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TOWARDS AN UNDERSTANDING OF THE USE OF VIDEO-BASED PERFORMANCE
ANALYSIS IN THE COACHING PROCESS

A thesis submitted for the degree of Doctorate of Philosophy awarded by

Loughborough University

By

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September 2012

ACKNOWLEDGEMENTS

Whilst my name resides on the cover, this work would not have been possible without the help of a number of people. I would like to open by thanking those coaches that kindly volunteered to participate in this study. Without you this project would not have been possible. Also I would like to thank my supervisor Dr. Christopher Cushion, for his interest in this project and belief in my ability to complete the thesis has provided me with a constant source of support. I would especially like to thank Chris for the freedom he gave me to learn, whilst always being there to support my development. He has never been 'too busy' for me. I would also like to thank Dr. Christopher Harwood, for his support as my Director of Studies. His support as a detached 'critical friend' has enabled me to step back from the thesis and consider my thinking in a 'new light'. Thanks also to Dr. Brett Smith and Professor Dave Gilbourne my internal and external examiners for their interest, support, guidance, and time in examining the thesis.

I would especially like to thank my mum Sue and dad Neil for their love and support in completing this project. Particularly to my dad, who has read every word of this thesis a number of times. Also I would like to thank my wife Angela for her patience and support through this project. This work has taken over a significant part of our life together. I would also like to thank my sons James and Jack, for providing me with a new purpose and motivation in the work that I do, and ensuring that I always have a smile on my face when I am sat at my computer. To my family I love you all. Special thanks goes to Dr. Lee Nelson for his support and friendship on the journey that we travelled together in our quest to better understand the things that ignite our academic interest. Also thanks to Dr. Paul Potrac for his interest, friendship and support in this project.

ABSTRACT

Recent scholarly writing has located performance analysis firmly within the coaching process. Although the what of performance analysis regarding system design and reliability has been well documented, the how and the why or use of video-based performance analysis within the coaching process remains less understood. Therefore, this thesis sought to develop an empirically-based understanding of some of the realities of the use of video based performance analysis feedback within the coaching process. Within a broad ethnographic framework, this thesis followed three key phases of data collection and analysis. Within phase one, a grounded theory methodology, was used to explore the what and why of the delivery of video-based performance analysis in elite youth soccer. Data were collected from interviews with 14 England youth soccer coaches. Through an iterative process of constant comparison, categories regarding Contextual Factors, Delivery Approach and Targeted Outcomes were highlighted.

Within phase two, coach-athletes interactions were examined ‘in situ’ over the course of a 10-month English Premier League Academy season to explore the how of the delivery of video-based feedback. Data were analysed using the techniques and procedures of conversation analysis combined with a social power analysis drawing upon the work of Bertram H. Raven. Analysis of the interactions revealed that the coach attempted to exercise control over the sequential organisation of the session, via asymmetrical turn-taking allocations, an unequal opportunity to talk, control over the topic of discussion within the interactions, and the use of questioning to select speakers to take turns to talk.

Within phase three, a narrative ethnographic approach was utilised to examine the how and why of the ‘in situ’ narrative construction of professional knowledge and coaching identity within video-based feedback sessions. Data were collected during the same 10 months of ethnographic field work, as presented in phase two, with a Premier League Academy Head Coach. Additionally, in-depth interviews stimulated by video-based reflection were used to explore the participant coach’s early interactional practices and subsequent changes in practice in the following four years. Data analysis was conducted using theoretical concepts of identity from the work of Anselm Strauss and revealed a number of features of the development and transformation of identity of the participant coach. Here, a reflective examination of authoritarian interactional practices and the consequences of those practices were critically considered against the creation of a positive self narrative in the development of the participant coach’s professional knowledge.

The empirical findings of the present thesis have highlighted some the what, why and how of the use of video-based performance analysis within the coaching process. This work has furthered understanding regarding the pedagogical practices which impact upon the delivery of video-based performance analysis feedback. In addition to broadening sports coaching’s theoretical and methodological repertoire, the applied value of this work is grounded in the need for coaching practitioners to become more critically reflective about the use of video-based performance analysis within the coaching process, and the impact of their interactional practices upon the coach-athlete relationship.

PUBLICATIONS RESULTING FROM THIS THESIS

Published Journal Articles:

Groom, R., Cushion, C., & Nelson, L. (2011). The delivery of video-based performance analysis by England youth soccer coaches: Towards a grounded theory. *Journal of Applied Sport Psychology*, 23, 16-32. DOI: 10.1080/10413200.2010.511422

Groom, R., Cushion, C., & Nelson, L. (2012). Analysing coach-athlete 'talk in interaction' within the delivery of video-based coaching in elite youth soccer. *Qualitative Research in Sport, Health and Exercise*. DOI: 10.1080/2159676X.2012.693525

Published Book Chapters:

Groom, R., & Nelson, L. (2013). The use of video-based performance analysis in the coaching process: The coach supporting athlete learning (pp. 96-107). *The Routledge handbook of sports coaching*. ISBN-10: 0415782228.

Groom, R., Nelson, L., Potrac, P., & Cushion, C. (2014). Conversation analysis. In L. Nelson, R. Groom, & P. Potrac (Eds.), *Research method in sports coaching*. London: Routledge. ISBN-10: 0415626803

Published Conference Communications:

Groom, R., & Cushion, C. (2005). The development of a conceptual model for the use of performance analysis. In *Proceedings of the ISSP 11th World Congress in Sports Psychology*. Vancouver, BC.

Groom, R. (2009). The delivery of video-based performance analysis by England youth soccer coaches: Towards a grounded theory. *Institute for Performance Research Seminar*, October, Manchester Metropolitan University, Alsager Cheshire.

Groom, R. (2012). Analysing coach-athlete 'talk in interaction' within the delivery of video-based coaching in elite youth soccer. *Institute for Performance Research Seminar*, April, Manchester Metropolitan University, Crewe Cheshire

Published Professional Article:

Groom, R., & Cushion, C. (2004). Coaches' perceptions of the use of video analysis: A case study. *Insight: The FA Coaches Association Journal*, 7(3), 56-58.

CONTENTS

Acknowledgements	i
Abstract	ii
Publications Resulting from this Thesis	iv
Contents	v
List of Figures and Tables	viii
 CHAPTER 1 Introduction	
1.1 Background	1
1.2 Research problem	5
1.3 Research questions	6
1.4. Organisation of the thesis	6
 CHAPTER 2 Review of Literature	
2.1.1 Introduction	8
2.1.2 What is performance analysis?	9
2.1.3 Research trends within the performance analysis literature	11
2.1.4 The identification of movement and performance patterns within competition	11
2.1.5 The identification of key performance indicators in sport	16
2.1.6 The measurement of physiological work rate profiles	18
2.1.7 Section conclusion	22
2.2.1 The need for ‘accurate’ and ‘reliable’ feedback within the coaching process	23
2.2.2 Modelling the use of video-based performance analysis within the coaching process	25
2.2.3 Section conclusion	30
2.3.1 The use of video-based feedback	31
2.3.2 The theoretical basis for the use of video feedback in sport	31
2.3.3 Approaches to the use of video in the social sciences	32
2.3.4 Research approaches examining video-based feedback and video modelling in sport	34
2.3.5 Section conclusion	52
2.4.1 The coaching process	54
2.4.2 Research trends within sports coaching	58
2.4.3 Coach behaviour research trends: Systematic observation research	59
2.4.4 The coach-athlete relationship	64
2.4.5 Section conclusion	69
2.5.1 Coaching as a social process	70
2.5.2 A social analysis of sports coaching practice	73
2.5.3 Section conclusion	82
2.6.1 A critique of the current foundations of the use of performance analysis within the coaching process	82
2.6.2 Expertise in sports coaching	87

2.6.3 A critique of the representation of the use of performance analysis within the coaching process	88
2.7.1 Conclusion and research problem	90
CHAPTER 3 Methodology	
3.1 Introduction	93
3.2 Research origins	94
3.3.1 The philosophy of science	97
3.3.2 Paradigms as scientific practices	98
3.3.3 Paradigms as world views	100
3.4.1 Methodological choices	103
3.4.2 Ethnographic framework	105
3.4.3 Analytical bracketing	106
3.4.4 Grounded theory	109
3.4.5 Interviews	115
3.4.6 Conversation analysis	119
3.4.7 Narrative ethnography	122
3.5.1 Ethical issues	124
3.5.1 Participants and context	126
3.5.2 Phases of data collection	133
3.5.4 Problems I faced	134
3.5.5 Section conclusion	136
CHAPTER 4 Study 1	
4.1 Introduction	138
4.2 Method	141
4.2.1 Participants	141
4.2.2 Design and procedure	143
4.2.3 Data analysis	146
4.3 Results and Discussion	149
4.3.1 Contextual Factors	150
4.3.2 Delivery Approach	159
4.3.3 Targeted Outcomes	165
4.4 Toward a grounded theory	169
4.5 Conclusion	172
CHAPTER 5 Study 2	
5.1 Introduction	175
5.2 Theoretical framework	180
5.2.1 Theoretical considerations	184
5.3 Context and Method	185
5.3.1 Participants	185
5.3.2 Procedure	186
5.4 Data analysis	187
5.4.1 Conversation analysis as an analytical tool	187
5.5 Results and Discussion	192
5.6 Toward an understanding of institutional talk in performance analysis feedback sessions	203
5.7 Conclusion	204

CHAPTER 6	Study 3	
	6.1 Introduction	209
	6.2 Narrative analysis	211
	6.3 Theoretical framework	215
	6.4 Method	220
	6.4.1 The participants and context	220
	6.4.2 Procedure	223
	6.4.3 Ethnographic interactional data	224
	6.4.4 Interviews	225
	6.5 Data analysis	227
	6.6 Narrative representation of the data	228
	6.7 Results and Data Analysis	230
	6.7.1 Michael's coaching context	230
	6.7.2 Early coaching experiences at Albion FC	234
	6.7.3 Early interactional practices at Albion FC	236
	6.7.4 Change of coaching identity	248
	6.8. Towards an understanding of identity construction, re-construction and transformation through interactions in performance analysis feedback sessions	252
	6.9 Conclusion	254
CHAPTER 7	Conclusion	
	7.1 Introduction	259
	7.2 Implications for coach education	263
	7.3 Reflexivity: The researcher and the researched	265
	7.4 Limitations	266
	7.5 Future directions	268
	7.6 Postscript	272
	7.6.1 Narrative reality: Constructivist and constructionist world Views	272
	7.6.2 Further developing the grounded theory	274
	References	276
	Appendix 1	312
	Groom, R., Cushion, C., & Nelson, L. (2011). The delivery of video- based performance analysis by England youth soccer coaches: Towards a grounded theory. <i>Journal of Applied Sport Psychology</i> , 23, 16-32. DOI: 10.1080/10413200.2010.511422	
	Appendix 2	313
	Groom, R., Cushion, C., & Nelson, L. (2013). Analysing coach-athlete 'talk in interaction' within the delivery of video-based coaching in elite youth soccer. <i>Qualitative Research in Sport, Health and Exercise</i> . DOI: 10.1080/2159676X.2012.693525	
	Appendix 3	354
	Groom, R., & Cushion, C. (2004). Coaches' perceptions of the use of video analysis: A case study. <i>Insight: The FA Coaches Association Journal</i> , 7(3), 56-58.	
	Appendix 4 Study 1 Participant consent	357

Appendix 5 Study 1 Interview guide	359
Appendix 6 Study 2 Academy Director and Head Coach Voluntary Informed Consent	362
Appendix 7 Study 2 Player Voluntary Informed Consent	364
Appendix 8 Study 3 Head Coach Voluntary Informed Consent	366
Appendix 9 Example interview guide Study 3	368
Appendix 10	371
Groom, R., Nelson, L., Potrac, P., & Cushion, C. (2014). Conversation analysis. In L. Nelson, R. Groom, & P. Potrac (Eds.), <i>Research method in sports coaching</i> . London: Routledge.	

LIST OF FIGURES

Figure 1. Relative percentage distance covered in different categories of activity for outfield players during soccer match-play	19
Figure 2. A simple schematic diagram representing the coaching process	26
Figure 3. A schematic diagram representing the coaching process, utilizing some of the computer-aided analysis and feedback technology	27
Figure 4. The performance analysis process	28
Figure 5. A modified flow-diagram illustrating the use of video feedback within the coaching process	29
Figure 6. Côté et al.'s (1995) mental model of coaching	66
Figure 7. Research timeline: Two year engagement within the field	133
Figure 8. Overview of concepts, subcategories, and categories pertaining to Contextual Factors, which framed the use of video-based performance analysis by England youth soccer coaches	159
Figure 9. Overview of concepts, subcategories, and categories pertaining to the Delivery Approach of video-based performance analysis used by England youth soccer coaches	165
Figure 10. Overview of concepts, subcategories, and categories pertaining to the Targeted Outcome of video-based performance analysis by England youth soccer coaches	169
Figure 11. A grounded theory of the delivery of video-based performance analysis	172

LIST OF TABLES

Table 1. Total distance covered and distance covered by position of 24 English professional soccer players	20
Table 2. An overview of the video feedback and video modelling literature in sport	36
Table 3. The meta-physical paradigm	102
Table 4. Grounded theory key definitions	144
Table 5. Conversation analysis transcription symbols	189

CHAPTER ONE: INTRODUCTION

1.1. Background

Performance analysis in sport has received considerable academic interest over the past 15 years (e.g., Hughes & Franks, 1997, 2004, 2008). Indeed, it has been suggested that performance analysis has now been firmly located within the coaching process (Carling, Williams, & Reilly, 2005; Hughes, 2008; Hughes & Franks, 2008). However, this increased academic interest has largely been focused towards discussions regarding: technological choices; the use of performance indicators; system design; and the reliability and validity of performance data (Hughes & Franks, 1997, 2002, 2008; O'Donoghue, 2010). This focus has been at the expense of considering how to use this information within the coaching process. As such, similarly to the development of sports coaching, performance analysis has developed along bio-scientific fragmented lines while the essential humanistic social nature of the total process remains less well understood (Bowes & Jones, 2006; Jones, 2000; Jones, Armour, & Potrac, 2002; Jones, Bowes, & Kingston, 2010; Jones & Turner, 2009; Jones, 2012; Potrac, Brewer, Jones, Armour, & Hoff, 2000). That is, the 'human viewed as a computer' information processing approach (e.g., Hughes & Franks, 1997; Maslovat & Franks, 2008; Schmidt & Wrisberg, 2000) or behaviourist stimulus-response view of learning (e.g., Smith & Smoll, 2007) represented by simplistic input-output models of human feedback processing, fails to consider social, cultural and environment factors associated with learning (Morgan, 2008). Alternatively, Armour (2004) has highlighted that 'pedagogy' is concerned with "the myriad ways in which lives, social and cultural contexts, personal experiences, philosophies and professional practices are interconnected" and therefore related to

“coaches, learners, knowledge and the learning environment” (pp. 94-95). Indeed, whilst the paucity of work examining the pedagogical use of video-based performance analysis in sport has been acknowledged within the literature for some time (e.g., Lyons, 1988; Bartlett, 2001), still, Stratton, Reilly, Williams and Richardson (2004) have reminded us that “even though coaches have greater access to video and other forms of technology, it is not yet clear how best to integrate this technology into coaching practice” (p. 132).

It is, however, clear that coaches do use video-based performance analysis in their coaching and as part of a coaching process (e.g., Abraham et al., 2006; Pain & Harwood, 2007, 2008), and within some sports such as professional soccer most if not all teams use video-based performance analysis (James, 2006). However, scholarly work that examines pedagogical issues (i.e., coaches, learners, knowledge & the learning environment) within the performance analysis remains scarce. Indeed, in discussing issues relating to performance analysis and evidence-based practice within the coaching process, Franks (2002) has suggested that “experimental studies used to develop practice guidelines may not be grounded in the realities of ‘real world’ coaching” (p. 4), thus may have limited applied efficacy and impact. This situation is mirrored within the sports science literature more broadly, as Williams and Kendall (2007) have highlighted a disconnection between sports science research and the issues that are important for elite level coaches. Specifically, elite level coaches highlighted two major concerns with the current direction of ‘applied’ sports science research, in that, more research based in natural settings is required, and that such research is only of value if elite athletes are used (Williams & Kendall, 2007). Therefore, from a methodological perspective, elite coaching practitioners require more contextually sensitive research methodologies, and for this research to be more

useful to them as practitioners, this work needs to be conducted with elite populations, thus research that better reflects the realities of elite sports coaching practice. Such an approach would necessitate a shift from ‘researcher driven agendas’ towards ‘collaborative research approaches’ with coaching practitioners, “where the coaching process may best be understood when coaches are active collaborators in telling the story” (Gilbert, 2007, p. 418).

In recognising the limitation of a bio-scientific analysis of social actors within a specific context (Jones, 2000), much of the recent empirical work within sports coaching has been driven by a greater desire to understand local and specifically constructed and co-constructed ontological position (Lincoln, Lynham, & Guba, 2011), drawing upon a subjectivist epistemology where findings are created through participation in “collaborative action inquiry” (Guba & Lincoln, 2005, p. 195). For example, rather than viewing coach-athlete interactions as a simple matter of information or feedback processing, the work of d’Arripe-Longuville, Fournier, and Dubois (1998) highlighted how elite level Judo coaches used an authoritarian interactional approach displaying indifference, direct conflict, and favouritism to stimulate interpersonal rivalry. Moreover, a number of studies have highlighted the importance that coaches’ place upon their interactions with athletes in order to retain the respect of the athletes and reinforce their position of social power (e.g., Jones, Armour, & Potrac, 2003; Potrac, Jones, & Armour, 2002). Whilst recent ethnographic work has depicted elite level coaching environments to be highly authoritarian, where at times hierarchical oppressive regimes are culturally produced, legitimised and reproduced (Cushion & Jones, 2006, 2012; Purdy, Potrac, & Jones, 2008).

Drawing upon recent work which highlights the complex, social, cultural and political nature of sports coaching (e.g., d’Arripe-Longuville et al., 1998; Cushion &

Jones, 2006, 2012; Jones et al., 2003; Potrac et al., 2002; Potrac & Jones, 2009; Purdy et al., 2008), the problems and questions addressed within this research go some way towards considering some of the realities of the use of performance analysis within the coaching process, through the conceptualisation of the use of video-based performance analysis in the coaching process as a contextually bound, social pedagogical endeavour.

These research problems are rooted within my own experiences and sensitivity to my own professional practice working as a performance analyst within elite youth soccer (Strauss & Corbin, 1998). The genesis of the research was born from my dissatisfaction with the paucity of empirical understanding within this area to support practitioners. This research, seeks to uncover some of the mystique, which currently surrounds the practices of elite level soccer coaches, of which currently very little is known (Potrac, 2002; Smith & Cushion, 2006), particularly regarding the use of video-based performance analysis within the coaching process (Lyons, 1988; Bartlett, 2001; Stratton et al., 2004). In parallel with the concerns of the elite level coaches in the work of Williams and Kendall (2007), as a practitioner I became increasingly dissatisfied with the dominance of laboratory-based, natural science approaches to understanding the use of video-based performance analysis feedback in sport. This approach has arguably produced a one-dimensional conceptualisation of performance analysis as being predominately interested in statistical data and issues of 'validity' and 'reliability'. Such research has been at the expense of more naturalistic scientific enquiry towards further exploring the realities of applied professional practice within this field (Gilbourne & Priestley, 2011; Potrac & Jones, 2009).

