.

- Phillips, E., Davids, K., Renshaw, I., & Portus, M. (2010). Expert Performance in Sport and the Dynamics of Talent Development. *Sport Medicine*, 40 (4). Pp. 271-283.
- Phillips, J.K., Klein, G., & Sieck, W.R. (2004). Expertise in judgment and decision making: A case for training intuitive decision skills. In (Eds.) Blackwell Handbook of Judgment and Decision Making. United Kingdom, Blackwell Publishing. 297-314.
- Phillippi, J. & Lauderdale, J. (2018). A guide to field notes for qualitative research: *Context and Conversation, Qualitative Health Research*. 28 (3), pp.381-388
- Poplin, S., Griffin, S., Porter, K.P., & Chengcheng, J.M. (2018). Efficacy of a proactive health and safety risk management system in the fire service. *Injury Epidemiology*, 5 (1).
- Potrac, P., Brewer, C., Jones, R., Armour, K., & Hoff, J. (2000). Toward an Holistic Understanding of the Coaching Process. *Quest*. 53, 186-199.
- Potrac, P., Jones, R., & Armour, K. (2002). 'It's All About Getting Respect': *The Coaching Behaviours of an Expert English Soccer Coach. Sport Education & Society*. 7, 183.
- Professional Golf Studies (2017). Course content. [Accessed Online]. Available at URL:<https://www.birmingham.ac.uk/undergraduate/courses/sportex/professional-golf-studies.aspx#CourseDetailsTab> (Accessed 10/11/2017)
- Rasdal, V., Moen, F., & Sandbakk, O. (2018). The Long-Term Development of Training, Technical, and Physiological Characteristics of an Olympic Champion in Nordic Combined. *Frontiers in Physiology*,

- Rattray, J. & Jones, M. (2007). Essential Elements of Questionnaire Design and Development, *Journal of Clinical Nursing*. 16 (2), p. 234-243
- Reilly, T., Atkinson, G., Edwards, B., Waterhouse, J., Akerstedt, T., Davenne, D., Lemmer, B., & Wirz-justice, A. (2007). Coping with jet-lag: A position statement for the European College of Sport Science. *European Journal of Sport Science*, 7(1), 1-7.
- Richards, P., Collins, D., Mascarenhas, D.R.D. (2017). Developing team decision-making: a holistic framework integrating both on-field and off-field pedagogical coaching processes. *Sports Coaching Review*. P.57-75
- Richards, A.R. & Hemphill, M. (2017). A Practical Guide to Collaborative Qualitative Data Analysis, *Journal of Teaching in Physical Education*.
- Robson, C. (2002). *Real World Research*. Singapore, Blackwell.
- Rogers, A.G. (2000). When methods matter: Qualitative research issues in psychology. In B. M. Brizuela, J. P. Stewart, R. G. Carrillo, & J. G. Berger (Eds.), *Acts of inquiry in qualitative research* (pp.51-60). Cambridge, MA: Harvard Educational Review.
- Rogers, R. (2018). Coding and writing analytic memos on qualitative data: *A review of Johnny Saldana's the coding manual for qualitative researchers*, 23 (4). Pp.889-892
- Rorty, R. (1989). *Rorty & Pragmatism: The Philosopher Responds to his Critics*. United States of America, Vanderbilt University Press
- Roulston, K. (2018). Qualitative interviewing and epistemics, *Qualitative Research*. 18 (3), pp.322-341
- Rousseau, S. (2015). The Celebrity Quick-Fix: *When Good Food Meets Bad Science*. *An International Journal of Multidisciplinary Research*. P. 265-287.