1.2 Research Problem

Whilst the use of performance analysis has been firmly established as a key building block of the coaching process (Carling et al., 2005; Hughes, 2008; Lyle, 2002), the pedagogical factors which impinge upon the use of video-based performance analysis feedback remains unexplored and less well understood (Lyons, 1988; Bartlett, 2001; Stratton et al., 2004). Indeed, the academic literature regarding performance analysis and video-based feedback, presently, remains disjointed with investigations being conducted along separate research paradigms, dominated by experimental natural science research approaches. This situation is problematic for performance analysis and coaching practitioners alike, as there is a paucity of naturalistic applied research with elite populations with which to critically reflect upon issues within applied professional practice (Williams & Kendall, 2007). Moreover, much of the scholarly writing regarding the use of video-based performance analysis within the coaching process has failed to engage with the increasing realisation of coaching scholars that coaching is a complex, reciprocal and co-constructed interpersonal process (Cushion & Jones, 2006; d'Arripe-Longuville et al., 1998; Poczwadowski, Barott, & Henschen, 2002; Potrac & Jones, 2009; Purdy et al., 2008). As such the idealistic models for the use of video-based performance analysis within the coaching process remains a decade behind our current understanding of the realities of sports coaching (Cushion, Armour, & Jones, 2006; Jones et al., 2002; Potrac & Jones, 2009). That is, the current models (e.g., Franks, Goodman, & Miller, 1983; Hughes & Franks, 1997; Hughes, 2008) which depict the use of performance analysis within the coaching process remain overly simplistic, lack an empirical basis and importantly is “reduced in complexity and scale, and the essential social and cultural elements of the process are often underplayed” (Cushion

et al., 2006, p. 83). This research therefore, attempts to address these issues in the specific context of elite youth soccer.

1.3 Research Questions

1. What can be learned about the pedagogical rationale behind the use of video-based performance analysis within the coaching process, and can an empirically grounded theory of practice be constructed to act as a reflective tool for practitioners? Specifically, what do coaches do and why do coaches do this?
2. What can be learnt about the delivery of video-based performance analysis within a naturalistic setting working with elite athletes? Specifically, how might a coach use video-based performance analysis feedback within the coaching process to achieve interactional goals?
3. How might a coach develop their professional knowledge regarding the use of video-based performance analysis, and how and why might these interactional practices change over time in the development of a coaching identity?

1.4 Organisation of the thesis

Chapter 1, the Introduction, is followed by the Review of Literature, chapter 2, which critically considers the disjointed nature of the performance analysis literature, video-based feedback literature, and the sports coaching literature. In doing so, this chapter highlights how the realities of the use of video-based performance analysis

within the coaching process can be better understood. Following this the Methodology, the third chapter, outlines how I came to select the methods that appeared to be the most appropriate to studying the delivery of video-based performance analysis within the coaching process. The chapter opens, by highlighting the research origins of this thesis via a reflective examination of ‘critical incidents’ within my applied professional practice. This is followed by an overview of the importance of considering the philosophy of science and the positioning of this thesis within an interpretivist framework, and specific methods used within the thesis. In the fourth chapter research question 1 is addressed drawing upon a grounded theory methodology. Here, the pedagogical factors which impact upon the delivery of video-based performance analysis of elite level youth soccer coaches are explored. In the fifth chapter research question 2 is examined utilising a conversation analysis approach to examine coach-athlete ‘talk in interaction’ within the delivery of video-based performance feedback in elite youth soccer. In the sixth chapter research question 3 is addressed using a narrative ethnographic approach to examine the construction of professional knowledge and coaching identity within video-based feedback sessions. Here, both interactions within sessions, and subsequent reflections upon early interactional practices are examined. The seventh and final chapter, The Thesis Conclusion, considers the implications of the thesis through a reflexive analysis of the researcher and the researched, the limitations of the thesis, positioning the research back within the literature, the implications for coach education, and future research directions.

CHAPTER TWO: REVIEW OF LITERATURE

2.1.1 Introduction

This literature review outlines recent developments in the fields of performance analysis and sports coaching. The review is structured to achieve four key objectives; firstly, it provides a brief illustrative overview of the key trends and contemporary issues within the sports performance analysis literature, and considers the present foundation for the use of performance analysis within the coaching process. Secondly, it considers the existing literature regarding the use of video and video-based feedback in sport. Thirdly, the review outlines current trends within the coaching literature, and a critique of the foundation of the use of performance analysis within the coaching process is offered. This critical analysis is vital to demonstrate recent conceptions of the complexity of sports coaching, methodological approaches within the field and to highlight a number of ‘blank spaces’ in our understanding of the realities of the use of performance analysis within the coaching process (Franks, 2002). Here, divergent research agendas of both performance analysis and coaching researchers are critically discussed. Indeed, the review moves through a number of, as yet, unconnected research approaches to the study of performance analysis, video-based feedback and sports coaching in an attempt to highlight the complexity but also lack of coherence within these fields. Finally, the review demonstrates how this knowledge can be built upon by suggesting ways in which we may better understand the realities of the use of video-based performance analysis within the coaching process. The review concludes by outlining the key research questions that will be addressed by this research.

2.1.2 What is performance analysis?

The case for ‘notational analysis’ or ‘performance analysis’ in sport as a method to record performance in an ‘accurate’ and ‘reliable’ manner has received much interest in recent academic discourse (e.g., Hughes & Franks, 1997; Hughes & Franks, 2004a; Hughes & Franks, 2008). For example, Hughes and Bartlett (2008, p. 9) suggest that notational analysis is “an objective way of recording performance, so that critical events in that performance can be quantified in a consistent and reliable manner. This enables quantitative and qualitative feedback that is accurate and objective” (p. 9). Therefore, for the purposes of the present thesis, performance analysis is conceptualised as a method, or set of procedures used to assess the quality and/or quantity of performance data in an accurate and consistent manner. Arguably, the recent move in terminology from ‘notational analysis’ to ‘performance analysis’ (Hughes & Franks, 2008; Hughes, 2008) or ‘match analysis’ (Carling et al., 2005), represents an attempt to reposition the method closer to coaching practice. As such, performance analysis has been recently located within the coaching process (Carling et al., 2005; Hughes, 2008; Hughes & Franks, 2008). Indeed, Hughes (2008) suggests that “the essence of the coaching process is to instigate positive changes in sports performance. Because coaching depends heavily upon analysis, to ensure that the feedback given as a consequence of such analysis is precise and effective, informed and accurate measures are necessary” (p. 102). However, although a number of authors have made such assertions (e.g., Carling et al., 2005; Hughes & Bartlett, 2008; Hughes & Franks, 1997; Hughes & Franks, 2004a; Hughes & Franks, 2008) these claims remain under researched without empirical support.

Furthermore, Bartlett (2001) has suggested that performance analysis is a way of bringing together biomechanics and notational analysis in a ‘unified approach’, as

an independent sub-discipline of sports science. However, such an approach has received much criticism as a ‘marriage of convenience’ to further the vocational pathways of applied biomechanists and notational analysts (Glazier, 2010). Indeed, in a recent review of the substantive issues and future directions of performance analysis, Glazier (2010) suggests that “it can be argued that the current formulation of performance analysis is rather ill-conceived and that a much stronger rationale for linking sports biomechanics and notational analysis is necessary if performance analysis is to survive and prosper as an independent academic sub-discipline of sport science” (p. 629).

Hughes (2005, p. 1) has suggested that performance analysis has gained a growing recognition throughout the world and is “recognised both as an academic subject and as an invaluable support mechanism in the coaching process”. Indeed, Hughes (2008) suggests that given the specialist training (computer/video technology and analysing the accuracy and reliability of the data etc.) required to undertake such a role “it is unlikely that the coaches themselves would undertake this task, but rather employ a notational analyst who can pick out aspects of the game/content as requested by the coach” (p. 102). Hughes (2005) further suggests that there are signs of a career structure developing for graduates with analysis experience. This is supported by the publication of *The International Journal of Performance Analysis* and a number of university courses offering performance analysis as a standalone discipline (e.g., University Wales Institute Cardiff, Middlesex University & Nottingham Trent University) or as modules within a broader coaching programme (e.g., Hull University & Manchester Metropolitan University). Whilst the focus of such courses remains diverse within such institutions, performance analysis has grown as part of the curriculum within the UK Higher Education system. The following section will

outline a number of key trends and contemporary issues within the performance analysis literature.

2.1.3 Research trends within the performance analysis literature

The academic study of performance analysis research has largely focused upon three areas of research interest: (1) the identification of movement and performance patterns within competition (e.g., Hughes & Franks, 2005; Tenga, Holme, Ronglan, & Bahr, 2010a; Tenga, Holme, Ronglan, & Bahr, 2010b), (2) the identification of key performance indicators in sport (e.g., James, Mellalieu, & Jones, 2005; Jones, James, & Mellalieu, 2008), (3) the measurement of physiological work rate profiles (e.g., Carling, Bloomfield, Nelson, & Reilly, 2008; Strudwick & Reilly, 2001).

Additionally, academic texts have also provided information about how to construct notational analysis systems, the importance of generating reliable data, and discussions about technological choices and emerging developments, amongst other useful topics (e.g., Carling et al., 2005; Hughes & Franks, 2004; Liebermann, Katz, Hughes, Bartlett, McClements, & Franks, 2002; Wilson, 2008). The following section will review the key research within each of the four areas.

2.1.4 The identification of movement and performance patterns within competition

The early work of Reep and Benjamin (1968) in soccer, which identified the success of a 'direct style of play' for scoring goals (i.e., 80% of goals were scored in three passes or less), has formed the basis of a large body of research which has sought to analyse patterns of play in successful and unsuccessful teams. Indeed, later work by Bate (1988) in association football highlighted that 94% of goals scored at all

levels of soccer were scored from possessions consisting of four passes or less, and that 50-60% of all possessions that led to a shot at goal originated from the final third of the pitch (i.e., the attacking third). Tenga et al. (2010a) highlighted that “the common objective of such studies is to determine the most effective ways of playing the game” (p. 237). For example, the work of Hughes and Franks (2005) re-assessed the early findings of Reep and Benjamin (1968), through an analysis of the passing sequences, shots and goals in the 1990 and 1994 FIFA World Cup finals. The findings of this work revealed that although the results conformed to the earlier findings of Reep and Benjamin (i.e., 84% and 80% of goals passes came from four passes or less in 1990 and 1994 respectively). However, once the data were normalized (by dividing the number of goals scored in each possession by the frequency of that sequence length) to assess the relative importance of the conversion rates from different lengths of passes per possession into goals, the findings revealed that longer passing sequence lengths have a better chance of scoring (Hughes & Franks, 2005). Here, Hughes and Franks (2005) suggested that “if teams have the skill to sustain possession, they have a greater chance of creating a shooting opportunity, but the conversion ratios of shots to goals are lower at longer lengths of possession” (p. 512). In interpreting these findings for coaching, Franks and Hughes (2005) suggested that the problem for coaches was to assess the qualities and skill level of their teams when deciding how to balance possession football (which would create more chances) against a more risky direct style of play (which would result in more goals per possession). This demonstrates the importance of contextual information and coaching knowledge when interpreting statistical sporting data.

Building upon this work, Tenga et al. (2010a) examined the effects of playing tactics in soccer, by comparing counterattack play to elaborate attack play, in 163

Norwegian professional league matches from the 2004 season. In a related study, Tenga et al. (2010b) defined counterattacks starting by:

Winning the ball in play and progressing by either: (a) utilising or attempting to utilise a degree of imbalance from start to end, or (b) creating or attempting to create a degree of unbalance from start to end by using an early (i.e., first or second, evaluated qualitatively) penetrative pass or dribble. Utilising a degree of imbalance means seeking penetration in such a way that a defending team fails to regain a high degree of balance from start to end of possession.

Counterattacks progress relatively quickly (p. 247).

Whereas elaborate attacks were defined as:

Winning the ball in play and progressing either: (a) without utilizing or attempting to utilise a degree of unbalance, or (b) by creating or attempting to create a degree of imbalance by using a late (third or later, evaluated qualitatively) penetrative pass or dribble/not utilising a degree of imbalance means seeking penetration in such a way that a defending team manages to regain a high degree of balance before the end of team possession, elaborate attacks often progress relatively slowly (p. 247).

The authors suggested that differences in the probability of goal scoring between offensive tactics were only found when defences were unbalanced. In addition, Tenga et al. (2010a) found support that long possessions (five passes or more) were more effective than shorter possessions (two passes or less) for scoring

goals, particularly against an unbalanced defence. Moreover, team possession that originated from the final third of the pitch had considerably higher effectiveness for goal scoring. When discussing the implications of the findings, Tenga et al. (2010a) highlight that “this information can be used when coaches and players plan and practice how to take advantage of an opponent’s choice of playing tactics in a competitive match” (p. 243).

Further work by Tenga et al. (2010b) examining the effect of tactics upon creating “score-box” possessions (i.e., controlled possession within the 18 yard box) within the same sample of 163 Norwegian soccer matches. The results of the score-box analysis revealed no overall difference in effectiveness between counterattacks and elaborate attacks on the probability of producing a score-box possession. However, counterattacks were more effective than elaborate attacks when playing against an imbalanced defence but not against a balanced defence. Therefore, defensively the team that were able to maintain a balanced defence (tight pressure, back up from defender 2, & cover from defender 3) were more effective in preventing score-box possessions. Tenga et al. (2010b) again suggest the same practical implications of their work that “this information can be used when coaches and players plan and practice how to take advantage of an opponent’s choice of playing tactics in a competitive match” (p. 254).

However, a number of issues remain with research in this field. For example, Hughes and Franks (2005) highlighted that “although the data presented by Reep and Benjamin (1968; Reep et al., 1971) have been replicated, different interpretations can be obtained from the same data using different analyses” (p. 513). Therefore, even when great care is taken over the objective collection of such sporting data, the interpretations of meaning and conclusions drawn often depend upon the level of

analysis undertaken. Here, Hughes and Franks (2005) have suggested that the data that was presented by Reep and Benjamin (1968) only lead to a partial understanding of patterns within game data, and that “this type of simple presentation is common in many publications in performance analysis” (p. 513). Moreover, Tenga et al. (2010a) highlight that goal scoring is often a combination of technical, psychological, physical, social and tactical factors, therefore, whilst performance analysis may be useful to measure behavioural patterns, often underlying processes are not well accounted for.

In summary, within this work performance analysis has been used as a method to objectively identify the relationship between in-game variables (i.e., shots, passing, dribbling etc) and performance outcomes (i.e., win/draw/lose and goal scoring). Primarily, this work has been conducted with an interest of identifying ‘hidden patterns of play’ through a reductionist statistical approach, seeking cause and effect relationships between variables. Whilst a number of studies have made suggestions as to the applied applicability of their findings, understanding patterns within sporting data has been the primary aim of such work (for reviews see Hughes & Franks, 1997, 2004, 2008). That is, research within this field has primarily concentrated upon the methods and procedures of analysing sports data in a ‘reliable’ and ‘accurate’ manner (cf. Hughes & Franks, 2004). Therefore, within the current academic texts performance analysis can be seen as a collection of methods and procedures for analysing sporting data, rather than an independent discipline of sports science (Glazier, 2010). Indeed, although many performance analysis studies have analysed ‘real’ sporting performance, often the research questions and directions of studies do not appear to have high levels of applied efficacy for elite coaching practitioners (Williams & Kendall, 2007). Indeed, Williams and Kendall (2007) have highlighted

that a number of elite sports coaches have highlighted dissatisfaction with the findings produced within the current sports science literature, particularly regarding the lack of naturalistic inquiry. Finally, the lack of both a theoretical underpinning and applied efficacy remains problematic for research conducted within this paradigm.

2.1.5 The identification of key performance indicators in sport

Following the identification of patterns of play within sports data, performance analysis researchers have started to develop a number of 'key performance indicators' (often termed K.P.I.'s). Hughes and Bartlett (2002) have suggested that KPI's are "a selection, or combination, of action variables that aims to define some or all aspects of a performance" (p. 739). This work has focused upon studying interactions on team (e.g., soccer & rugby) and match play sports (e.g., tennis & squash), with few studies in acrobatic, athlete and cycling sports (Hughes & Bartlett, 2004).

For example, Jones et al. (2008) developed standardised K.P.I. indicators to assess a team's performance and form in a single match relative to their past 19 matches in rugby union. In this work, 18 K.P.I.'s were highlighted: (1) Analysis of scrum success, (2) Opposition scrum success, (3) Lineout success, (4) Opposition lineout success, (5) Team ruck success, (6) Opposition ruck success, (7) Team maul success, (8) Opposition maul success, (9) Team tackle success, (10) Opposition tackle success, (11) Breaks made, (12) Turnover percentage, (13) Team open-play and restart kick success, (14) Team goal kick success, (15) Penalty percentage given away, (16) Team total errors, (17) Team intrusions into attacking 1/3, and (18) Team time in possession. Jones et al. (2008) suggested that this form of analysis "allows for coaches to isolate areas where performances are poorer or better than previously and can be modified if desired, to include different combinations of indicators to provide

both team and individual feedback” (p. 698). Indeed, at an individual player level, work by James et al. (2005) in rugby union, identified a number of K.P.I.’s (e.g., passing, carrying and tackling for the forward positions, and passing, carrying, tackling and kicking for the backs) evident for general positional profiles. Furthermore, James et al. (2005) suggested that these findings were practically important for coaches and sports scientists to monitor the impact of an interventional strategy (technical, tactical, mental or physical) upon team and individual performance.

However, James et al. (2005) highlighted significant between-player differences were found for the positional K.P.I.’s, which was suggested to be related to individual differences in decision-making and different styles or patterns of play. In addition, even with careful consideration of operational definitions, with such analyses James et al. (2005) highlighted that “some bias was inevitable” (p. 71), for example, judgments regarding where errors emanated (i.e., the thrower or receiver of lineouts etc). Here, even with carefully constructed scientific methodologies the influence of human coder interpretation is evident. James et al. (2005) further highlighted that an important issue in the performance analysis literature is to identify the amount of data required to generate stable profiles. This is particularly important when comparing performance across different contexts (i.e., win/lose/draw or pre-mid-end of season). Here, Hughes, Evans and Wells (2001) have suggested that without achieving a stable profile any inference drawn from such analysis maybe considered somewhat ‘spurious’.

In summary, this work has sought to understand performance profiles of both teams and individual athletes. Here, researchers have attempted to identify a number of possible ‘in-game’ behaviours which may have a significant impact upon

individual and team performance, and assess individual and team performance across a number of matches through a reductionist statistical approach, seeking cause and effect relationships between variables. This work aims to reduce the complexity of game data to identify what ‘the most important’ sports behaviours are for successful performance. Such work has been suggested to be practically useful for the monitoring of individual and team performance due to the increase in manageability of data within applied setting. However, there remains little empirical work which has highlighted the practical applicability of this work within the coaching process, more specifically, how this approach may be used by practitioners and what are the realities of using such an approach. For example, what are the consequences of an overly mechanistic approach to assessing and monitoring sporting performance within dynamic team sports, and how does playing to such a ‘blue print’ impact upon the opposition teams tactics? Importantly, little consideration has been given to how this information should be fed back to athletes and what the long term consequences of such a monitoring approach may be.

2.1.6 The measurement of physiological work rate profiles

The measurement and analysis of the physical demands of sports performance combines both physiological knowledge and performance analysis assessment methods. Indeed, Carling et al. (2008) have suggested that “among the traditional sport science disciplines, exercise physiology has arguably had the greatest impact upon practices within professional soccer” (p. 10). The use of ‘in-game’ performance data rather than laboratory based testing dates back to the early work of Reilly and Thomas (1976) in soccer. Using frame-by-frame video analysis, Reilly and Thomas (1976) classified players’ movements as walking, jogging, striding, sprinting, moving

sideways, walking backwards and jogging backwards. Following this, work-rate-profiles were calculated for players playing in different positions (e.g., full-backs, central defenders, midfielders & forwards), to demonstrate the position specific profiles. One of the key findings of this work was that players were without the ball for 98% of the match. More recent research by Strudwick and Reilly (2001) assessed the work-rate profiles of twenty-four full time professional Premier League football players. Figure 1 illustrates the relative distances covered by the outfield players during a 90 minute soccer match (Strudwick & Reilly, 2001).

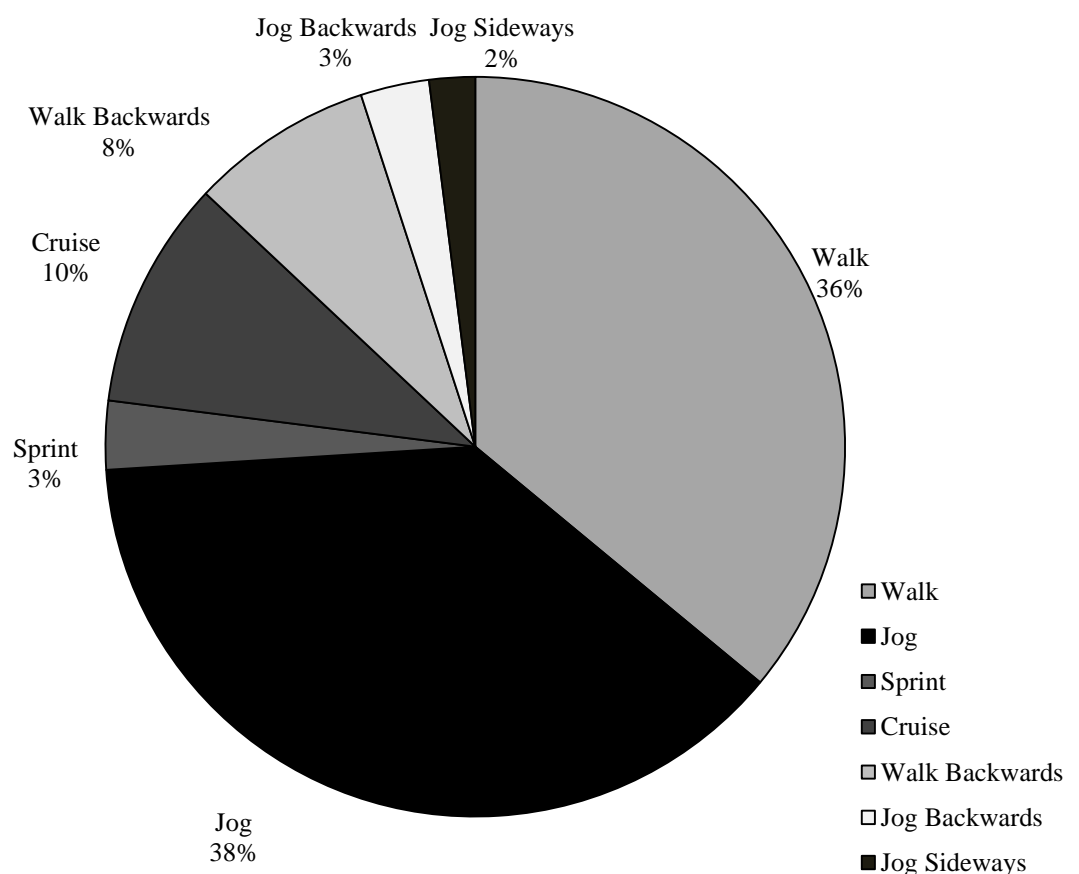


Figure 1. Relative percentage distance covered in different categories of activity for outfield players during soccer match-play (Strudwick & Reilly, 2001).

Of particular interest within the data is the high percentage of time elite soccer players spent either walking (forwards - 36% or backwards 8%), jogging (38%), or cruising (10%). Indeed, sprinting activity only accounted for 3% of all work rate undertaken.

Table 1. Total distance covered and distance covered by position of 24 English professional soccer players (Strudwick & Reilly, 2001).

Unit of Analysis	Distance (m)
Mean Total Distance Covered (all positions)	11264
Mean Fullback Distance Covered	11433
Mean Central Defender Distance Covered	10650
Mean Midfielder Distance Covered	12075

Furthermore, while Strudwick and Reilly (2001) demonstrated an increase in total distance covered between the Premier League and the old 1st Division, total distance covered for outfield players remained relatively similar irrespective of playing position (see Table 1). Therefore, it appears that total distance covered alone, is insufficient to differentiate differing positional demands of soccer. In a summary of overall work-rate reported within soccer indicates that outfield players cover a mean distance of 8-13km during the course of a match (Carling et al., 2005), occasionally players have been found to reports values of up to 14km (Carling et al., 2008). Indeed, data suggests that total distance covered remains relatively stable across positions in

soccer (see Table 1) with midfield players covering the most distance (Strudwick & Reilly, 2001).

However, one of the main findings of the key findings of the work-rate profile literature in soccer is that high-intensity running is likely to be the most important measurement for physical match performance (Bangsbo, 1994; Drust, Atkinson, & Reilly, 2007). Furthermore, over the past decade a number of advances have been made in the measurement and recording of motion analysis in sport (Carling et al., 2008). Several semi-automated tracking systems now allow for motion analysis data to be collected in 'real time' during match play. For example, systems such as Amisco Pro[®], DatatraX[®], Pro-Zone[®], and Tracab[®] employed stadium based camera tracking systems, which allow users to access frequency and duration data of player's activities within set movement thresholds (Abt & Lovell, 2009; Carling et al., 2008). The systems work using motion recognition algorithms, which requires a manual technician to set the players start positions at the beginning of each half and monitor occlusions caused by players crossing over in close proximity (e.g., corner kick situations). Typically, games are produced within 24 hours of the match, which includes individual player match events (e.g., successful & unsuccessful passes, dribbles, crosses, tackles, headers, shots etc) and team match events (e.g., goals, corners, free kicks, possession etc) linked to a video file of the game with the motion analysis data (Carling et al., 2005; James et al., 2005). Whilst such system were designed to be used in an applied setting by sports scientists, a number of academic papers have examined research areas such as performance characteristics according to playing position in elite soccer (Di Salvo, Baron, Tschan, Calderon Montero, Bach, & Pigozzi, 2007), the activity profiles when running with the ball (Carling, 2010), the use of individualised speed and intensity thresholds (Abt & Lovell, 2009), and an

analysis of high intensity activity in Premier League soccer (Di Salvo, Gregson, Atkinson, Tordoff, & Drust, 2009). Whilst such systems offer a wealth of statistical data (upwards of 2,000 games events coded per game), to date, these systems often incur installation and analysis costs in excess of £100,000 per season. Therefore, the use of such systems is often restricted to larger national governing bodies and soccer and rugby teams within the highest divisions.

This body of work is primarily concerned with the collection of position specific physical work rate data, within a range of speed thresholds. Here, data including total distance covered, and the duration, frequency, and percentage time within physical activity thresholds provides sports scientists with data to assess the physical demands of soccer match play. The primary aim of this work is to quantify physical activity, to better understand the physiological effects of match-play. Moreover, Carling et al. (2008) suggest that the collection of physiological work-rate data provides a “valuable pool of data that can inform and influence the daily practices of coaches” (p. 840). However, similarly to the previous work within performance analysis, there remains little evidence of how this has impacted upon applied professional practice within elite soccer.

2.1.7 Section conclusion

In this section of the literature review, four key areas of sports performance analysis research were illustrated: (1) the identification of movement and performance patterns within competition, (2) the identification of key performance indicators in sport, and (3) the measurement of physiological work rate profiles. Furthermore, a number of contemporary issues within the performance analysis field were highlighted.

Importantly, the inquiry paradigm which, to date, has dominated the study of sports performance analysis largely conforms to that of (post)positivism. That is at an ontological level reality is “real” and apprehendable, epistemologically the findings are reported as true (valid & reliable), and methodologically experimental hypotheses are tested, chiefly through quantitative methods (Lincoln, Lynham, & Guba, 2011). Within this scientific approach the main concern is with regards to ‘the analysis of the performance data itself’, with a view to better understanding sporting performance. Such work, therefore, largely conforms to a ‘natural science’ approach. Indeed, many of the researchers within this field have a mathematics, physics or physiological background. However, to date, there remains a disconnection between the ‘analysis of athletic performance’ and ‘the use of performance analysis within the coaching process’ (Franks, 2002). This is problematic because the rationale of much of the research within performance analysis is based upon its usefulness to coaches and coaching practitioners (Carling et al., 2008; James et al., 2005; Tenga et al., 2010b). However, such claims remain anecdotal as there is no clear empirical evidence as to how research from the performance analysis literature has impacted upon coaching. The following section considers the present foundation for the use of performance analysis within the coaching process. Moreover, the link between how the data is collected and analysed and how this information is used within the coaching process remains unclear.

2.2.1 The need for ‘*accurate*’ and ‘*reliable*’ feedback within the coaching process

Within coaching the need to provide athletes with feedback to correct or reinforce performance is well established (Côté & Sedgwick, 1993; Cushion, 2010; Franks, 2004; Greenleaf, Gould, & Dieffenbach, 2001). Indeed, within the

performance analysis literature the case for performance analysis is built on the performers' 'need for feedback' and the human limitations of coaches to provide 'accurate' and 'reliable' information (Franks & Miller, 1986, 1991). Indeed, Maslovat and Franks (2008) have suggested that it is paramount that this information [performance analysis feedback] be objective, unbiased and as comprehensive as possible" (p. 4). Whilst few would argue with the need to provide performers with accurate and reliable feedback, this should not be interpreted to suggest that coaches cannot achieve this without the use of technology. Importantly, here Liebermann et al. (2002) highlighted that:

Coaches strive constantly to improve the performance of athletes. The most important aspect of their role is to provide the athlete with a practice environment that is conducive to effective and efficient learning. The introduction of information technology into the sport performance environment appears to be a positive, although not always essential, step towards achieving this goal (p. 767).

Therefore, the role of technology from a motor learning perspective should be viewed as providing the potential to add to, or augment performance feedback (Liebermann et al., 2002). As such, within the motor learning literature, feedback is often classified as intrinsic, (i.e., where sensory information is generated by the athlete as a consequence of making the action) or extrinsic (i.e., where sensory information is generated by an outside source) (Schmidt & Wrisberg, 2000). The use of performance analysis, and particularly video-based performance analysis, has tended to focus on the coach providing the athlete with additional extrinsic feedback

to add to the intrinsic feedback generated by the athlete and assist future performances (Maslovat & Franks, 2008). Such additional extrinsic feedback has tended to relate to feedback relating to knowledge of performance KP (e.g., technical proficiency or movement quality) or knowledge of results KR (e.g., movement outcome or environmental goal). In this regard, Franks and Maile (1991) have suggested that video can be a useful tool for providing athlete feedback, as it offers the ability to record and replay past performances from many angles, slow down actions and pause images. This helps to overcome what Bandura (1997) terms ‘performance ambiguity’ where athletes are not able to view certain elements of their performance therefore are unable to make corrections for future performances.

2.2.2 Modelling the use of video-based performance analysis within the coaching process

Early representations of ‘performance analysis within the coaching process’ have tended to use flow diagrams containing a number of related features of coaching practices. For example, the often cited work of Franks, Goodman and Miller (1983) depicts: athlete performance, coach observation, performance analysis, past results accounted for, coach plans practice, and coach conducts practice (see Figure 2).

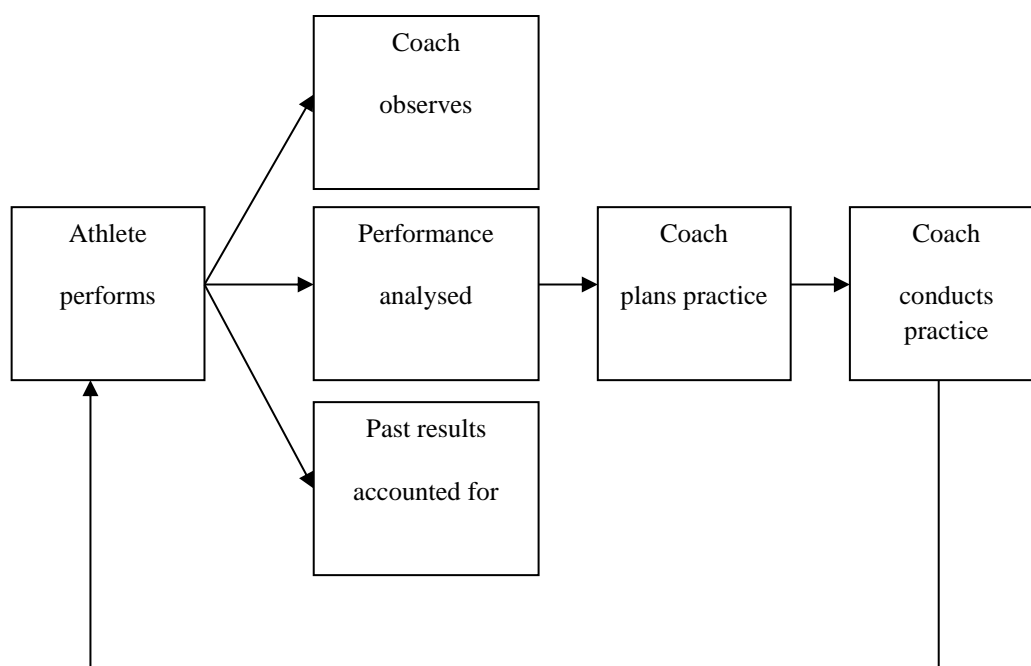


Figure 2. A simple schematic diagram representing the coaching process (Adapted from Franks et al., 1983).

Franks et al. (1983) depicts the stages which a coach may work through when using performance analysis, following the performance of an athlete. This simplistic representation of how coaches could use performance analysis is the most often cited work within the performance analysis literature (e.g., Franks, 2004; Hughes & Franks, 1997; Maslovat & Franks, 2008). Furthermore, Franks et al. (1983) schematic represents the cyclical nature of the use of performance analysis within the coaching process. Building upon this work Hughes and Franks (1997) illustrated how computer-aided analysis and feedback technology could be integrated into the coaching process (Figure 3).

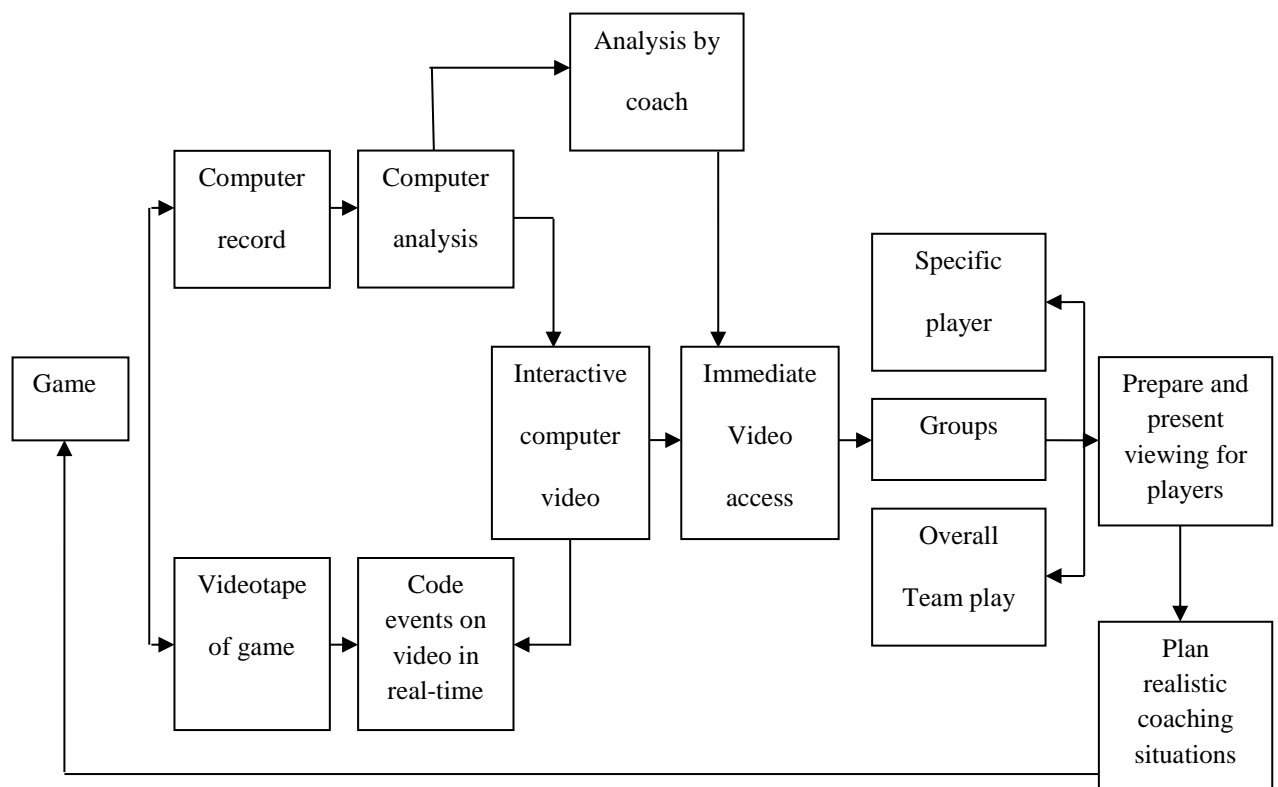


Figure 3. A schematic diagram representing the coaching process, utilizing some of the computer-aided analysis and feedback technology (Adapted from Hughes & Franks, 1997).

Within Hughes and Franks (1997) representation, additional consideration was given to how performance was analysed (i.e., the use of computers for coding recordings), and decisions regarding the timing and structuring of feedback (i.e., immediate feedback, individual player feedback, group feedback, & overall team play).

Later, Robinson (1999) depicted the performance analysis process consisting of five elements: observation, analysis, evaluation, feedback and planning. Again, Robinson's (1999) flow diagram depicts a simple process of movement between

elements within the model, which has been stripped of any social or contextual factors (see Figure 4).

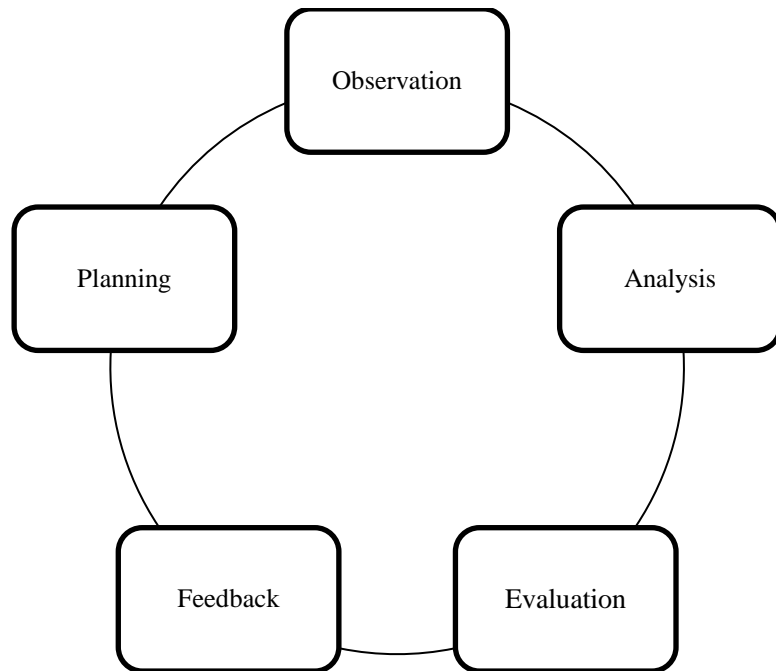


Figure 4. The performance analysis process (Adapted from Robertson, 1999).

The most recent representation comes from the work of Hughes (2008), who depicts the use of video-based feedback within the coaching process (Figure 5). Based upon the work of Hughes and Franks (1997), Hughes (2008) has updated a number of components to the model to include the use of modern technology and some coaching-based feedback decisions.