- Ruoranan, K., Clausen, J., Nagel, S., Lang, G., Klenk, C., Giauque, D., Bayle, E., & Schlesinger, T. (2018). Causes for professionalization in national sport federations in Switzerland: *A multiple-case study. Current Issues in Sport Science*, (3).
- Rynne, S. B., Mallett, C. J., & Rabjohns, M. W. O. (2017). High performance coaching: demands and development. In Richard Thelwell, Chris Harwood, & I. Greenlees (Eds.), *The Psychology of Sports Coaching: Research and Practice* (pp. 114-126). Abingdon, Oxon, United Kingdom: Routledge.
- Sagar, S.S. & Jowett, S. (2015) Fear of Failure and Self-Control in the Context of Coach-Athlete Relationship Quality. *International Journal of Coaching Science*, 19, 03-21.
- Sagor, R.D. & Williams, C. (2017). *The action research guidebook: A process for pursuing equity and excellence in education*. United States of America, Sage.
- Sankey, H. (2018). *Rationality, Relativism and Incommensurability*. London, Routledge.
- Sauvage, L. & Loudon, J. (2017). Coaching for Performance. *Training for Development*, 44 (2). P.16-19
- Sayers, M.G.L., Stuelcken, M.C. & Gorman, A.D. (2017). Functional variability in golf putting differentiates between highly skilled players. *International Journal of Sport Psychology*, 48 (1). Pp.70-81
- Schmidt-Felzmann, H. (2003). Pragmatic Principles – Methodological Pragmatism in the Principle-Based Approach to Bioethics. *Journal of Medicine and Philosophy*, 28, 581-596.
- Shelley, C.H., Cole, A.R., & Markley, T.E. (2007). *Industrial Firefighting for Municipal Firefighters*. United States of America. Penwell.

- Sluis, R.A., Boschen, M.J., Neumann, D.L., & Murphy K. (2018). Post-event processing in social anxiety: *Investigation using attentional control theory. Cognition Brian Theory*. 22 (4).
- Smith, M.F. (2010). *The Role of Physiology in the Development of Golf Performance*. Sports Medicine, 40, 635-655.
- Smith, B. (2017). Generalizability in qualitative research: *Misunderstandings, opportunities and recommendations for the sport and exercise sciences, Qualitative Research in Sport, Exercise and Health*. Pp.1-13
- Smith, K. & McGannon, K.R. (2018). Developing rigor in qualitative research: *Problems and opportunities within sport and exercise psychology, International Review of Sport and Exercise Psychology*. Pp.1-21
- Sparkes, A.C., & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology and relativism in action, *Psychology of Sport and Exercise*. 10 (5). Pp.491-497
- Sparkes, A.C. (2015). Developing mixed methods research in sport and exercise psychology: Critical reflections on five points of controversy. *Psychology of Sport and Exercise*, 16 (p3). 49- 59. ISSN 1469-0292
- Stake, R.E. (2006) *Multiple Case Study Analysis*. London, Sage
- String, R. (2005). Police Officer's Handbook: An Introductory Guide. United States of America, Productions Credits.
- Stronge, J.H. (2018). Qualities of Effective Teachers, 3rd Edition. United States of America, ASCD. 3rd Ed.
- Stephens, J.T. & Pait, G.T. (2003). Golf Forever. Hong Kong, ISBN.
- Squires, G. (1999). Teaching as a professional discipline. London: Falmer Press.

- Taks, M., Green, B.C., Misener, L. & Chalip, L. (2018). Sport participation from sport events: *Why it doesn't happen. Marketing Intelligence & Planning*, 36 (2). Pp. 185-198.
- Tappin, N. (2016). Golf Monthly: *New golf monthly top 25 coaches list revealed*. April 7
- Tashakkori, A. & Teddie, C. (2010). SAGE Handbook of Mixed Methods in Social & Behavioural Research. Great Britain, SAGE.
- Taylor, J. & Wilson, G.S. (2005). Applying Sport Psychology: *Four Perspectives*. United States of America, Human Kinetics.
- Thorpe, H. & Chawansky, M. (2016). The 'Girl Effect' in Action Sports for Development: *The Case of the Female Practitioners of Skateistan*, Great Britian. Springer link
- Top 25 Golf Coaches. (n.d.). Retrieved from <http://www.golf-monthly.co.uk/tips/top-25-coaches2>
- Tourangeau, R. (1984). Cognitive Sciences and Survey Methods. In T. Jabine, M. Straf, J. Tanur, & R. Tourangeau (Eds.), *Cognitive Aspects of Survey Methodology: Building a Bridge Between Disciplines*, pp. 73-100. Washington, DC: National Academy Press.
- Thomas, S.L., Hyde, J., Karunaratne, A., Kausman, R., Komesaroff, P.A. (2008). "They all work... when you stick to them": A qualitative investigation of dieting, weight loss and physical experience, in obese individuals. *Nutritional journal*.
- Treloar, J.A., Tidwell, D.K., Williams, R.D., Buys, D.R., Oliver, B.D., & Yates, J. (2017). Applying Theory of Planned Behavior to Energy Drink Consumption in Community College Students. *American Journal of Health Studies*.