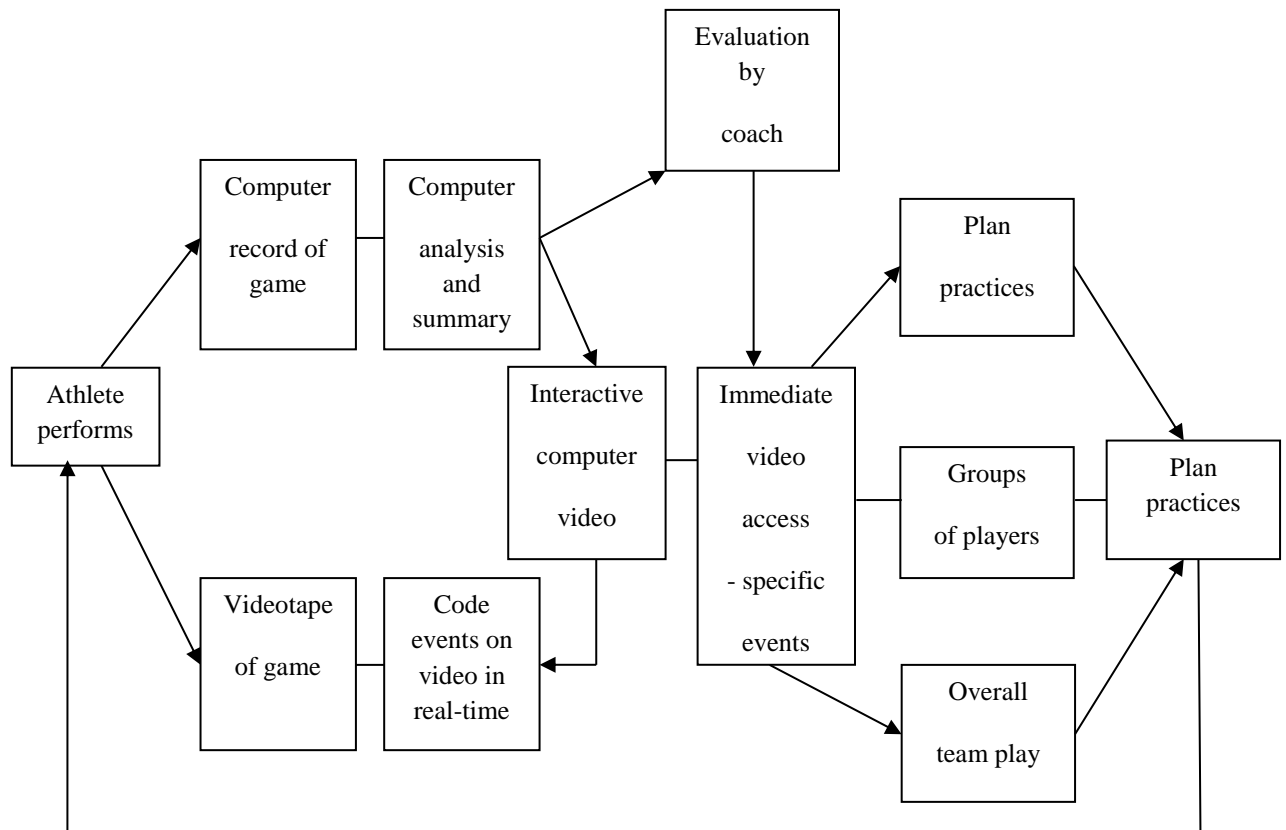


Figure 5. A modified flow-diagram illustrating the use of video feedback within the coaching process (Adapted from Hughes, 2008).

Although not apparent at first glance, a number of structural and process changes have been made by Hughes (2008). For example, the specific play analysis elements has been replaced by a ‘plans practices’ element, prepare and present viewing for players, has also been replaced by a separate ‘plans practices’ element, while the ‘plan realistic coaching situations’ has been removed in favour of the aforementioned planning element. Some of the terminology has slightly changed, although no reason is provided for these modifications. For example ‘analysis by coach’ has been changed to ‘evaluation by coach’, presumably to represent a non-notation/systematic appraisal of events (as opposed to the computer analysis element

of the model). Hughes' (2008) modified model can be seen to represent two subsections, the first concerned with the analysis (i.e., computer record of game, computer analysis and summary, interactive computer video, immediate video access to specific events), and a coaching subcomponent (i.e., evaluation by coach, plan practice, delivery to group of players, delivery to team, plan practices). Hughes (2008) states, that this figure firmly illustrates the use of notational analysis within the coaching process.

2.2.3 Section conclusion

In this section of the review, it has been argued that the value of performance analysis rests largely upon coaches' often subjective and poor recall abilities (e.g., Hughes & Franks, 1997; Franks, 2004; Maslovat & Franks, 2008; Hughes, 2008). Here, it has been argued that performance analysis offers an 'accurate' and 'reliable' alternative to provide athletes with much needed feedback. Indeed, a number of models (e.g., Franks et al., 1983; Hughes & Franks, 1997; Robinson, 1999; Hughes, 2008) have been presented which depict the use of performance analysis within the coaching process, with the aim of firmly locating performance analysis within sports coaching (Hughes, 2008). However, limited consideration has been given to the use of video-based feedback or video based modelling within the current performance analysis literature. Therefore, the following section will review the body of work in sport which has examined video-based feedback and video based modelling in the acquisition of sports skills.

2.3.1 The use of video-based feedback

Burwitz (1981) suggested that the “majority of sports coaches and physical education teachers believe that demonstrations and videotape recordings benefit the acquisition and performance of physical skill” (p. 182). Indeed, the use of video within the motor learning and skill acquisition literature has been traced back to the mid-1950s (for reviews see Burwitz, 1981; Franks & Maile, 1991). Surprisingly then, at present investigations into the use of video-based technology to enhance athlete learning in sport remain a relatively under-explored topic (Bartlett, 2001; Lyons, 1988; Stratton et al., 2004). However, there is a substantial body of research investigating the use of video within numerous populations, including alcoholics, families, probation services, psychiatrists, salesmen, students and teachers, indeed, this has been highlighted in a review by Fuller and Manning as early as the 1970s (Fuller & Manning, 1973). The use of video feedback, then, is a well-established and widely accepted means of modelling adaptive behaviours (i.e., behaviours that are positive for improvement) and correcting maladaptive behaviours (i.e., behaviours that inhibit improvement) across many disciplines (Dowrick, 1999).

2.3.2 The theoretical basis for the use of video feedback in sport

Dowrick (1991) has suggested that the theorising regarding the underlying process by which the use of video impacts the learner remains still in its infancy. The social cognitive paradigm remains the dominant approach to understanding the mechanisms by which video impacts learning in sports skill acquisition. Within the social cognitive paradigm, Hars and Carmels (2007) have highlighted that Bandura’s (1986, 1997) social cognitive theory of observational learning has been the most common theoretical approach to understanding the impact of video modelling in

sport. Bandura's (1986, 1997) social cognitive theory comprises of four sub-processes that govern observational learning: (1) Attention, to the relevant information to be learnt, (2) Retention, of the information via symbolic coding, cognitive organisation, and cognitive and enactive rehearsal, (3) Production, via cognitive representation, observation of enactments, feedback, and conception matching, and (4) Motivation, reinforced via external, vicarious (observing others), and self-incentives. Of particular importance to learning through observation within Bandura's (1986, 1997) social cognitive theory, is the role of self-modelling (i.e., watching oneself perform successfully), and vicarious modelling (i.e., watching another perform successfully; expert or peer model). Bandura (1986) hypothesised that observing successful self and vicarious images would increase self-efficacy (or situational specific confidence), and enhance learning. Within each stage of the learning process, Bandura (1986) also highlighted the attributes required by the observer to learn from the modelled event.

2.3.3 Approaches to the use of video in the social sciences

Dowrick (1991) highlighted a number of approaches to the use of video within the social sciences literature (e.g., self-modelling, positive self-review, feedforward and self-confrontation). With regard to self-modelling of behaviours, the participant views images of themselves performing adaptive behaviours as a form of reinforcement. Such positive self-review can be understood as "catch me being good and remind me of it" (Dowrick, 1999, p. 25). Alternatively, using feedforward, elements of the adaptive behaviour which the learner has demonstrated competence in are edited together before the learner has acquired the full behaviour (Dowrick, 1999). When video has been used as a behavioural intervention, Dowrick (1999) highlighted six key features of self-modelling with regard to personal learning and efficacy: (1)

clarifying performance goals and outcomes, (2) demonstrating a positive self-image of performance, (3) reminding of previous performance competence, (4) repeated observation of competent performance, (5) observation of one's skills applied to a new setting, (6) anxiety free performance or successful performance outcome despite anxiety, and (7) demonstration of new skills composed of pre-existing subskills. Typically, in clinical settings video is used to reinforce adaptive behaviours (i.e., behaviours that are positive for improvement) and alternatively to correct maladaptive behaviours (i.e., behaviours that inhibit improvement).

Importantly, Dowrick (1991) has also highlighted the potential negative impact of the use of video with learners via a process described as 'self-confrontation'. It is in these instances where some of the most extreme examples of the use of video in intervention studies have been highlighted. For example, in clinical settings when working with clients with maladaptive strategies to deal with their conditions, the viewing of negative behaviours has at times, caused the learner to be so emotionally distraught that the viewing of the situation itself acts as a spiral toward further negative behaviours (e.g., alcoholics drinking more; suicide in marital counselling therapy; Dowrick, 1999). Alternatively, some of the success stories regarding the use of video as a behavioural intervention have been evident when working with children with selective mutism. In these settings, the use of video to feedforward behaviour from home environment, where the children speak freely, to school environment, where the child is mute, have demonstrated considerable success (Dowrick, 1999). In this regard, although within the social science literature a number of powerful lessons have been learnt about the potential impact of video-based feedback, to date, there remains limited consideration to how this may impact the use

of video within sport. The following section will examine the use of video feedback in sports skill acquisition.

2.3.4 Research approaches examining video-based feedback and video modelling in sport

A number of different approaches have been utilised within the literature to study the effects of video feedback and video-based modelling. This makes precise comparisons across cases difficult. However, the most common design used to assess the impact of a video intervention (i.e., video-based performance feedback & video-based modelling) is an experimental pre-test/post-test design, either with or without verbal instructions from a coach. This is often then compared against a control group who did not receive the intervention (see Table 2).

The impact of video has been compared against either single or multiple conditions such as: no feedback (e.g., Atienza, Balaguer, & García-Merita, 1998; Herbert & Landin, 1994; Horn et al., 2002; Rikli & Smith, 1980; Van Wieringen, Emmen, Bootsma, Hoogesteger, & Whiting, 1989), physical practice (e.g., Atienza et al., 1998; Emmen, Wesseling, Bootsma, Whiting, & Van Wieringen, 1986; Van Wieringen et al., 1989), verbal feedback (e.g., Bertram, Marteniuk, & Guadagnoli, 2007; Bunker et al., 1976; Guadagnoli et al., 2002; James, 1971; Herbert & Landin, 1994), video-based self-review (e.g., Boyer, Raymond, Mitenberger, Batsche, & Fogel, 2009; Emmen et al., 1985; Hazden, Johnson, Martin, & Srikameswaran, 1990), video and verbal feedback from a coach (e.g., Bertram et al., 2007; Emmen et al., 1985; Herbert & Landin, 1994; Van Wieringen et al., 1989), physical training and video (e.g., Atienza et al., 1998; Emmen et al., 1985; Van Wieringen et al., 1989), expert modelling (e.g., Baudry, Leroy, & Chollet, 2006; Boyer et al., 2009; Emmen et

al., 1985; Hall & Erffmeyer, 1983; Hazden et al., 1990; Herbert & Landin, 1994; Horn et al., 2002), self-modelling (e.g. Baudry et al., 2006; Starek & McCullagh, 1999), peer modelling (e.g. Starek & McCullagh, 1999), point light display models (Horn, Williams, & Scott, 2002), self-guided learning (e.g., Bertram et al., 2007; Guadagnoli, Holcomb, & Davis, 2002), and imagery (e.g., Atienza et al., 1998). An overview of studies and key findings of the video-based feedback and video based modelling research in sport can be seen in Table 2. Whilst some studies found significant improvements in performance between video feedback groups and control conditions (e.g., Clark & Ste-Marie, 2007; Hazden et al., 1990; Herbert & Landin, 1994; Rikli & Smith, 1980; Stark & McCullagh, 1999), other studies found no significant difference between experimental and control conditions (e.g., Emmen et al., 1985; James, 1971; Horn et al., 2002; Penman, 1969; Van Wieringen et al., 1989). Interestingly, those studies utilising a non-inferential multiple-baseline design have provided evidence of encouraging improvements for participants receiving video-based modelling and video-based feedback (e.g., Boyer et al., 2009; Hazden et al., 1990). When analysed at a sports level, improvements in performance were evident in basketball (e.g. Hall & Erffmeyer, 1983), gymnastics (e.g., Baudry et al., 2006; Boyer et al., 2009), swimming (e.g., Bunker et al., 1976; Clark & Ste-Marie, 2007; Hazden et al., 1990; Starek & McCullagh, 1999), and tennis (e.g., Atienza et al., 1998; Herbert & Landin, 1994; Rikli & Smith, 1980).

Table 2. An overview of the video feedback and video modelling literature in sport.

Study	Sport	Participants	Design	Findings
Penman (1969)	Gymnastics	Two groups of students (N= 24 & 25)	Intervention – post-test. Tumbling technique evaluated by judges. Two groups: (1) Experimental group instruction + video replay, and (2) Control group instruction.	No significant ($P < 0.05$) differences between experimental and control groups.
James (1971)	Trampoline	11-to 12 year old boys (N = 18)	Intervention – post-test. Four basic drops and a seven-bounce routine Participants randomly assigned to two groups (1) videotaped feedback group, and (2) verbal feedback group.	Although the videotape group scored higher than verbal instruction group this was not significant ($P < 0.05$). Correlations between performance on verbal ability indicated participants with high verbal ability benefited from verbal feedback. Participants with high and low verbal ability benefitted from video tape feedback.

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
Bunker et al. (1976)**	Swimming	Two groups of children aged 4.5-6.4yrs (N = 18) and 6.5-8.5yrs (N = 18)	Pre-test/post-test flutter kick rating Half of each age group received video tape feedback immediately with augmented coach feedback and half of each age group received traditional verbal feedback.	Both age groups receiving video feedback performed better than the age groups receiving instruction. No significant ($P < 0.05$) difference between the 4.5-6.5 age groups. A significant ($P > 0.05$) difference between the 6.5-8.5 age groups in the post-test.
Rikli and Smith (1980)**	Tennis	Advanced beginners (N= 48) and intermediate (N= 48) players	Pre-test/post-test, tennis service task Dependant variables: (v1) footwork, (v2) body movement, (v3) ball toss, (v4) arm pattern phase I, and (v5) arm pattern phase II. Randomly assigned to 4 group: (1) Control no video feedback, (2) Early learning video feedback, (3) Middle learning video feedback, and (4) Combination video feedback (Early & Middle).	Video feedback groups were significantly ($P > 0.01$) better for all participants for v4, and intermediate participants only for v1. No significant difference between Early, Middle or Combined learning stage.

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
Hall and Errmeyer (1983)*	Basketball	Female inter-collegiate basketball players (N = 10).	Pre-test/post test basketball free throw % Two groups: (1) videotaped expert positive Modelling, and (2) no modelling.	Video-based modelling group significantly (P >0.05) outperformed the no modelling group.
Emmen et al. (1985)	Tennis	Novice tennis players (N = 40, 20 male & 20 female) aged 18-60	Pre-test, between-test, post-test design. Participants were assigned to one of five groups: G1 – Traditional training (physical coaching) TT1, 45 min x 5 (including live service demonstrations). G2 – Video model training (expert model) VMT, 45 min x 5 (15 min observation of model with instructor explanation (16 services performed by expert), followed by 30 min of traditional training. G3 – Video feedback training (analysis of self) VFT, 45 min x 5; (1) 15 min discussion of own service by the coach and pupil, 5 services recorded analysed and discussed at the end of the session and the	Participants in all groups improved significantly (P >0.05) on technique. significantly (P >0.05) on accuracy. A significant (r = 0.29; P<0.05), although low correlation was found between technique and accuracy measure only after all 5 sessions. VFT + VMFT compared to TT1 + TT2 had almost a significant interaction (P = 0.058), in favour of ‘video-feedback’ conditions.

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			beginning of the next session. For the remaining 30 min the participants trained the same way as G1.	
			G4 – Video model-feedback training (2 & 3) VMFT, 15 min viewing expert model and analysing video of self performance with coach. For the remaining 30 min the participants trained the same way as G1.	
			G5 – Traditional training (physical coaching) TT2, 30 min x 5 (including live service demonstrations), Therefore 15 min less training per session than G1 but the same amount of physical practice as VMT, VFT and VMFT groups.	
			Task: Subjects observed a video of an expert model serving, then performed 15 services, 10 of the serves were graded either 0, 1, or 2 based upon accuracy. Participants had to serve under a rope towards the	

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			Right sided service area. Also the service observation list (SOL) was used to grade the quality of service (from a minimum of 16 to a maximum of 80 points). Therefore, both accuracy and technique were assessed.	
Van Wieringen et al. (1989)*	Tennis	Intermediate tennis players (N = 66, 33 males & 33 females).	Pre-test/post –test design. Participants assigned to two groups: (1) Traditional training, 40 min total, which included 30 min of training with 10 min viewing video of ground strokes and volleys of expert players with discussion. (2) Video-feedback training, 40 min total, which Included 30 min of training with 10 min of discussion of the video recording of the participants performance within the session.	Participants in the VFT and TT groups improved significantly (P >0.05) on accuracy, in the ARTST test over the control group in the post-test. However, there was no significant (P <0.05) difference between the VFT and TT training group. Participants in the VFT and TT groups improved significantly (P >0.05) better in the SOL test

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			<p>(3) Control group, no training pre-test and post-test with 'tennis diary'.</p> <p>Participants were instructed to maintain a 'tennis training diary' to record how many hours of additional training were undertaken.</p> <p>Task: ARTST tennis service performance test, scored 2 points for a successful first service place within the designated target zone, plus an additional 1, 2, or 3 points for the location of the second ball-ground contact (as an indicator of ball velocity). If the first service did not land in the designated Target zone but landed in the adjacent zone a score of 1 point plus the velocity score was recorded. If the ball failed to land in the designated target area on the first service a score of 0 was recorded.</p>	<p>over the control group in the post-test. However, there was no significant (P <0.05) difference between the VFT and TT training group.</p>

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			<p>Participants undertook a minimum of 20 serves and a maximum of 40 serves depending upon availability.</p> <p>A maximum score of 120 points (20 trials x 6 points (2 for position + 4 for velocity)), and a minimum of 0 was possible.</p> <p>Also service technique was assessed using the Service Observation List (SOL), 15-item test with rating of 1-5 for technical service performance, therefore a maximum of 75 points was possible.</p>	
Hazden et al. (1990)***	Swimming	<p>Experiment 1:</p> <p>1 male and 6 female</p> <p>age-group competitive swimmers aged 8-12yrs.</p>	<p>Multiple-baseline observed mean % of correct performance for freestyle flip turn and backstroke spin turn under traditional coaching and video-based feedback conditions.</p> <p>Video-feedback package included both: (1) expert/ symbolic modelling, with augmented verbal</p>	<p>Participants receiving video feedback improved above the control group.</p>

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			<p>feedback, and (2) performance review video feedback of the participants own performance, with augmented feedback.</p> <p>Part 1) 3 participants observed on the freestyle flip turn, followed by a video tape feedback package, a 4th participant did not receive any video training.</p> <p>Part 2) 1 participant received training on the free style flip turn, and 2 other participants received training on the backstroke spin turn. The videotaped package was introduced sequentially across, the participants a 4th participant did not receive any training.</p>	
		<p>Experiment 2:</p> <p>1 male and 5 female</p> <p>age-group competitive</p> <p>swimmers aged 8-12yrs.</p>	<p>Target behaviour freestyle swimming stroke, participant's individual errors were highlighted to improve (i.e., hand entry), % of correct performance assessed by observer.</p>	<p>The group based video feedback had little or no effect upon performance.</p> <p>Individual video feedback sessions had a meaningful effect upon</p>

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			Baseline data collected during practice.	performance.
			Intervention 1, all 6 subjects received group based video feedback. Intervention 2, following this 3 participants received sequential video feedback until they reached the training criterion. The remaining 3 participants acted as a control group. Retention tests were conducted without further intervention.	2 of the 3 participants in the experimental group retained their improved performance. 1 of the experimental group returned to baseline level in the retention test. The control group performance remained low.
Herbert and Landin (1994)*	Tennis	Female students (N = 48) mean age 20.92yrs.	Pre-test, acquisition trials, retention test design. Participants randomly assigned to four groups: (1) AFB –augmented verbal feedback, (2) LMFB – learning model feedback (video of peers with associated feedback), (3) LMFB + AFB – Learning model and individual	The three experimental groups significantly outperformed the control group in the acquisition trials

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			<p>verbal feedback on performance feedback, and</p> <p>(4) Control received no feedback.</p> <p>Task: to perform a volley with non-dominant side.</p> <p>Dependant variables: accuracy to target and trajectory of shot.</p>	
Atienza et al. (1998)**	Tennis	12 female tennis players aged 9-12yrs.	<p>Pre-test/post-test design. Participants were Assigned to four groups: (1) Physical practice, (2) Physical practice + video, (3) Physical practice + video + imagery, and (4) Control group.</p> <p>Dependant variables: service placement and judges rating of technique.</p> <p>Video models included a combination of expert, peer, multiple and coping models</p>	<p>Significant differences were found between the physical training and the physical practice, video and imagery group only.</p>

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			(i.e., successful learners adjusting technique).	
Starek and McCullagh (1999)*	Swimming	8 female and 2 males beginning swimmers aged 20-58 yrs.	Participants were randomly assigned to either (1) self-modelling, or (2) a peer modelling group. Participants were observed and rated on their performance using a 64-item check list of skills. Participants undertook a 3 week training programme, for the self modelling group between which included either self modelling or peer video-based modelling. Participants also completed the Swimming Self-Efficacy Scale, the State-Trait Anxiety Inventory (STAI), and a 25-item checklist of skills.	The self video modelling group significantly outperformed the peer video modelling group. A significant improvement was found session 3 and 4. No significant difference in self- efficacy or anxiety were found between groups.
Guadagnoli et al. (2002)**	Golf	30 golfers aged 29 -50yrs.	Pre-test, post-test ¹ , and post-test ² , participants were randomly assigned to either a: (1) video, (2) verbal,	All groups were equal on the pre-test, in post-test ¹ , the self-guided group

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			or (3) self-guided group.	outperformed other groups.
			Task: to was to strike 15 balls with a 7 Iron to a target.	In post-test ² the video was better than the verbal group, which was in turn better than the self-guided group.
			Accuracy and distance from the target were the dependant variables.	No significant difference was found for accuracy or total distance.
				Both instructional groups were found to be significant less variable than the Self-guided group in post-test ² .
Horn et al. (2002)	Soccer	21 female students Mean age of 22.2yrs.	Pre-test, post –test, and retention test. Participants were assigned to three Matched groups (1) Video expert model, (2) Point Light Display (PLD) model, and (3) Control (no model). The task was a soccer ball chip over	No significant difference was found in learning across the 3 groups. No significant difference was found between PLD and video model groups. Participants observing the video model developed marked reduction in

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			a barrier towards a target. Dependant variables: Outcome (distance from target), Kinematic (intra-limb co-ordination, joint range of motion, relative temporal phase of knee extension after ball contact), and Visual Search (eye movement recorder) data.	variability of temporal phasing from pre-test to retention test. PLD and control group variability remained mixed. Models were only beneficial for general gains in global representation and temporal phasing.
Baudry et al. (2006)*	Gymnastics	16 gymnasts Mean age of 14.3yrs 6+ years of gymnastic experience.	Pre-test, post-test and retention test Randomly assigned to two groups: (1) Expert and self-modelling via video feedback, and (2) verbal performance feedback from a coach. Task was to perform the double leg Circle movement on the pommel horse.	Performance significantly improved for both groups pre-test to post.

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			Dependant variable body segmental alignment.	
Bertram et al. (2007)**	Golf	48 male and female Golfers (24 novices; 24 skilled player)	Pre-test post-test design Participants randomly assigned to 3 groups: (1) Verbal coaching (V), (2) Verbal + video coaching (V+V), (3) Self-guided (SG). The task was a 12 shot test where Club head speed, club face angle at impact and tempo were measured.	Novices in the verbal feedback group significantly increase club head speed. Skilled players in the self-guided group significantly improved club head speed. For club face angle, novice players in the V+V group demonstrated significantly more deviation following video feedback. Skilled player in the V+V group significantly slowed their tempo. Novice players in the V group became

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
				significantly more consistent in their shot-to shot tempo pre-test-to-post-test. Group differences revealed that novices became significantly less consistent pre-test-to-post-test.
Clark and Ste-Marie (2007)**	Swimming	33 children (20f; 13m) aged between 6-10yrs, mean age of 8.3yrs.	Pre-test, acquisition trials, and post-test design. Participants were randomly assigned to one of three groups: (1) Self-modelling, (2) Self-observation, and (3) Control group. The task was swim a distance of 10 metres continuously. Dependant variables of: rated swimming performance, self-efficacy, and motivation	Self-modelling group performed significantly better than the self-observation group and the control group (who performed similarly). Self efficacy increased across all sessions. Self-modelling group were more intrinsically motivated. Self modelling group reported higher satisfaction.

Table 2. An overview of the video feedback and video modelling literature in sport (continued).

Study	Sport	Participants	Design	Findings
			were recorded.	
Boyer et al. (2009)***	Gymnastics	4 female competitive gymnasts aged between 7-10 yrs	<p>Design: baseline, acquisition trials, follow up.</p> <p>Task a backwards giant circle to headstand, a kip cast, and a clear circle on the uneven bars.</p> <p>Dependant variables: performance rating, and a social validity questionnaire.</p> <p>Video-based expert model and video-based recommend it to others, thought that Performance feedback was provided both singular and with a combined split screen.</p>	<p>All participants improved their performance from the baseline rating on all technical skills, from the acquisition trials and follow up trials.</p> <p>Mean baseline performance increased across all girls and skill of 53%.</p> <p>The social validity questionnaire revealed that both the coaches and athletes liked the procedure, would it had improved performance, and thought it was helpful and easy to follow.</p>

*Significant difference in performance for video feedback group. **Some significant differences found for video feedback group. *** Meaningful differences in non-inferential designs.

A number of studies have demonstrated that video-based feedback is a useful tool to enhance sports skill acquisition (Bunker et al., 1976; Hazden et al., 1990; Rikil & Smith, 1980), especially when the feedback is individualised rather than delivered to a group (Hazden et al., 1990). Also expert video models (Atienza et al., 1998; Baudry et al., 2006; Hall & Erffmeyer, 1983), self-models (Baudry et al., 2006; Clark & Ste-Marie, 2007; Starek & McCullagh, 1999), peer modelling (Atienza et al., 1998; Herbert & Landin, 1994), coping models (i.e., start with some errors and ‘stumbling’, followed by self-correction and ending with a strong finish) and models that vary in age, gender and ability (Atienza et al., 1998), have all been demonstrated to be useful to hasten sports motor skill acquisition. Interestingly, the work of Starek and McCullagh (1999) highlighted that the group viewing self-models significantly outperformed the peer modelling group. It also appears that the age of the participants may play an important role in determining the efficacy of video-based modelling designs, with a number of studies suggesting an age-attention related effect (Bunker et al., 1976). Indeed, a number of studies have sought to overcome the impact of learners inability to attend to the relevant learning cues by providing feedback from a coach to focus the athletes attention (e.g., Hazden et al., 1990; Herbert & Landin, 1994), or use advances in modern technology to provide split screen images of an expert performance alongside the athletes own performance (e.g., Boyer et al., 2009).

2.3.5 Section conclusion

In this section of the review, it is clear that the use of video in sport holds a great deal of potential for assisting athlete development, although, the underlying mechanisms associated with gains in performance are not yet fully understood. To date, Bandura’s (1986, 1997) social cognitive theory is the most used approach to

understanding video modelling in sport (Hars & Carmels, 2007). However, the video-based feedback and video-based modelling literature in sport has, thus far, produced equivocal findings. In this regard, the precise impact of video-based feedback and video-based modelling upon motor skill acquisition appears to be a complex phenomenon. Indeed, it is likely that a number of interrelated personal (i.e., athlete characteristics), task (i.e., skill complexity), design (i.e., acquisition/training period), and environmental factors (i.e., learning environment created) all play an important role in the efficacy of such interventions. Therefore, future investigation is required from a naturalistic perspective to better understand the impact of video-based feedback and video based modelling within sport.

Similarly to the work within the performance analysis literature, the inquiry paradigm which has dominated the use of video-based feedback within sport largely conforms to (post)positivism. In that, an ontological level reality is “real” and apprehendable, epistemologically the findings are reported as true (valid & reliable), and methodologically experimental hypotheses are verified, manipulated, chiefly through quantitative methods (Lincoln, Lynham, & Guba, 2011). However, it remains unclear as to how well these findings transfer into ‘real world’ environments, where athletes rather than participants, and coaches rather than experimenters are employed within real sporting contexts. The following section will examine the recent developments within the sports coaching literature in an attempt to highlight a number of critical concerns of previous approaches to understanding the use of performance analysis within the coaching process.

2.4.1 The coaching process

Whilst the term coaching process has been recognised within the literature for two decades, the use of the term has often proven problematic due to a lack of a sound conceptual underpinning (Cushion et al., 2006; Lyle, 2002). Indeed, the coaching process and coaching practice have often been used interchangeably within the literature. To further understand the vocation of coaching, Lyle (1996) argued for the need to develop a conceptual understanding of the profession to: (a) demystify practice, provide a common vocabulary, (b) form a basis for further research and enquiry, and (c) create a template for education is essential for the development of coaching. Lyle (2002) further argued that the foundations of scepticism and resistance to regard coaching as a credible field of scientific study can be explained by three major factors: (1) the lack of conceptual understanding, (2) the lack of prevailing coaching related theories, and (3) a general bias of performance sciences in academic studies. In an attempt to define elements of the activity of coaching, Lyle (2002, p. 40) uses the term ‘coaching process’ to describe “a purposeful, direct and indirect, formal and informal series of activities and interventions designed to improve competitive performance. The most evident part of the process is normally a planned, co-ordinated and integrated programme of preparation and competition.” A number of models of the coaching process exist none of which has received consensual agreement. This work falls within two methodological approaches models of and models for the coaching process (Cushion et al., 2006; Lyle, 1999; Lyle, 2002). Models of the coaching process are based upon empirical research, are specific to the coaching process being analysed, identify idiosyncrasies, and sometimes demonstrate contextual differences between individual and team or performance and participation sport (Lyle, 2002). Conversely, models for the coaching process are based upon the

research literature (to varying degrees), are idealistic representations, are used as an analytic tool, and can be refined (although are often not) as more empirical evidence becomes available (Lyle, 2002).

The work of Côté et al. (1995) is an example of a model of coaching and was derived from empirical data collected via interviews with elite level gymnastics coaches and depicts a 'mental model' of coaching. Lyle (2002) highlights that as Côté et al. (1995) 'mental model' (Figure 6) was derived from empirical data it has "great potential for explaining coaching practice" (p. 90). However, Lyle (2002) also highlights that a number of weaknesses are evident within the model, for example: the process element characteristic of coaching is not immediately obvious, factors are represented rather than relationships between them described, as an abstract conceptual model it is not immediately applicable to coaching practice, and finally that there is insufficient detail to differentiate between coaches and thereby analyse practice.

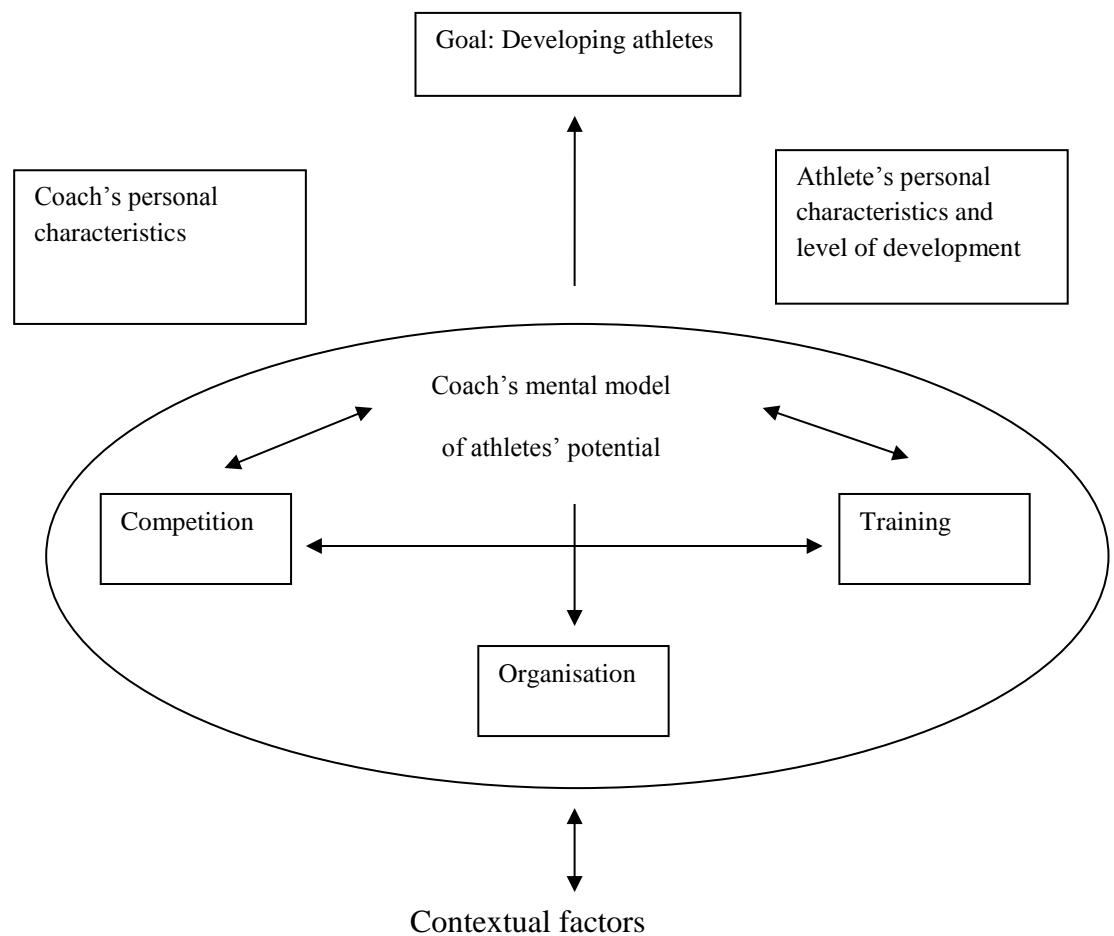


Figure 6. Côté et al.'s (1995) mental model of coaching.

In attempting to address some of the limitations within the literature Lyle (2002) proposed that fourteen 'building blocks' of the coaching process should be attended to within future work:

- (1) The information platform – The information required to feed implementation,
- (2) Coaching expertise – Knowledge and skills of the coach,
- (3) Performer capabilities – The performer's current and potential capacities,
- (4) Analysis of performance – Knowledge and understanding of performance,

(5) Operationalisation – The application within coaching practice, (6) Systematic development – Purposeful approach to improve performance, (7) Planning – Sequencing, nature and level of activities, (8) Goal setting – Giving direction and setting expectations and targets, (9) Regulation procedures – Adjustment of the process, (10) Monitoring procedures – Use of video, athlete responses and data collection, (11) Preparation and training programme – The long term planning of activities, (12) Competition programme – Engagement within a competition programme, (13) Individualisation – Designed to meet both team and individual needs, and (14) Personal and social meaning – Dealing with interpersonal activity (p. 99).

Here, Lyle (2002, p. 99) argues that the multiple variations in and between the building blocks go some way to explaining how the model can accommodate differentiation and contextualisation between coaching processes without losing the core pattern evident in the model. It may be useful to think of the coaching process as a ‘wall constructed of building blocks’.” Lyle (2002) has further attempted to construct an ‘all inclusive’ coaching process model, however, the result has been criticised as being “systematic to the point of mechanical”, thus unlikely to be able to be useful to explain the “messy, complex reality of practice” (Cushion et al., 2006, p. 88).

In summary, using models of and models for the coaching process as a conceptual framework offers a useful analytical tool by which to better understand the construction of such models. Models of the coaching process are based upon empirical data, while models for the coaching process are based on idealistic representations (Cushion et al., 2006; Lyle, 1999). Whilst a number of models exist

none has received consensual agreement, furthermore, through the process of modelling the coaching process much of the social and cultural complexity of the process is reduced (Cushion et al., 2006). As such, Jones and Wallace (2005) have highlighted that “as a result, the complexity has not been acknowledged or sufficiently understood before attempting to produce models and consequently ‘oversimplification’ of the phenomenon and over precision of prescriptions is the unfortunate price paid” (p. 123). In guiding future research endeavours, Cushion (2007b) suggests that an “analysis of coaching practice in real settings (in collaboration with coaches) provides the tools to better comprehend coaches’ and athletes individual and collective work” (p. 431).

2.4.2 Research trends within sports coaching

The landscape of coaching research has change considerably over the past 40-45 years. In a review of the coaching literature between 1970 and 2001, Gilbert and Trudel (2004) highlighted that from 1970-1973 seven coaching studies were conducted; all of which used a quantitative questionnaire design, whilst between 1998-2001 28.2% of studies used a qualitative data collection methodology (i.e., interviews and observations etc). Within the review of literature from 1970-2001, Gilbert and Trudel (2004) highlighted that coach behaviour research accounts for half of the studies (50.07%). Coach behaviour research aims to highlight ‘what coaches do’ in their practice (Gilbert & Trudel, 2004). Drawing upon the work of Anderson (1990), Gilbert and Trudel (2004) have highlighted that although descriptive research is often considered the most elementary level of research it is essential for developing the field of sports coaching as it provides the foundation for future enquiry.

2.4.3 Coach behaviour research trends: Systematic observation research

Tharp and Gallimore's (1976) seminal work examining the coaching behaviours of UCLA legendary coach John Wooden, has provided the basis for much of the research examining coach behaviour. Gallimore and Tharp (2004) later suggested that this work "might be glossed as an educational psychology perspective" to understanding sports coaching (p. 121). Within this work a systematic observation instrument was used to highlight the frequencies, durations, ratios and percentages of coaching behaviours such as the use of first name, pre-instruction, concurrent instruction, post-instruction, questioning, physical assistance, positive modelling, negative modelling, hustle, praise, scold, and management (Tharp & Gallimore, 1976). In a later re-analysis of their work Gallimore and Tharp (2004, p. 120) stated that their aim had been to "research the practices of a master teacher to generate new hypotheses and investigative avenues" within sports coaching. Indeed, Wooden won 10 NCAA Championships (7 in a row), and was named the greatest college coach of the 20th century by ESPN (Gallimore & Tharp, 2004).

Of particular interest within the findings of Tharp and Gallimore (1976) is the high percentage of instructional behaviours used by coach Wooden (50.3%). Indeed, most of coach Wooden's behaviours were instructional in nature. Moreover, Gallimore and Tharp (2004) highlighted that "75% of all utterances carried information, much of which was repetitive (instruction, hustles, modelling, & combinations)" (p. 122). Also given the 'drill like' nature of indoor basketball practices, it is unsurprising to see hustle representing 12.7% of all utterances. Following this work similar approaches to understanding coach behaviour have been evident in a number of sports such as soccer (e.g., Cushion & Jones, 2001; Ford, Yates, & Williams, 2010; Partington & Cushion, 2011; Potrac, Jones, & Armour,

2002; Potrac, Jones, & Cushion, 2007; Smith & Cushion, 2006), basketball (e.g., Bloom, Crumpton, & Anderson, 1999), golf (e.g., Schempp et al., 2004), baseball (e.g., DeMarco, Mancini, & Wuest, 1996), ice hockey (e.g., Trudel, Côté, & Bernard, 1996), and tennis (e.g., Claxton, 1988; Lacy & Goldston, 1990). Indeed, in a recent review of coach behaviour research Becker (in press) highlighted 300 research papers.

This body of coach behaviour research has typically highlighted that instructional, praise/scold, and silence behaviours account for approximately 80% of ‘what coaches do’. However, a number of problems are evident with a simple frequency based analysis of coaching behaviour. For example, there has been a great deal of debate surrounding ‘off task’ and ‘on task’ silence, with the former relating to ‘doing nothing’ and the latter relating to a ‘deliberate coaching strategy’ utilised to encourage athlete self-problem solving (Cushion, 2010). In addition, a number of authors have suggested that the recording of behaviour frequencies alone tells us very little about ‘why coaches do what they do’ (Potrac et al., 2002). Indeed, Potrac et al. (2002) highlighted that “while such enquiry has provided valuable knowledge regarding the pedagogical styles utilized by coaching practitioners in training and competition, it has failed to offer an insight into the social and contextual factors that underlie, and impinge upon, coach behaviour” (p. 184).