- Turner, M.J., Ewen, D. & Barker, J.B. (2018). An Idiographic Single-Case Study Examining the Use of Rational Emotive Behaviour Therapy (REBT) with Three Amateur Golfers to Alleviate Social Anxiety. *Journal of Applied Sport Psychology*, pp.1-9
- Vallee, C.N. & Bloom, G.A, (2005). Building a Successful University Program: *Key and Common Elements of Expert Coaches*. *Journal of Applied Sport Psychology*, 17, pp.179-196.
- Van De Roest, J., Spaaij, R., & Bottenburg, M.V. (2015). Mixed methods in emerging academic subdisciplines: *The case of sport management*, *Journal of Mixed methods Research*, 9 (1). pp.70-90
- Wallin, P. & Adawi, T. (2018). The reflective diary as a method for the formative assessment of self-regulated learning, *European Journal of Engineering Education*. 43 (4), pp.507-521
- Welch, C. & Piekkari, R. (2017). How should we (not) judge the ‘quality’ of qualitative research? *A re-assessment of current evaluative criteria in International Business*, *Journal of World Business*, 52 (5). Pp. 714-725
- Willis, G.B. (2004). Cognitive Interviewing, *A Tool For Improving Questionnaire Design*. Great Britain. Thousand Oaks.
- Wilson, M.R. & Richards, H. (2011). Putting it Together: Skills for Pressure Performance. In Collins, D., Button, A., & Richards, H. (Eds.) *Performance Psychology: A Practitioners Guide*. Printed in China. Elsevier.
- Wood, G.W., Baker, J.B., Turner, M.J., & Sheffield, D. (2018). Examining the effects of rational emotive behaviour therapy on performance outcomes in elite in elite Paralympic athletes. *Scandinavian Journal of Medicine & Science in Sports*, 28 (1). Pp. 329-339

Zagorska, A. & Guskowska, M. (2014). A Program to Support Self-Efficacy Among Athletes. *Scandinavian Journal of Medicine & Science in Sports*. 24, 121-128.

Appendix Table of Contents

<u>Appendix A:</u>	Golf Coach PJDM Survey	210
<u>Appendix B:</u>	B (i) Pre-Observation Interview with Coach	215
	B (ii) Post-Session Interview with Coach	216
	B (iii) Post-Session Interview with Player	217
	B (iv) Participation Information Sheet	218
	B (v): Informed Consent Form	220
<u>Appendix C:</u>	C (i) Post-Tournament Interview with Player	221
	C (ii) Participant Information Sheet	222
	C (iii) Informed Consent Form	224

Appendix A: Golf Coach PJDM Survey

Q1. What golf coach qualifications do you have?

- UKCC Level 1
- UKCC Level 2
- PGA Level 3
- None
- Other (please specify)

Q2. What level(s) of player are you **currently** working with? Please indicate how many players using the drop-down menu for each category:

- International (Tour level)
- National (National Squads)
- County Level
- Club Level

Q3. How long is the average relationship for each category of player?

- 1 day
- 1 week
- 1 month
- 3 months
- 6 months
- 1 year
- 2 years
- 3 years
- More than 3 years

Q4. When you first met the players you CURRENTLY work with, how much time ON AVERAGE did you spend deciding what to work on and in what way? Please type in the box provided and briefly state why this was the case (please state "NA" if player group not applicable)

- 0-10mins
- 10-20mins
- 20mins-1hour
- 1-2hours
- 2-5hours
- 5hours-1day
- 1day-3days
- 3days-1week

Q5. IN MOST CASES, what type of MAIN goal do you prefer to work towards with your CURRENT players?

- A goal for the current practice session (i.e., a goal for today)
- A goal for the next practice session

- A goal for the next week
- A goal for the next month
- A goal for the next 6 months
- A goal for longer than 6 months

Q6. IN MOST CASES, what type of MAIN goal do YOUR CURRENT PLAYERS prefer to work towards?

- A goal for the current practice session (i.e., a goal for today)
- A goal for the next practice session
- A goal for the next week
- A goal for the next month
- A goal for the next 6 months
- A goal for longer than 6 months

Q7. IN MOST CASES, what type of MAIN goal do you both END UP working towards?

- A goal for the current practice session (i.e., a goal for today)
- A goal for the next practice session
- A goal for the next week
- A goal for the next month
- A goal for the next 6 months
- A goal for longer than 6 months

Q8. ON AVERAGE, what contribution is made by yourself and your players to this decision?

- 100% players request
- 75% players request – 25% coach perception
- 50% players request – 50% coach perception
- 25% players request – 75% coach perception
- 100% coach perception

Q9. For the answer(s) you have given for Q8, why do you think this is generally the case?

Q10. What do these main goals NORMALLY involve working on?

- Technical factors (e.g., technical chance, biomechanics)
- Organisational factors (e.g., practice structure)
- Tactical factors (e.g., competition factors)
- Physical conditioning factors (e.g., strength training)
- Psychological factors (e.g., confidence)
- Political factors (e.g., interaction with sponsors/squad managers)

Q11. If/when your CURRENT players have wanted to change what they're working on, how much time ON AVERAGE have you spent deciding the best way to work on the new goal(s)? Please type in the boxes provided and state why this is normally the case

- 5-10mins
- 10-20mins
- 20mins-1hour
- 1hour-1day

Q12. To the CLOSEST AVERAGE, what percentage of your CURRENT players have a 'quick fix' mentality (i.e., regularly wanting to change what they're working on to fix a problem)?

- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 70%
- 80%
- 90%
- 100%

Q13. If a player does want to change what they're working on, how often to the CLOSEST AVERAGE do you adhere to this?

- 0%
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 70%
- 80%
- 90%
- 100%

Q14. To the CLOSEST AVERAGE, how often do you see the players you are CURRENTLY supporting face-to-face?

- Once per day
- Once per week
- Once per month
- Once per 3 months
- Once per 6 months
- Once per season

- Less than once per season

Q15. Apart from face-to-face interactions, how often are you in contact with your players ON AVERAGE? This includes phone calls, Skype, texts, emails etc.

- Once per day
- Once per week
- Once per month
- Once per 3 months
- Once per 6 months
- Once per season
- Less than once per season
- Never

Q16. To the CLOSEST AVERAGE, where do you normally see MOST of the players you are currently supporting?

- 100% players training ground
- 75% players training ground and 25% competition facilities
- 50% players training ground and 50% competition facilities
- 25% players training ground and 75% competition facilities
- 100% competition facilities

Q17. Who NORMALLY decides when, where and how often you work with your current PLAYERS?

- The player
- The coach
- A mix of both

Q18. To the CLOSEST AVERAGE, what do you NORMALLY use to gauge the quality of your decisions on the day of working with your CURRENT players?

- 100% session performance
- 75% session performance & 25% towards longer term goal
- 50% session performance & 50% towards longer term goal
- 25% session performance & 75% towards longer term goal
- 100% progress towards longer term goal

Q19. What do your players NORMALLY use to gauge the quality of your decisions on the day of working with them?

- 100% session performance
- 75% session performance & 25% towards longer term goal
- 50% session performance & 50% towards longer term goal
- 25% session performance & 75% towards longer term goal
- 100% progress towards longer term goal

Q20. In general, what do YOU consider the most significant marker of coaching effectiveness at the following performance levels if applicable to your practice?

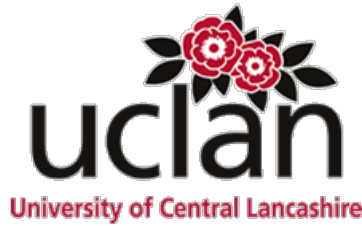
- Performance enhancement within a practice session

- Performance enhancement over weeks
- Performance enhancement over months
- Performance enhancement over a season
- Performance enhancement over multiple seasons

Q21. In general, what do YOUR PLAYERS consider the most significant marker of coaching effectiveness at the following performance levels if applicable to your practice?