In a re-analysis of their earlier work Gallimore and Tharp (2004) highlighted that much of their original drive in the 1970’s was driven by the dominant behaviourist view of teaching (i.e., praise & scold of behaviours) and the “objective zeitgeist [original emphasis] of the 1970’s” (p. 124). In reconsidering their methodological approach, Gallimore and Tharp (2004) highlighted that “we were unable to appreciate the relationship of his succinct, punctuated statements and the organized context of those orchestrated and intense practices ... Lacking the context of

his intentions, we could only note with admiration the nature and tone of his pedagogical practices, but we could not interpret it” (p. 124). More recently, examples of combining data collection methods can be found in the work of Potrac et al. (2002), Smith and Cushion (2006), and Partington and Cushion (2011). Here, systematic coach observation was used to explore the ‘what’ of coaching behaviour (i.e., ‘what do coaches do?’), in combination with interpretive interviews, to explore the ‘why’ behind the exhibited behaviours (i.e., ‘why do coaches do what they do?’).

Drawing upon a mixed method approach, early work by Potrac et al. (2002) highlighted a similar ‘behavioural signature’ of the participant coach as seen in previous studies (i.e., pre-instruction, concurrent instruction, post instruction, questioning, physical assistance, positive modelling, & negative modelling accounted for 63.85% of all coded behaviours). However, interpretive interviews were also utilised to highlight how the participant coach used instructional behaviours, not just to teach athletes, but to demonstrate a level of coaching expertise and gain respect, with the goal of increasing the athletes’ compliance. Furthermore, drawing upon French and Raven’s (1959) social power typology, Potrac et al. (2002) were able to highlight a number of alternative sources of social power (e.g., reward, coercion, expert, referent, informational & legitimate power) available to the coach to influence the athletes. In addition, the work of Goffman (1959) was used to highlight how the coach engaged in ‘playing the role of the coach’, whereby the coach strategically managed interactions with the players to present a ‘coaching front’, similarly to that of an actor portraying a role within the theatre. Therefore, the use of interpretive interviews and social theory was highlighted as being particularly useful to illuminate some of the contextual complexities of coaching practice, which are not visible utilising systematic observation alone. Potrac et al. (2002) concluded that social role,

power and self-presentation are “inextricably interlinked” (p. 197), and that “through his skilful use of instruction, demonstration, praise and scold, Brian [the participant coach] attempts to create a social bond between himself and his players that is not only based upon their respect for him as a competent and knowledgeable professional, but also as a person” (pp. 197-198).

In summary, coach behaviour research represents the largest body of research in sports coaching (approximately 50% of all coaching studies). However, a number of authors have been critical of the reductionist approach to understanding sports coaching through the use of systematic observation systems. Indeed, authors have suggested that such an approach ‘strips valuable context’ from the act of coaching (Cushion, 2010; Kahan, 1999; Potrac et al., 2000), making interpretations of the nature and tone of pedagogical practices unachievable (Gallimore & Tharp, 2004). Whilst this work has, at times, provided an interesting ‘snap shot’ into ‘what coaches do’, using this approach reveals relatively little regarding the context within which the actions occur. Indeed, such work is open to the criticism of being reductionist in nature, driven by early 1970’s behavioural educational psychology and (post)positivistic research cannons of ‘objectivity’ (Gallimore & Tharp, 2004), and being predominately descriptive (Anderson, 1990) even when used within an interpretivist framework. Moreover, Kahan (1999) highlights that “it would seem that due to its nomothetic pursuit, systematic observation is incongruous with, and insensitive to, the peculiarities of coaching and the unique conditions under which coaches act” (p. 42). Indeed, it may be argued that those investigating coach behaviour have not yet made the ‘paradigm shift’ from teaching to learning which is apparent within mainstream educational research (Barr & Tagg, 1995).

However, given the relative immaturity of the field of sports coaching it has been argued that the coach behaviour research has offered a valuable database upon which to build future understanding (Potrac et al., 2007), and perhaps “generate new hypotheses and investigative avenues” for sports coaching research (Gallimore & Tharp, 2004, p. 120). Moreover, a number of researchers have demonstrated the value of integrating interpretive interviews into a mixed-method coach behaviour investigation. Here, research has been able to highlight not only the ‘what the coach did’ but also the reason ‘why the coach engaged in such behaviours’. Furthermore, in an attempt to link the personal to the social (Jones, 2009), to better understand social and contextual factors which impact upon observed behaviours, researchers have started to draw upon social theories such as French and Raven’s (1959) social power typology and Goffman’s (1959) presentation of the self in everyday life. Consequently, this work has started to address the lack of theoretical depth within sports coaching research (Cushion, 2007, 2010; Jones, 2009; Jones, Armour, & Potrac, 2002; Lyle, 2002).

However, a conceptualisation of sports coaching where coaches are able to make unfettered choices, detached from wider social, cultural and institutional pressures appears unrealistic (Cross, 1995; Cushion & Jones, 2006; Hemmestad, Jones, & Standal, 2010; Saury & Durand, 1998). In this sense, whilst a behaviourist approach to understanding the impact of an ‘antecedent-behaviour-consequence’ contingency approach appears appealing to generate simple behavioural guidelines for coaching behaviour (e.g., Smith, 2007), such reductionism does little to explore the essential social and contextual complexity in which these actions occur (Cushion, 2007; Cushion, 2010). Indeed, such an approach tells us very little about the nature of the coach-athlete relationship beyond a functional ‘behaviour-response’ episode,

which maybe fundamental to understanding actions and consequences of behaviour. Therefore, the following section will outline research which has considered ‘the coach-athlete relationship’.

2.4.4 The coach-athlete relationship

Jowett and Poczwadowski (2007) highlighted that “coaches and athletes often form relationships, alliances, or partnerships through which instruction, guidance, and support are provided to the athlete” (p. 4). Moreover, Kalinowski (1985) interviewed 21 Olympic swimmers and concluded that “no one can become an Olympic calibre swimmer without the direct support, instruction, and otherwise of many people” (p.140). Others support this notion and for the need for closeness in the coach-athlete relationship, for example, Hemery (1986) suggests that Steve Cram’s relationship with his coach went beyond a normal coach-athlete partnership and that his coach developed into “a friend of the family.....a sort of father figure” (p.122).

Early research examining leadership dynamics between the coach and athlete have commonly used either the Meditational Model of the Coach-Player Relationship (Smoll, Smith, Curtis, & Hunt, 1978) or the Multidimensional Model of Leadership in Sport (Chelladuria, 1993) to understand the impact of leadership behaviours in sport. However, this work has been criticised as being over simplistic and limited in scope (Bloom, Durant-Bush, & Salmela, 1997; Lyle, 1999). More recently, the impact of such a relationship upon athletes’ performance and psycho-social wellbeing has been examined in some detail.

Within Olympic sports, Gould, Dieffenbach and Moffett (2002) highlighted the importance of the coach having confidence in the athlete, providing a positive environment for the athlete, understanding the athlete, encouraging the athlete, and

providing unconditional support to the athlete. Moreover, within gymnastics, Pocwardowski, Barott and Henschen (2002) highlighted how coaches and athletes strived to create a 'caring' environment, where both athletes and coaches engaged in behaviours "aimed at protecting the others personal feelings through self-screening the content of their conversations and feedback" (p. 126). Furthermore, care was demonstrated through a number of small gestures and favours, such as filling the athletes' water cup while training in isolation on the bike. Indeed, one athlete commented how they knew that the coach cared for them as they would make this explicit in the interactions, making it clear that the coach wanted the athlete to be the best that they could be, and how both the coach and athlete were involved in 'negotiating consensus' where likes and dislikes were discussed before important decisions were made. Here, Pocwardowski et al. (2002, p. 122) highlighted that "interaction was the very fundamental antecedent to all phenomena" regarding the coach-athlete relationship.

Conceptually, the work of Jowett (2000, 2001), Jowett and Meek (2000), and Jowett and Cockerill (2003) has provided a framework within which to examine relationship factors that impact on the quality of the coach-athlete relationship. Drawing upon the constructs of Closeness (Berscheid, Snyder, & Omoto, 1989), Co-orientation (Newcomb, 1953), and Complementarity (Kiesler, 1997), Jowett and colleagues have developed a conceptual framework known as the '3Cs' to investigate the nature of the coach-athlete relationship (Jowett, 2003; Jowett & Cockerill, 2003; Jowett & Meek, 2000).

Later, Jowett and Ntoumantis (2004) expanded the 3Cs to include Commitment, thus creating the '3+1 Cs' framework, where "Commitment refers to coaches' and athletes' intentions to maintain their athletic relationship, and implies

the athletic dyad's cognitive orientations for the future" (Jowett & Ntoumantis, 2004, pp. 249-250).

Similarly to the work of Poczwadowski et al. (2002), Jowett and Cockerill (2003) examined positive coach-athlete relationship factors of 12 Olympic medallists. The findings illustrated that athletes viewed feelings of intimacy, trust, liking, respect, belief and commitment as being important to create Closeness between the coach and athlete. While feelings of Co-orientation were based upon shared knowledge (i.e., information exchange) and shared understanding (i.e., common goals & influence), Complementarity was based upon reciprocal behaviour (i.e., roles & tasks) and helping transactions (i.e., support).

Furthermore, using the 3Cs framework, Jowett (2003) undertook a case study to analyse the impact of conflict in the coach athlete-relationship. An international level coach-athlete dyad was purposefully selected who had "experienced conflict or negative relational issues in the athletic relationship" (Jowett, 2003, p. 446). Both the coach and athlete were interviewed regarding the nature of emotional closeness, co-orientation, and complementarity within their relationship. The data revealed how the nature of the coach-athlete relationship changed over time. From initially being a typical functional relationship (including respect, liking, trust, belief, & intimacy), with success the coach and athlete became closer until the relationship peaked with winning a silver medal at the 1996 Olympic Games in Atlanta (Jowett, 2003). Following this success the relationship between the coach and athlete deteriorated with the coach highlighting feelings of 'rejection' and 'dissatisfaction', viewing the athlete as becoming 'spoilt' (Jowett, 2003). Similarly, the athlete thought that the coach "does things just to annoy me, to create problems; for example he compares me with other athletes in a degrading way" (Jowett, 2003, p. 449). Indeed, a number of

negative emotions were evident where a lack of: Closeness (e.g., isolation, anger, & frustration), Co-orientation (e.g., disagreements, inadequacy signs, unequal needs, & imbalanced influence), and Complementarity (e.g., incompatibility, power struggles, & lack of support) were evident.

Using a structured interview approach d'Arripe-Longuville et al. (1998) examined the interactions between elite Judo coaches and athletes. The findings of this study revealed a number of surprising strategies used by the coaches to motivate the athletes to train harder and become mentally tougher and more competitive. For example, the coaches openly admitted to using strategies such as stimulating interpersonal rivalry and conflict via the use of unfair selection process, provoking athletes verbally using aggressive, ironic tones and negative feedback, displaying indifference and an intentional lack of interest in the athletes, communicating threats regarding selection, and exhibiting favouritism to some athletes (d'Arripe-Longuville et al., 1998). When asked to explain the use of such unorthodox strategies the coaches highlighted the complex cultural and political nature of Judo in France, and a belief that this was the best way to challenge the athletes to either quit or come back to train stronger, more self-reliant and resilient (d'Arripe-Longuville et al., 1998). Indeed, d'Arripe-Longuville et al. (1998) highlighted that “for political and cultural reasons and because of the personal stake, coaches have adopted autocratic methods” (p. 330). In turn, the athletes also highlighted the use of diplomacy and an acceptance of inequity, which was underlined by an “obligation to adapt or quit” (d'Arripe-Longuville et al., 1998, p. 326). Athletes also demonstrated a level of ‘sociological competence’ (Jones, 2008), to solicit feedback from the head coach directly, select appropriate members of staff to gain feedback based upon their competencies, and bypass conventional rules by seeking and utilizing other assistants (d'Arripe-

Longuville et al., 1998). Such approaches were considered 'clandestine' in nature, where the athlete would receive training and instruction from outside of the appointed coaching staff (d'Arripe-Longuville et al., 1998). Indeed, it appears that the environment that had been created could be described as a highly political 'Machiavellian-esque' social structure. Such findings then are not consistent with the leadership literature (i.e., the creation of a positive working environment and the need for positive feedback), and depict more complex micro-level power struggles between coaches and athletes to survive within the culture (d'Arripe-Longuville et al., 1998).

In summary, "although there is no conclusive evidence to suggest that a causal relationship exists between the quality of the coach-athlete relationship and performance" (Jowett, 2003, p. 444), a number of elite athletes across a wide range of sports have highlighted that they perceive that the quality of the coach-athlete relationship is important to perform optimally (e.g., Gould et al., 2002; Greenleaf et al., 2001; Jowett, 2003; Jowett & Cockerill, 2003; Pocwardowski et al., 2002). Although methodologically deductive, and therefore restrictive, 'neat' and 'clean' in nature (Jones, 2011; Jones & Wallace, 2005), the concepts of Closeness, Complementarity, Co-orientation, and Commitment have provided a useful framework to initially focus examination into the coach-athlete relationship (Jowett, 2003; Jowett & Cockerill, 2003; Jowett & Ntoumantis, 2004). Unsurprisingly, within this framework athletes have reported the importance of intimacy, trust, liking, respect, belief, commitment, shared knowledge and shared understanding, and reciprocal behaviour in maintaining a positive coach-athlete relationship (Jowett, 2003; Jowett & Cockerill, 2003). Similarly, athletes have highlighted the importance of the coach providing confidence, a positive environment, understanding, encouragement, and unconditional support (Gould et al., 2002).

2.4.5 Section conclusion

The coaching process viewed as “a planned, co-ordinated and integrated programme of preparation and competition” (Lyle, 2002, p. 40), is highly dependent upon, and operationalised through, social relationships and interactions between coaches and athletes within a situated cultural context (Cushion, 2001; 2007a, 2007b; Cushion & Jones, 2006; Lyle, 2002; Lyle & Cushion, 2010). In the study of sports coaching, the behaviours of the coach has been a predominate feature of the landscape of coaching research. This research has examined the frequencies and patterns of behaviours exhibited by the coach, with the aim of understanding ‘what coaches do’ and ‘why coaches do what they do’ (e.g., Potrac et al., 2002; Potrac et al., 2007; Smith & Cushion, 2006; Tharp & Gallimore, 1976). Typically, studies have demonstrated that instructional, praise/scold, and silence behaviours account for approximately 80% of ‘what coaches do’ (Cushion, 2010). However, often the coaches rationale behind the elicited behaviours remains more complex than the provision of performance-related feedback, and can often be understood to be influenced by self-presentational considerations such as maintain control, respect, social position and as a tool of social power (Jones et al., 2003; Potrac et al., 2002; Potrac et al., 2007).

Following work that has been concerned with observable behavioural actions of coaches, a number of studies have examined the impact of relationship factors between the coach and athlete. This body of work has started to highlight the importance of trust, respect, honesty, commitment, closeness, co-orientation, complementarity, power and conflict within the coach-athlete relationship (e.g.,

d'Arripe-Longuville, 1998; Gould et al., 2002; Greenleaf et al., 2001; Jowett, 2003; Jowett & Cockerill, 2003; Jowett & Ntoumantis, 2004; Pocwardowski et al., 2002).

Whilst retrospective interviews have been utilised to highlight that conflict and power are key issues within the coach-athlete relationship literature (d'Arripe-Longuville, 1998; Jowett, 2003), a full exploration of the complexities of such power relations 'in action' has been restricted by the methodological constraints of this body of work. Indeed, such approaches have illustrated very little about hierarchical power relations within the coach-athlete relationship in situ, which maybe fundamental to understanding actions and consequences of behaviour. This growing body of work is important as it highlights some of the realities of coaches and athletes working closely together within high performance sport, which is considerably different from a coach-athlete relationship which may be evident within youth participation sport (Lyle, 2002). Therefore, the following section will outline research which has attempted to draw upon diverse methodological approaches from the social science literature in conceptualising coaching as a social process.

2.5.1 Coaching as a social process

Early investigations into sports coaching have focused upon the development of a theory and methodology of training, technical and tactical knowledge or effective coaching behaviours drawing upon sport science sub-disciplines of physiology, psychology, nutrition and biomechanics (Jones, 2000). In his critique of this literature, Jones (2000) highlighted that as a consequence, sports coaching research has often developed along "scientific, fragmented lines, while the essential humanistic social nature of the total process [of coaching] remains less well understood" (p. 33). Here, Jones (2000) cautions that "what are produced, as a consequence, are two-dimensional

coaches who, being driven by mechanistic considerations which are unable to comprehend and thus, adapt to the complex dynamic human context” (p. 34). As a result, Jones et al. (2002) have highlighted that “despite the recent increase of research into coaching, the essential social and cultural nature of the process has received little attention” (p. 34). Moreover, Potrac et al. (2000) have highlighted that research into coaching has been limited by its focus on developing theories and methods of training linked, in the main, to the psychological and physical development of the athletes. In an attempt to broaden research interests into sports coaching Jones et al. (2002) proposed that role, interaction, and power are three interrelated concepts which are in need of further examination. Role theory is a concept that has been utilised widely in psychology, social psychology, and organisation research, where roles are viewed as positions within a social structure (Welbourne, Johnson, & Elez, 1998). In applying role theory to sports coaching, Jones et al. (2002) have suggested that coaches become socialised into behaving in certain ways to fulfil a role requirement but retain the ability to either conform or resist such pressure. Here, Jones et al. (2002) draw upon the concept of ‘organisational socialisation’ to depict the way the neophyte coaches acquire the skills and supporting ideology to contribute towards the profession learning “how to do things and what matters around here” (Sage, 1998, p. 87). Furthermore, drawing upon the work of Goffman (1959), Jones et al. (2002) highlight that interactions occur when two or more people are in one another’s presence. In particular, Jones et al. (2002) highlight the use of ‘impression management’ or ‘face work’ as an analytical tool to understand the way that coaches ‘present themselves to athletes within such interactions’, where ‘presentation of the self’ can be seen to be closely related to role theory in the performance of the ‘coaching role’ (Goffman, 1959). Furthermore,

Goffman (1959) uses a dramaturgical approach, using performance drama as a metaphor to understand how actors 'play roles' within social structures. In the coaching context, the coach may be thought of as the 'actor' and the athletes as the 'audience'. Drawing upon Branhart (1994), Jones et al. (2002) suggest that within the coaching context interactions can be viewed "as a performance shaped by environment and audience, constructed to provide others with the impressions that are consistent with the desired goals of the actors" (Branhart, 1994, p. 2). Finally, Jones et al. (2002) explain that social power viewed as the "ability to get others to do what you want them to do" (Weber, 1978), or to get them to do something they otherwise would not do" (Hardy, 1995, p. xiii), should be considered an important concept to understand the situated nature of sports coaching. In this regard, Jones et al. (2002) highlight that "power is not merely imposing from above but also often involves consent of subordinate groups and the soothing of resistance through adaptation" (p. 42). Drawing upon French and Raven's (1959) original social power typology of reward power, coercive power, legitimate power, referent power, and expert power, Jones et al. (2002) suggest that understanding social power may assist in better understanding how coach's legitimacy is created and how the coach is able to influence athlete's behaviours. Specifically Jones et al. (2002) suggest that "through a social inquiry into the everyday actions and strategies of coaches, we might gain a better understanding of the complexity that is the coaching environment, on how coaches attempt to manipulate it, and how they cope with the multitude of variations that exist within it" (p. 45).

In summary, Jones et al. (2002) propose that to better understand the complexity of the realities of sports coaching, future empirical investigation within sports coaching should consider how role, power and interaction 'intersect' within the

coaching context. That is, that role and power should be viewed as simultaneously occurring phenomena which are evident within coach athlete interactions.