- Performance enhancement within a practice session
- Performance enhancement over weeks
- Performance enhancement over months
- Performance enhancement over a season
- Performance enhancement over multiple seasons

Appendix B (i): Pre-Observation Interview with Coach



Professional Judgment and Decision Making in Elite Golf Coaches

Pre-Observation Session 1 Interview with Coach:

- 1) What goals are you working on with ‘player X’? Why these?**
 - a. What, if any, medium or long-term goals are you working on? Why these?
- 2) What have you been doing to try and achieve these goals so far? Why this?**
 - a. What stage do you think you are at in achieving the medium and long-term goals?
- 3) What are your aims and intentions for today’s practice session?**
 - a. What impact do you aim to have? Why this?
 - b. What would you like the player to achieve in the session?
 - c. What would you like the player to take away from the session?
 - d. What, if anything, are you trying to set up for your next practice session with the player?
- 4) How are you planning to achieve your aims for today?**
 - a. What are you planning to do in the practice session? Why this?
 - b. Can you talk me through the outline and structure of the session? What exercises/practices are you going to do?
- 5) To what extent, if any, do your aims and plans for today differ from those you had before your last session with the player?**
- 6)**
- 7) How will you know if you have effectively delivered your intentions and plans for today? Why these markers?**

Pre-Observation 2 & 3 Interview with Coach:

- What are you planning to do in the imminent practice session? Why this?
- To what extent, if any, does this differ to your aims and plans for your last practice session with ‘player X’?
- How will you know if your plans have been effective? Why?

Appendix B (ii): Post-Session Interview with Coach

- 1. Can you talk me through how today went against the aims and plans you had for the session?**
 - a. What helped or got in the way?
 - b. How do you feel the session went against your plan?
 - c. How do you feel the session went against your medium and long-term goals?

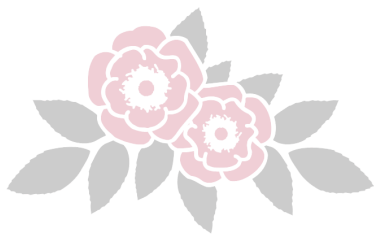
- 2. VIDEO USE HERE: What, if any, do you feel were key decisions or moments within the practice session? Why these?**
 - a. Did these represent changes from your initial aims and plan? Why?
 - b. Did you exploit any opportunities within the session to achieve your pre-set intentions?
 - c. Did you work to set any particular moments up within the session?

- 3. What impact, if any, do you think your decisions within the session had on the player? Why?**
 - a. What impact do you think you had?
 - b. What do you think the player achieved?
 - c. What do you think the player took away from the session?

- 4. On the back of this session, what might be your focus and aims for next time? Why this?**

Appendix B (iii): Post-Session Interview with Player

- 1. Before arriving today, what did you think the practice session was going to involve and what were you aiming to achieve?**
 - a. Was this the same or different to what the session actually focused on?
 - b. Was this the same or different to what you worked on last time?
 - c. What are you aiming to achieve in the medium and long-term with your coach?
- 2. Can you talk me through how the session went against your aims and expectations?**
 - a. What did you achieve?
 - b. Did anything help or get in the way?
 - c. How did it fit with your short-term goals?
 - d. How did it fit with your medium- and long-term goals?
- 3. VIDEO USE HERE: From your perspective, were there any key moments or coach decisions/actions within the practice session? Why?**
 - a. What did the coach do to make these key moments?
- 4. What have you taken from today's practice session?**
 - a. To what extent, if any, did you learn or recognise something new today?
 - b. To what extent, if any, did you make continued progress towards your longer-term goals?
- 5. On the back of this session, what are you going to focus or work on before your next practice session with the coach? Why this?**



Appendix B (iv): Participation Information Sheet

University of Central Lancashire

Participant Information Sheet

Please read the information below thoroughly before deciding whether or not to participate in this study.

Introduction

You are being invited to take part in a study being conducted as part of a Professional Doctorate in Elite Performance Coaching research programme at the University of Central Lancashire. Before you decide it is important for you to understand why the research is being done and what it 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 – our contact details are at the end. Take time to decide whether or not you wish to take part.

Thank you for reading this information sheet, which you should keep if you decide to take part in the study.

Purpose of this Study

Professional Judgment and Decision Making (PJDM) in sports coaching are considered a key characteristic of effective coaching. There is no apparent research surrounding specifically how golf coaches arrive at their decisions given the complexity of the golf-coaching environment. This study seeks to identify how golf coaches working with individuals competing at national level arrive at decisions that they believe will develop the golfers performance level.

Why have I been chosen?

You have been chosen to participate in this study because you are currently a golf coach working with individuals at National level. We believe you will be a suitable candidate for this study as you have the understanding of the importance in identifying best practices in golf coaching.

Do I have to take part?

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 also be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part?