Importantly, this work has signified a methodological change in direction for coaching research, where the early (post)positivist methodological approaches driven by early behaviourist approaches concerned with the measurement and modification of coaching behaviour have more recently been challenged by a naturalistic constructivist ontology and epistemology, which is concerned with local and specific constructed and co-constructed realities, where understanding is created through interactions with our surroundings (Lincoln et al., 2011). Here, the research process is seen as co-created by the inquired and inquirer with the aim of understanding and interpreting meaning (Lincoln et al., 2011). The following section highlights a number of key studies which have undertaken a social analysis of sports coaching practice drawing upon a constructivist research approach.

2.5.2 A social analysis of sports coaching practice

The work of Jones, Armour and Potrac (2003) is one of the earliest examples of an investigation into sports coaching which focuses upon the social construction of coaching knowledge. Such investigations have started to examine the coaches' philosophy that underpins their behaviours, considering not only 'what coaches do' but 'why they do it'. In this sense, a coaching philosophy can be viewed as "a set of values and behaviours that serve to guide the actions of a coach" (Wilcox & Trudel, 1998, p. 41). Similarly, a coaching philosophy has been viewed as "a personal statement that is based on the values and beliefs that direct ones coaching" (Kidman

& Hanrahan, 1997, p. 32), or “a comprehensive statement about the beliefs that characterise a coach’s practice” (Lyle, 1999, p. 30).

As opposed to cognitive-based examinations of factual knowledge content, the work of Jones et al. (2003) is concerned with how Steve Harrison an expert coach constructed and continued to construct his coaching knowledge. Using a life story approach, a narrative of Steve’s career focusing upon his ‘coaching context’, ‘becoming a coach’, ‘learning from others, mentors and influences’, ‘learning from the self, experiential knowledge and player empathy’, ‘professional knowledge and coach certification’, ‘the utilisation of knowledge and effective coaching’ are explored. The findings of this work highlighted that Steve viewed himself as a ‘players coach’, and believed that the coach must respect players, value them, and support them as individuals, providing a positive climate (Jones et al., 2003). This formed the foundation of Steve’s coaching philosophy, which “permeated all aspects of his work” (Jones et al., 2003, p. 217). Steve highlighted that one of the main sources of his coaching knowledge came from watching other coaches (both good & bad) work, and then attempting to take the ‘good bits’ and use them in a way that suited Steve’s own approach to coaching (Jones et al., 2003). Steve was also aware of the process of socialisation into the profession of coaching, and how this in-turn resulted in him acting in certain ways, although Steve always felt that he had the ability to either conform to, or resist such pressures upon him (Jones et al., 2003). Similarly, to the findings of Tharp and Gallimore (1976, 2004) in their examination of the coaching practices of John Wooden, Steve has an “unshakable belief in the importance of concise instruction” (Jones et al., 2003, p. 224). Interestingly, Steve highlighted the importance of the need to ‘be himself’ and ‘know himself’ as a coach to “weave his knowledge into a personal style” (Jones et al., 2003, p. 223), thus,

creating a personalised coaching identity which is recognisable both to the athletes and the self. Finally, Steve highlighted the importance of portraying himself as being “bulletproof” to the players, where he was able to quickly and seamlessly adapt to any unforeseen circumstances which may affect the quality of his training sessions (Jones et al., 2003, p. 225). Steve felt that this was important to retain the projection of a ‘professional coaching front’ (Jones et al., 2003).

Following this work similar investigations across a number of sports have highlighted a number of similarities with Steve’s story. For example, soccer coach Hope Powell highlighted her ability to think like a player stating “I do look back to when I was a player, and ask, ‘Would I enjoy this?’ And there are some things that you have to do that players absolutely hate and it’s boring but it needs to be done so I do them thoroughly but quickly” (Cushion, 2004, p. 36). While soccer coach Graham Taylor highlighted that the essence of coaching is “knowing enough about your subject to be able to deliver practices and information in a way that is of clear benefit to the players in preparing them for the demands and rigours of competition” (Potrac & Purdy, 2004, p. 21), and that:

Unless people are willing to listen to you, unless you’re prepared to listen to them and understand them as people, the best coaching book in the world isn’t going to help you. It all comes down to how well they really want to do for you. It all comes back to the relationship that you have with your players and the trust that exists between you. It can’t be a relationship if it’s not based on trust. That’s just life (Potrac & Purdy, 2004, p. 28).

In applying a role (Jones, 2004b), interaction (Jones, 2004c) and power (Potrac, 2004) analysis to the coaching narratives within the work of Jones et al. (2004), Steve Harrison suggested that coaching role requirements were learnt through the observation of others, stating that “I think you learn something from everybody; you learn by copying what people you admire do, and then you add variations of your own” (Jones, 2004b, p. 120). Also, in acknowledging the performative nature of coaching Graham Taylor and Hope Powell highlighted the importance of expressing themselves within their interactions with the players in a manner that is a convincing confident ‘front’, with Graham Taylor suggesting that “the best coaches would make good actors” (Jones, 2004c, p. 139), while Steve Harrison went to great lengths to ensure that his coaching delivery was not viewed as ‘false’ by the players. Here, the coaches highlighted the importance of undertaking a number of impression management strategies in order to ‘keep the players on side’. Furthermore, in a power analysis of the coaches’ experiences, philosophies and behaviours Potrac (2004) highlighted how Graham Taylor highlighted that “inappropriate training methods and the unrealistic expectations of one of his former coaches had an impact upon credibility” (p. 154), while Steve Harrison highlighted the need to be working as equals with players if he was to get the best from them in match day performance (Potrac, 2004). Indeed, Steve Harrison further highlighted the need to possess and display high levels of technical knowledge with the ability to deliver this in a concise manner, thus increasing his social power resource of expert and informational power (French & Raven, 1959; Raven, 1992). Moreover, all the coaches highlighted the need to use rewards to help to improve the learning and positive coaching environment that they strived to create. Such actions can be understood to relate to the coaches ability to use reward power to incentivise the subordinate athletes (French & Raven, 1959).

Finally, in attempting to understand how relationship factors can be influenced by power relations, Potrac (2004) highlights how the personal and positive selected interactional strategies used by Steve Harrison, Graham Taylor and Hope Powell can be understood as increasing the coaches 'referent power', which is based upon personal admiration, respect and liking (Raven, 2001). Here, actions that demonstrate positive interpersonal interactions such as care and understanding reinforce the coaches' referent power base.

Whilst this work has been valuable in broadening our understanding of the social complexities involved in acquiring coaching knowledge, and developing meaningful interpersonal relationships with athletes, again this work has relied heavily upon retrospective interviews, and therefore methodologically limited in examining the realities of such philosophies and behaviours within real world pressurised high performance sporting contexts. That is, 'what coaches say they do' and 'what coaches actually do' may not always be the same thing (Cushion, 2010; McAlister, Blinde, & Weiss, 2000). Therefore, the following section will outline a number of key findings from recent ethnographic work within sports coaching, in an attempt to further explore issues regarding power relations within high performance environments.

Cushion and Jones (2006) examined the coach-athlete relationship within professional youth soccer. Drawing upon Pierre Bourdieu's sociological concepts of field (i.e., the social context including structured systems of position), capital (i.e., economic, cultural, social, symbolic and physical prestige), habitus (i.e., internalised cultural norms), and symbolic violence (i.e., the imposition of order, restraint through legitimised cultural practices), to unveil power, structure and the accompanying discourse within the club context. Through ethnographic observations and interviews

data were collected in situ to give a 'truer' picture of the coaching practice of elite coaches within a Premier League Academy context. First of all, it is important to develop an understanding of the context in which these interactions took place. Cushion and Jones (2006, p. 146) highlight that "players in these academies are constantly scrutinized by coaches who are in turn predominately judged, despite the official developmental ethos, on game results". This is an important contextual constraint upon both the players and coaches, and goes some way to explaining the pattern of the interactions that were evident. Indeed, the context should be viewed as hierarchical, where coaches occupy a higher position within the social structure than athletes, and whereby external pressures upon winning and developing players for the first team impact upon the continued employment prospects of the coaching staff. An example of this can be seen during one of the coach's talks to the players "N, the only thing reliable about you is that when you get the ball I already know you're going to miss. I just turn my back now. Unreliable players get coaches the sack" (Cushion & Jones, 2006).

The main findings of this work revealed a highly authoritarian, restrictive training regime, where the use of physical punishment (i.e., exercise and increased training loads etc) and aggressive (often swearing) language was seen to be a legitimate coaching strategy both used by the coaches and accepted as normal practice by the athletes (p. 151).

Here, Cushion and Jones (2006) highlighted how the language that was used was a form of symbolic violence, with the aim of keeping the athletes "within a realm of obedience" (Cushion & Jones, 2006, p. 150). Furthermore, the coaching discourse

was described as “gendered, autocratic, and hierarchical”, aimed at purposefully punishing the athletes for poor performance, further demeaning their efforts by questioning the athletes’ masculinity (Cushion & Jones, 2006, p. 150). In explaining the use of such abusive, harsh, and personalised language, one of the coaches commented that “I think it’s the easiest way to do things when you feel under pressure and I know that I’ve done that. I think that’s part of the culture we all come up in as well. It was certainly done to me in my life as a player” (Cushion & Jones, 2006, p. 146). Cushion and Jones (2006) further highlight that “the fact that this domination was consistent and almost omnipresent ensured that a process of inculcation, or habitus occurred”, that is, the culture became embodied as actors saw such interactions as “sensible” and “legitimate” (p. 150), thus perpetuating the hierarchical power structure within the coaching context. Of particular note here, is not just the findings of this work but also the ‘methodological appropriateness’ (Patton, 2002), required to unearth such an authoritarian coach-dominated environment. Specifically, it is likely that if the data were collected via coach interviews alone, that the coaches may have espoused a coaching philosophy that values a positive and supportive environment, rather than the realities of their interactional practices. Whilst such data remains surprising and certainly goes against the body of literature which highlights the importance of a positive coaching environment, it would be naive to assume that such interactions were a ‘one off’ occurrence. Indeed, such interactional practices have been highlighted as being relatively common within the culture of professional football (Butcher, 1987; Nelson, 1995; Robson, 1982). Indeed, similarly to the findings of d’Arripe-Longuville et al. (1998) in Judo, the coaches viewed the “harsh, aggressive, and sometimes threatening discourse as being in the players’ best interests, a specific strategy to improve their respective performances” (Cushion &

Jones, 2006, p. 155). Interestingly, Cushion and Jones (2006) highlight that within a squad setting coach-athlete relationships were affected by the coaches' perception of the players as being either, good players, favourites, or rejects. This classification by the coaches was based upon the coaches' perceptions of the attitude and technical and athletic ability of players'. Here, attitude was particularly related to obedience towards the coaches' requests, thus, reinforcing the social power structures evident within the academy environment, as such, "players who succumbed to the regime and followed its values received a more positive experience in return" (Cushion & Jones, 2006, p. 156). Moreover, because of the cultural capital posed by one of the coaches (an ex-professional player), the players perceived the coaches as being 'someone worth listening to', 'someone who's been there and done it', which therefore reinforced the coaches power and legitimised his actions in the eyes of the players (Cushion & Jones, 2006).

Similarly, using an autoethnographic approach within competitive rowing Purdy, Potrac, and Jones (2008) highlighted similar issues of power, consent and ultimately resistance within a dysfunctional coach-rowing crew relationship. Here, the authors draw upon Giddens (1984) work on power, agency and the dialectic of control, and Nyberg's (1981) concept of 'power over power', where "rather than power being an unlimited capacity which one person wields absolutely over another" (Purdy et al., 2008, p. 323), subordinate individuals are not viewed as 'powerless' but possess some degree of power and an ability to resist influence. Initially, when a new coach is appointed at the rowing club the first author highlights a sense of excitement and a desire for training to be 'more professional' to improve the competitive standard of the squad.

Here, Purdy et al. (2008) highlighted how the coaching practices of the coach had provided her with a comfortable feeling of being secure and safe in the coaches charge, thus developing a sense of ‘ontological security’ (Giddens, 1984), which may be understood as “a sense of confidence continuity and trust in society” (Purdy et al., 2008, p. 325). Whilst initial Purdy attempts to support the coaching regime of the new coach, the relationship between the coach and squad soon became frayed. The athletes perceived the coach to be highly autocratic in her behaviour to the point of being condescending, treating the athletes like robots who should obey her coaching requests with little input into the process themselves (Purdy et al., 2008). Moreover, the athletes perceived the coach to lack in interpersonal skills in her interactions, often snapping and being unreasonable, particularly in early morning training sessions (Purdy et al., 2008). Importantly, Purdy et al. (2008) highlighted that “the problem was not caused by a perceived deficiency in terms of her expertise or knowledge, but of how she chose to interact and communicate with us” (p. 328). This breakdown in the quality of the coach-athlete interactions eventually led to resistance from the squad, who used the power resource of withdrawal of best efforts and derogatory humour in an attempt to regain a sense of power within the coach-athlete interactions. Finally, following a post-race argument with one of the boat crew, the coach announced to the rest of the squad that she had deselected for the 8-boat although did not relay this information on to the athlete. When the athlete attended the following event unaware of his de-selection due to ‘not having time to tell him’, the coach lost the respect of Purdy as a knowledgeable professional and as a person, who following the National Championships withdrew from the squad.

2.5.3 Section conclusion

There is a growing body of evidence that challenges the ‘performance’ and ‘effectiveness’ research agenda of early coaching research, with the aim of understanding a ‘truer’ picture of sports coaching replete with complexity and power struggles (Cushion & Jones, 2006; Purdy et al., 2008). Indeed, the work of Cushion and Jones (2006) highlights how power can be used (or misused) within the hierarchical structure of professional youth football. Moreover, the work of Purdy et al. (2008) demonstrates how far from being ‘powerless’ athletes can, at times, resist such pressures in innovative ways through the withdrawal of best efforts, the use of derogatory humour and direct coach-athlete conflict. The final section of the review of literature presents a critique of the current foundations of the use of performance analysis within the coaching process.

2.6.1 A critique of the current foundations of the use of performance analysis within the coaching process

The principle assumption upon which the performance analysis literature is based is that coaching observations are not only unreliable but are also inaccurate (Hughes & Franks, 1997). Typically, early research by Franks and Miller (1986, 1991) is cited in support of this argument; that international level soccer coaches could only recall 30 percent of the key factors in a game and that they were less than 45 percent correct in the post-game assessment of what occurred during matches. Therefore, that case for notational analysis, latterly termed ‘performance analysis’, was founded upon ‘the coaching process and its problems’ (Hughes & Franks, 1997; Hughes & Franks, 2004; Hughes & Franks, 2008). This section will review, in detail, the key studies upon which this assumption is based.

In their seminal paper titled 'Eyewitness Testimony in Sport', Franks and Miller (1986) highlight a paucity of research specifically aimed at assessing the observational strategies of expert coaches. Therefore, Franks and Miller (1986) designed a study to assess "the observational accuracy of novice coaches (third year physical education students) during the viewing of an international soccer game" (p. 41). The task was to view and recall events from viewing a 45-minute video of a soccer game. The 30 participants were randomly assigned to one of three groups: (1) a control group who viewed the video footage without pre instruction regarding the organisation of their observations, (2) who were instructed to record specific behaviours from the video tape, and (3) who were also instructed to record specific behaviours from the video tape, with additional training regarding systematic errors of observation. Following the viewing of the game participants were asked to complete a questionnaire, consisting of 30 questions, specifically assessing recall regarding ball possession, shots on goal, passing, set pieces, crossing, and goalkeeping. The results highlighted no significant difference between the three groups in the post-test, with a mean observational accuracy score of 42%, although certain categories were better recalled than others. Indeed, novice coaches demonstrated a significantly better ability to recall set piece information more accurately than other categories (Franks & Miller, 1986). Importantly, in explaining the relatively low recall accuracy of the coaches, Franks and Miller (1986) highlighted that "the coaches were novice (soccer observers and as such would view the events without any direct system of observation. Therefore, the game events may have appeared to be random in nature and, hence, difficult to store and retrieve in any organizational format" (p. 43). Indeed, Franks and Miller (1986, p. 44) further highlighted that "using experienced coaches as subjects" may help in solving such issues in future research designs. Given that this study forms

one of the foundations of the use of performance analysis in the coaching process it appears that the findings have been taken somewhat out of context. That is, Hughes and Franks (1997) stated that:

Traditionally, coaching intervention has been based upon subjective observations of athletes. However, several recent studies have shown that such observations are not only unreliable but also inaccurate. Franks and Miller (1986) compared coaching observations to eyewitness testimony of a criminal event. Using methodology gained from applied memory research, they showed that international-level soccer coaches could only recollect 42% of the key factors that determine successful soccer performance during one match (p. 1).

Similarly, Franks (2004) stated that:

Franks and Miller (1986) compared coaching observations to eyewitness testimony of criminal events. Using methodology gained from applied memory research, they showed that that international level soccer coaches could recollect 30% of the key factors that determined successful soccer performance during one match (p. 8).

Whilst Maslovat and Franks (2008, p. 3) later stated that:

Studies have shown international level soccer coaches could only recollect 30 percent of the key factors that determined successful soccer performance and

were less than 45 percent correct in the post-game assessment of what occurred during a game (Franks & Miller, 1986, 1991).

However, the coaches used in the Franks and Miller (1986) study were in fact novice coaches (although an international soccer match was viewed). Moreover, only 45 minutes and not 90 minutes of footage was in fact used (therefore only one half of a soccer match & not a full game). Finally, it is open to debate as to whether the questions that the researchers asked the participants to recall were in fact “key factors that determined successful soccer performance” (Maslovat & Franks, 2008, p. 3). That is, the methodology utilised asked participants to comment on the frequency of fairly standard game events rather than any pertinent individual player or team level technical analysis, which therefore leaves the research team open to criticism for being too similar to the recall of factual information which may be useful for a criminal trials, rather than the information which expert coaches may attend to, store and utilise within their coaching process (Lyle, 2010; Vergeer & Lyle, 2009).

In the second key study often cited as the grounds upon which the use of performance analysis in the coaching process is based, Franks and Miller (1991) examined the possibility of ‘training coaches to remember and observe’. The participants were 28 male and 8 female soccer coaches, “all who had attained their Level 3 or ‘C’ License coaching certificate within the National Coaching Certification Programme and their coaching experience ranged between 2 and 20 years” (Franks & Miller, 1991, p. 289). The participants were split into three groups: (1) experimental group who undertook a sports specific observation training programme, (2) control group 1 who answered a questionnaire after each tape, and (3) control group 2 who engaged in group discussions and completed a personal analysis, additionally, each

group viewed seven 15 minute training videos that included nine critical features which the coaches were required to recall as part of their training. A pre-test post-test designed was used; where the pre-test consisted of viewing 30 minutes of a soccer game, in which coaches were instructed that they would be asked questions relating to three categories: (1) goal scoring, (3) shot taking, and (3) missed opportunities to shoot. Once the video had ended the participants completed a recall accuracy questionnaire. The results revealed an overall pre-test accuracy of 16.8%, with an increase to 21% in the post-test. Franks and Miller (1991) highlighted that, on average, coaches at this level were not able to recall more than 40% of the information that pertained to how goals were scored.

Clearly, with a range of coaching experience of between “2 and 20 years” (Franks & Miller, 1991, p. 289), it is questionable if the coaches were international level or ‘expert’ coaches, therefore the accuracy of the claims regarding ‘the coaching process and its problems’ remains open to some criticism. That is, international or ‘expert’ coaches were not used in either of the studies by Franks and Miller (1986, 1991), which is highly problematic for the field given the earlier claims. Indeed, this is the single most repeated justification for the use of performance analysis within the coaching process (Hughes & Franks, 1997, 2004, 2008). With the sole case made for the use of performance analysis in the coaching based upon a small number of early research studies which question coaches’ recall and cognitive abilities (Franks & Miller, 1986, 1991). It is worthwhile reflecting upon their relevance within contemporary understanding of expertise in sports coaching and alternative methodological approaches utilised within this field.