The study will consist of the researcher observing three coaching sessions along with an interview before and after the session for the coach and one interview for the player after the session. If you wish to participate in this study, please contact the researchers within two weeks of receiving this information sheet.

Confidentiality

Please rest assured that all information gathered in this study will remain completely anonymous and strictly confidential. Interviews will be assigned an anonymous code number. When we write the final report and any other academic or professional publications, we will not use your name or any other information which could make you publicly identifiable. All collected data will be held on a password protected

computer and in a secure locked cupboard. Data will be stored for five years from the end of the project and then destroyed.

Withdrawing from the study

Participation in this study is completely voluntary. You do not have to answer any question, you can stop answering a question at any point, and you have the right to fully withdraw from the study at any time without penalty. If you withdraw from the study, your interview(s) will be deleted and all information about your involvement will be discarded. Please note that if your data has already been anonymised and aggregated with other data, it will not be possible to identify and remove it. However please be assured it will also not be possible to identify anyone from this aggregated data set. Finally, it will not be possible to withdraw any data contained within any academic and/or professional publications derived from this study.

Risks and Benefits

The information you provide will help us understand more about professional judgment and decision making in golf coaching at national level. We hope through this study, the practice of decision making in golf coaching which ultimately dictates effective and non-effective coaches will be defined and improved.

Research Ethics

The University of Central Lancashire's research ethics committee has reviewed and approved this study.

If you have have any complaints or issues about the study please contact John Minten, Head of School, Sport, Tourism, and the Outdoors, UCLan. Jhminten@uclan.ac.uk

If you would like to take part in this study or if you require further information please contact:

Daniel Adams daniel.adams42@hotmail.co.uk 07557672604

Dave Collins: DJCollins@uclan.ac.uk

Appendix B (v): Informed Consent Form

University of Central Lancashire Informed Consent Form

Investigation: Professional Judgment and Decision Making in Elite Golf Coaches
Investigator: Daniel Adams

Participant Name

Please read and initial each statement:

I have read and understand the subject information sheet	
I understand what the project is about and what the results will be used for	
I am fully aware of all procedures involving myself and of any risks and benefits associated with the study.	
I know that my participation is voluntary and that I can withdraw from the project at any stage without giving any reason	
I agree to notes being taken during the interview	
I agree to the recording and transcription of my interview	
I understand that anonymised quotes may be taken from me and used to illustrate general themes within any publications or presentations resulting from this work	
I understand that the data [<i>field notes, interviews</i>] will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed	
I understand that the results will be anonymous and any quotations used will not be attributable to me	
I would like to receive a copy of the results	

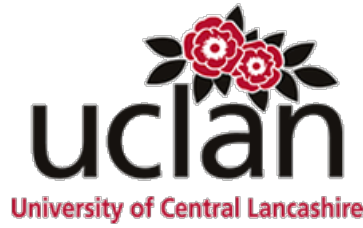
Participant's signature:

I certify that I have explained to the above individual the nature, purpose and possible risks associated with participation in this research study, have answered any questions that have been raised, and that the above signature has been witnessed.

Signature of investigator:

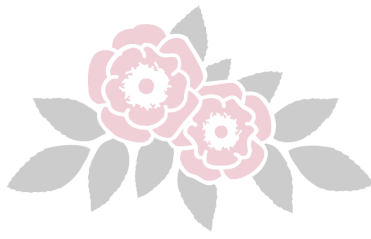
Date _____

Appendix C (i): Post-Tournament Interview with Player



Tournament-level professional judgment and decision making in elite golf coaching

- What were your goals heading into this tournament? Why these?
- How did you find the coaching support during this week? Why?
- Have any aspects of our work this week stood out in particular? Why?
- How were you feeling and thinking before and after the practice sessions? Why?
- To what extent do you feel that the coaching support over the week was coherent and consistent? Why?
- To what extent do you feel that the coaching support was coherent and consistent with your medium and long-term goals? Why?
- What areas of the coaching service would you have changed if any? Why?



Appendix C (ii): Participant Information Sheet

University of Central Lancashire

Project: Tournament-level professional judgment and decision making in elite golf coaching

Participant Information Sheet

Please read the information below thoroughly before deciding whether or not to participate in this study.

Introduction

You are being invited to take part in a study being conducted as part of a Professional Doctorate in Elite Performance research programme at the University of Central Lancashire. Before you decide it is important for you to understand why the research is being done and what it 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 – our contact details are at the end. Take time to decide whether or not you wish to take part.

Thank you for reading this information sheet, which you should keep if you decide to take part in the study.

Purpose of this Study

Professional Judgment and Decision Making is an important feature of effective coaching practice. However, little research has been conducted in this area within elite golf. This study therefore aims to monitor the professional judgment and decision making of your coach (i.e., the lead researcher) over three forthcoming events.

Why have I been chosen?

You have been chosen to participate in this study because you are currently working with the coach who is leading this study.

Do I have to take part?

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 also be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part?

The study will involve your coach/the lead researcher collecting data on his practice with you over three agreed forthcoming events. Your interaction at these events will run as normal, with the lead researcher taking observational notes after your usual practice sessions/meetings based on his decisions/actions. You will also be asked to take part in an interview at the end of each tournament which will focus on the decisions made by your coach/the lead researcher during the tournament. This interview should last no longer than 45 minutes and will take place at a time most convenient to you (ideally still at the tournament venue with Skype/FaceTime as an alternative).

Confidentiality

Please rest assured that all information gathered in this study will remain anonymous and strictly confidential. Interviews will be assigned an anonymous code number. When we write the final report and any other academic or professional outputs (e.g., publications/presentations) we will not use your name or any other information which could make you publicly identifiable, although you may have a higher probability of identifying other participants who work with the coach. All collected data will be held on a password protected computer and in a secure locked cupboard. Data will be stored for five years from the end of the project and then destroyed. Please also be assured that the study is primarily concerned with **the coaching practice of the lead researcher rather than evaluative measures of you or your performance.**

Withdrawing from the study

Participation in this study is completely voluntary. You do not have to answer any question, you can stop answering a question at any point, and you have the right to fully withdraw from the study without penalty. If you decide to withdraw from the study, all data relating to you will be destroyed. If you decide to withdraw after outputs arising from the study have been communicated (e.g., publications, presentations), please be assured that none of your responses will have been explicitly linked to you in these works.

Risks and Benefits

Your participation and the information you provide will help us understand more about professional judgment and decision making in elite-level golf coaching. Through this study, we hope that decision making practice in golf coaching can be better defined and improved.

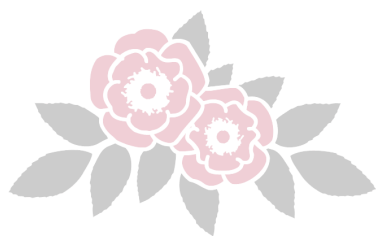
Research Ethics

The University of Central Lancashire's research ethics committee has reviewed and approved this study. If you have any complaints or issues about the study please contact Adrian Ibbetson, Acting Head of School, Sport, Tourism, and the Outdoors, UCLan.

If you would like to take part in this study or if you require further information please contact:

Daniel Adams (Lead Researcher) daniel.adams42@hotmail.co.uk
07557672604

Dave Collins (Director of Studies): DJCollins@uclan.ac.uk



Appendix C (iii): Informed Consent Form

University of Central Lancashire Informed Consent Form

Investigation: Tournament-level PJDM in elite golf coaching

Investigator: Daniel Adams

Participant Name

Please read and initial each statement:

I have read and understand the participant information sheet.	
I understand what the project is about and what the results will be used for.	
I am fully aware of all procedures involving myself and of any risks and benefits associated with the study.	
I know that my participation is voluntary and that I can withdraw from the project without giving any reason. I understand that if I decide to withdraw from this study all data relating to me will be destroyed. I understand that it will not be possible to remove my data from any publications or presentations led by the investigator up to this point.	
I agree to notes being taken after practice sessions and during the interviews	
I agree to the audio recording and transcription of my interviews	
I understand that anonymised quotes may be taken from me and used to illustrate general themes and points within any publications or presentations resulting from this work.	
I understand that the data collected on me will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.	
I understand that, although the others players who work with the investigator may have a higher probability of identifying me (and vice versa), the results will be anonymous and any quotations used will not be attributable to me.	
I would like to receive a copy of the results.	

Participant declaration: I certify that I have had the nature, purpose and possible risks associated with participation in this research study explained, and that I have had any questions that have been raised answered. I also certify that the signature below has also been witnessed.

Participant's signature:

Signature of investigator:

Date