2.6.2 Expertise in sports coaching

Early research into expertise in coaching by Saury and Durand (1998) suggested that the cognitive functioning of the expert sailing coaches was highly adaptive in nature, their planning was very flexible, and based upon adapting to the dynamic context (arising coaching situations). Furthermore, similarly to the findings of the expertise literature more generally, the accumulation of thousands of hours of deliberate coaching practice appears to be significantly related to the development of expertise in coaching (Gilbert, Lichtenwaldt, Gilbert, Zelezny, & Côté, 2009). In addition, recent research by Vergeer and Lyle (2009) suggests that when comparing inexperienced and experience coaches, there were differences in both the amount and value of information attended to by coaches. Vergeer and Lyle (2009) further demonstrated that experienced coaches showed evidence of an extensive knowledge and a capacity to weigh a range of factors and took earlier decisions than less experienced coaches. In addition, these finding appear to be in-line with previous expertise research, an emerging body of literature suggests that expert coaches make a significant investment in monitoring and improving their coaching practice (Jones et al., 2003; Schempp, Webster, McCullick, Busch, & Mason, 2007; Nelson, 2010; Werthner & Trudel, 2009).

Interestingly, utilising a similar recall approach to Franks and Miller (1986), recent research in sports coaching by Laird and Waters (2008) demonstrated that coaches possessing a range of Scottish Football Association (SFA) qualifications (Levels 1- 4) were 17.2% more accurate than the participants in Franks and Miller's (1986) study. These findings are particularly interesting given the relatively low level of qualification and inexperience of most of the participant coaches. That is, 6 years was the most coaching experience any of the participant had acquired and the majority

(6 out of 8) of coaches had only coached for 3 years or less, with most of the participants (5 out of 8) only holding the most basic Level 1 qualification. Therefore, given the findings of Laird and Waters (2008) study, and the recent increase in our understanding of the complex nature of coaching knowledge (Jones et al., 2003; Saury & Durand, 1998; Vergeer & Lyle, 2009) it appears that the early work of Franks and Miller (1986, 1991) has been misinterpreted, and more importantly, appears to have failed to capture much of what is currently understood as the complexity of coaching knowledge (Jones et al., 2003; Saury & Durand, 1998; Lyle, 2010; Vergeer & Lyle, 2009). That is, a simple recall and recognition approach to assessing coaches' cognitive abilities may be questioned in light of recent coaching decision-making research, which suggests that dealing with complexity via cognitive decision making lies at the heart of coaching practice (Abraham, Collins, & Martindale, 2006; Côté, 1998; Nash & Collins, 2006; Lyle, 2010; Vergeer & Lyle, 2007). Therefore, part of the challenge for future research in coaching is to identify 'nuance' methods for examining such complexity (Jones, Bowes, & Kingston, 2010).

2.6.3 A critique of the representation of the use of performance analysis within the coaching process

Early 'modelling' work (e.g., Franks et al., 1983; Hughes & Franks, 1997; Robinson, 1999; Hughes, 2008) has tended to depict performance analysis as simplistic, unproblematic, and a given series of predefined events. Such representations are arguably idealistic models for the analysis of performance, rather than being empirically grounded models of performance analysis use 'in action' (Cushion, Armour, & Jones, 2006). Recognising this difference would seem important because, "the current set of models result in a representation of the coaching process

that is often reduced in complexity and scale, and the essential social and cultural elements of the process are often underplayed” (Cushion et al., 2006, p. 83).

Increasingly, empirical findings have depicted the coaching process as a complex, dynamic, cultural and politically negotiated social process (Cushion & Jones, 2006; Poczwadowski et al., 2002). Hence, the ‘neat’ application of such knowledge in the ‘real-world’ has been questioned, as pedagogical interactions occurring between the coach and athlete do not exist in a vacuum, but rather in a ‘messy’ and contested human social context (Cushion & Jones, 2006; Purdy et al., 2008).

Importantly, Franks (2002) has suggested that “experimental studies used to develop practice guidelines may not be grounded in the realities of ‘real world’ coaching” (p. 4). Similarly, Jones and Wallace (2005) have argued that a drive for practical prescription has largely dominated the field of coaching and coach education (‘knowledge-for-action’). Jones and Wallace (2005) suggest that this focus has restricted the development of a more sophisticated understanding of sports coaching. Importantly, recent empirical research has depicted coaching as a complex, reciprocal and co-constructed interpersonal process (Cushion & Jones, 2006; d’Arripe-Longuville et al., 1998; Poczwadowski et al., 2002). Moreover, Jones and Wallace (2005) have argued that ‘knowledge-for-understanding’ projects, using a ‘bottom-up’ approach, are required if a more realistic and complete appreciation of coaching is to evolve. That is, Jones and Wallace (2005) contend that insights gained through ‘knowledge-for-understanding’ projects could provide a more secure foundation on which ‘knowledge-for-action’ could be built and from which more realistic guidelines for coach education could evolve.

2.7.1 Conclusion and research problem

The performance analysis literature has principally focused upon ‘notational analysis’ or ‘performance analysis’ as a method of recording ‘accurate’ and ‘reliable’ data. Here, a number of research approaches have been utilised to provide information that relates to understandings sports performance data. Moreover, a number of suggestions have been made based upon the applied efficacy of this work to assist coaches in their coaching process. The principle assumption which underpins this work has been termed ‘the coaching process and its problem’, in that, expert coaches are unable to recall more than 45% of key game events (Franks, 2004; Maslovat & Franks, 2008). However, the critical literature review provided here has questioned a number of assumptions of this work, which therefore raises issues about the realities of the use of performance analysis within the coaching process.

Furthermore, the, as yet unconnected and divergent research agendas and methodological choices of researchers working within the performance analysis, video-based feedback and sports coaching literature were highlighted. Here, the (post)positivistic methodological approaches utilised within the performance analysis, video-based feedback literature, and early coaching research, were contrasted with a more recent constructivist based approaches concerned positioned with an ontological view of local and specific co-constructed realities, within a subjectivist epistemology to understanding some of the complex realities of sports coaching. Importantly, to date, within performance analysis texts ‘the use of performance analysis within the coaching process’ has often been depicted in a simplistic, linear and unproblematic manner, stripped of social context. In drawing upon the work of Lyle (1999, 2002) and Cushion et al. (2006), and contemporary findings within the sports coaching literature a critique of these assumptions was offered which questioned such a

simplistic approach given recent empirical work (e.g., Cushion & Jones, 2006; Purdy et al., 2008). Here, interpretive and ethnographic methodologies were highlighted as providing the potential to illuminate some of the complex social realities evident within sports coaching. That is, although the ‘what’ of performance analysis (i.e., system design, biomechanical analysis techniques) which is well researched, the ‘how’ or use of performance analysis in the coaching process remains less understood (Lyons, 1988; Barttlet, 2001). In this regard, Stratton et al. (2004) have reminded us that “even though coaches have greater access to video and other forms of technology, it is not yet clear how best to integrate this technology into coaching practice” (p. 132).

Consequently, much of the previous academic writing regarding the ‘science’ of performance analysis (i.e., reliability, system design, & the use of performance indicators) has enhanced our appreciation of the uses of methods and the handling of performance data, however, it appears to have fallen short of examining the use of performance analysis in practice (Franks, 2002). Similarly to Jones (2000) critique of the development of sports coaching, performance analysis has developed along bio-scientific fragmented lines (e.g., statistical analysis, biomechanical analysis, & physiological analysis etc.) while the essential humanistic social nature of the total process remains less well understood. It is clear that coaches, particular expert coaches, do use video-based performance analysis within their ‘coaching process’ (Abraham et al., 2006; Pain & Harwood, 2007, 2008). However, if video-based performance analysis is indeed located within the coaching process then given the recent finding of the coaching literature (i.e., the power dominated micro-political nature of coach-athlete interactions) then it is likely that the use of performance analysis, like coaching more broadly, does not exist in a social vacuum (Cushion &

Jones, 2006; Purdy et al., 2008). Indeed, given the findings of the ethnographic work of Cushion and Jones (2006), of particular importance here is the role of socially situated actions, particularly within institutional performance environments (i.e., soccer youth academy's). Specifically, far from instruction by the academy coaches being unproblematic 'neutral' technical instruction, as often depicted within the performance analysis, video-feedback and video modelling literature, feedback to players was often illustrated to be hierarchically delivered to athletes within an unequal power sharing relationship. Therefore, elite youth soccer appears to offer an ideal site, replete with situated interactions to study, and thus better comprehend, the realities of the use of video-based performance analysis within the coaching process. Indeed, such empirical work is required to build a more secure knowledge base to inform practice (Jones & Wallace, 2005). The primary aim of the thesis, therefore, is to examine the realities of the use of video-based performance analysis within elite youth soccer, with the aim of enhancing the provision of coach education within this area.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

“‘Why bother with the philosophy of science anyway?’ you might be thinking. ‘What has it to do with my concerns as a sport scientist?’ The first thing that occurs to me is that every working scientist will adopt procedures and attitudes which are derived, consciously or not, from some basic beliefs about the scientific enterprise. What philosophy of science tries to do is to get these basic commitments out into the open so that they can be rationally explained. To find oneself to have been committed to an incoherent view of one’s own activity might be the beginning of important changes in one’s scientific practice, attitudes and knowledge (Parry, 2005, p. 29).”

This chapter outlines how I came to select the methodological approaches best suited to address the research questioned posed within the thesis. The chapter opens, by highlighting the research origins of this thesis via a reflexive examination of ‘critical incidents’ within my applied professional practice. Secondly, a brief overview of the importance of considering the philosophy of science is considered. Thirdly, follows a discussion of the dominant paradigms within scientific research and resulting ‘paradigm wars’ (Denzin, 2010). The fourth section positions this thesis within an interpretivist framework, where the aim of inquiry is to “understand and interpret through meaning of phenomena, through the joint construction/reconstruction of meaning of lived experience” (Lincoln, Lynham, & Guba, 2011, p. 106). The final section explores the specific methods utilised and an overview of the data collection process within the thesis.

3.2 Research origins

Strauss and Corbin (1998, p. 38) suggest that personal and professional experiences “might be a more valuable indicator of a potentially successful research endeavour than a more abstract source ... as professional experience frequently leads to the judgement that some feature of the profession or its practice is less than effective, efficient, human, or equitable”. As such the following three reflections are significant turning points in my career as a young practitioner and researcher. They are my introduction to the field, and the dilemmas in my professional practice which have shaped the focus of the thesis.

The beginning: 14th August

After presenting a section of my MPhil research “the development of perceptual skill in youth soccer players” at the International Society of Sports Psychology, we relax by the pool in the hot summer sun, with a beer in our hands talk turns to football. As a young researcher with a passion for youth football and experience of video-based editing, a Professor asks if I would be interested in applying for a position as a performance analyst with the England youth football team. I would have to go through an interview process, present and be expected to undertake research as part of my duties but this seems a fantastic opportunity to finally get my hands dirty working at elite level and put my past 5 years sports science training to use! I eagerly accept and within three months I am appointed to the position.

First trip on the road: 9th September

My first time on the road with a squad is with England U19 Men's team, one of the oldest and therefore most prestigious teams we support. As it's my first game I am there as an observer to help and learn. I have an experienced mentor who will guide me through the trip and help me learn the ropes. We have two cameras to film the game, so that I can get feedback and tips about filming football matches. My mentor takes the main camera position and decides that I should gain my practice filming the back four (defensive unit). The ground is awful, the worst I have ever seen it's run down with building work everywhere. My mentor climbs a very dangerous scaffold to get the all important high central view of the game for the coaches. I climb on top of an outbuilding, level with one of the goals, and we stay in position for 2 hours filming on a cold wintery September night. After the game we arrive back at the team hotel and meet with the head coach. We review the tapes to pick out key elements from the game for the coach to play back to the squad in a team debrief. We hunch around my mentors DV player. Blue screen. There is nothing on the tape. It's a big game and the U21 manager is here to visit. Nothing. The main camera has failed and my mentor starts to show his frustration. "For fuck sake, stupid fucking camera. I stand on the rickety old scaffold risking my life for nothing!". A panic set in. Luckily the coach sees the funny side he laughs out loud "Jacque Cousteau the underwater camera man. Everything's blue like the sea!" This breaks the mounting tension. The head coach turns to me 'okay Ryan let's see what you've got'. I play my tape, it works but we can see very little of the general play as I concentrate on the angles and distances of the back four, the depth and supporting angles. My

tape helps but not much. The game is gone; we missed it there is nothing we can do. It's lost. I learn my first and biggest lesson on day three in the role, whatever you do make sure you have a film of the game. You can always go back afterwards. Without this you have nothing.

A dilemma in professional practice: 11th November

After undertaking three successful trips with the England U16 Men's team, with a team that won the Victory Shield tournament (England vs. Scotland, Ireland and Wales), I feel I am growing into the role. The staff and players are friendly. It's hard work, especially on match day often staying up working until 2am for the following morning debrief. I am given the opportunity to travel with the England Women's U19 team to follow them through a complete European Championship tournament cycle (UEFA qualification rounds, UEFA European Championship, & World Championship). The atmosphere with the Women's team is relaxed. There are no egos and everyone is respected in their role. The coaches are keen to have my input as the 'expert' in my area. I soon become aware that much of what I have learned regarding sports psychology, motor learning and other facets of sports science seems very basic, common sense, minute in applicability within a much broader context. Suddenly my enthusiasm as a student for learning about the results of laboratory based studies measuring various movement amplitudes of limbs under different feedback conditions appears wasted as this just does not relate to role or my context. The main skills that I learnt through my sports science background were generic research skills. However, I am unable to find anything in the performance analysis literature to help me as a practitioner to

deal with the complexities apparent within the coaching context. Reliability, validity and system design do not help me work with coaches and players within a performance environment. I have nothing to help guide me. The coaches appear to be the experts here not me. I need to learn from them and their experiences within this context. What works and what does not work and why?

The following section places the origins of the thesis into the broader debate regarding the philosophy of science, and the implications of this upon the thesis.

3.3.1 The philosophy of science

Balashov and Rosenberg (2003) suggested that the philosophy of science is a difficult subject to define but deals with predominately two questions; (1) The questions that the sciences (physical, biological, social, & behavioural) cannot answer now and perhaps may never be able to answer, and (2) About why the sciences cannot answer the first lot of questions. Balashov and Rosenberg (2003) further highlighted that all of these disciplines, which have spun off from philosophy, have left to philosophy a set of distinctive problems (issues which they cannot resolve) but most leave either permanently or temporarily for philosophers to deal with. Moreover, McNamee (2005, p.5) states that “it is widely held that, until the seventeenth century, the term philosophy was used to refer to any systematic enquiry of any subject after which certain methods of enquiry, certain ways of arriving at knowledge, come to be privileged.” Although frequently when examining research the philosophic view of the author/s is not often explicit, such disclosure can assist in the understanding and

interpretation of the research process (Creswell, 2009). Furthermore, Seale (1999, p.8) has suggested that “the quality of research is enhanced if the researcher engages with philosophical and methodological debates.” Similarly, McNamee (2005) suggests that the cultivation of philosophic concerns in research is critical to becoming a reflective practitioner as opposed to a mere scientific technician. This is important because philosophical views shape the decisions which researchers make regarding the research methods, research design and selection strategies of inquiry (Morgan, 2007). Therefore, the following section will provide a brief critique of the evolution of science.

3.3.2 Paradigms as scientific practices

In his 1962, 1970 and 1996 publications ‘The Structure of Scientific Revolutions’ Thomas Kuhn demonstrated that the history of science, and in particular scientific discoveries, cannot be understood as a simplistic linear accumulation of knowledge. Kuhn (1970) highlighted that many developments in science are characterised by ‘paradigms in crisis’. Where previous theories and practices are challenged and eventually either survive or are surpassed by superior theories ‘paradigm shifts’ (Abernethy & Sparrow, 1992). Kuhn (1970) uses the term paradigm to depict legitimate problems and methods of a research field, accepted examples of actual scientific practice – examples of which include law, theory, application, and instrumentation together. As Kuhn (1970, p.11) states:

Men whose research is based on shared paradigms are committed to the same rules and standards for scientific practice. That commitment and the apparent consensus it produces are prerequisites for normal science, i.e. for the genesis and continuation of a particular research tradition.

This notation relates to Kuhn's (1970) view of 'normal science' during which prevailing theories and associated methodological practices are dominant. Kuhn (1970, p.10) defines normal science as "research based firmly upon one or more past scientific achievements, achievements that some scientific community acknowledges for a time as supplying the foundation for its further practice." For example, the acceptance in peer reviewed journals of a particular theory and method of inquiry, relates to the conception of a 'paradigm' being a matter of social convention (Boyd, 1991). Furthermore, Gee (2005) suggests that new researchers in an area are 'normed' by more established researchers within the area, which includes the use of various tools and strategies in operation. Therefore, methods are through and through social and communal (Gee, 2005). Indeed, it is important to recognise that paradigms are human constructions (Denzin, 2010). Within sciences, Kuhn (1970) identifies the formation of new journals, specialist societies, and the claim for a special place in the curriculum as markers of a single paradigm. Such features are true of coaching and more recently performance analysis as a number of arguments have been forwarded which promotes its own specialized disciplinary boundaries (e.g., Hughes & Franks, 2008; Lyle, 2002; see Chapter 2 pages 9-10). Such arguments are often grounded in the need for special attention to be paid towards the development of a 'distinct body of knowledge' towards the advancement of the field (Taylor & Garratt, 2010). However, in recognising the socially constructed nature of knowledge it is import to

first revisit precisely what is meant by the term paradigm. The following section outlines a number of alternative uses or interpretations of the term paradigm.

3.3.3 Paradigms as world views

Whilst it has been suggested that paradigms as a shared belief among members of a speciality area, is consistent with Kuhn's preferred choice of the term paradigm (Kuhn, 1970; 1974; Morgan, 2007), the most widespread use of the term paradigm within the social sciences is that of paradigms as epistemological stances (e.g., realism and constructivism), which act as distinct belief systems that influence how research questions are asked and answered (Morgan, 2007, p. 52). Furthermore, Morgan (2007) highlights that when qualitative research gained renewed interest in the 1970s, there was no agreed upon name for the dominant paradigm. Indeed, as Kuhn's (1996) work demonstrates those working within a period of 'normal science' are often only implicitly aware of the beliefs and practices that guide their work. In an attempt to cause a change, Morgan (2007) demonstrated how those advocating qualitative research evoked a paradigmatic shift to legitimise the value of their preferred method. Drawing largely upon a four stage process outlined by Kuhn (1996): (1) the previous dominant paradigm was characterized, (2) issues and frustrations were highlighted with the paradigm, (3) a clear characterisation of the new paradigm was communicated, and (4) an agreement that the new paradigm resolves the issues of the existing paradigm was sought (Morgan, 2007). As such the previously dominant paradigm was labelled positivism, and served largely as a label that the advocates of quantitative research used to summarise their approach to research (Shadish, 1995). The best known alternative to positivism comes from the work of Guba and Lincoln

(1985, 1988), through the concepts of ontology, epistemology and methodology, termed the metaphysical paradigm. Guba and Lincoln (1994) suggested that metaphysical paradigms can be distinguished from each other by answering questions related to ontology, epistemology and methodology:

Ontological considerations: What is the form and nature of reality? What can be known about reality?

Epistemological considerations: What is the nature of the relationship between the knower (the inquirer) and the would-be knower and what can be known?

Methodological considerations: How should the inquirer go about finding out whatever he or she believes can be known?

The new paradigm came to be known as constructivist (originally termed naturalistic inquiry or interpretivism). Lincoln and Guba (1985, 1988) explicitly refer to these approaches as two competing paradigms with differing epistemological stances. In recent years, this work has been expanded to include paradigms such as critical theory, (post)positivist, and participatory research (Lincoln & Guba, 2000; Lincoln et al., 2011). Here, Table 3 contrasts the traditional opposing views of positivist and constructivist within the meta-physical paradigm.

Table 3. The meta-physical paradigm, adapted from Lincoln and Guba (1994).

Item	Positivism	Constructivism
Ontology	Naive realism – ‘real’ but apprehendable	Relativism – local and specific constructed realities
Epistemology	Dualist/objectivist; findings true	Transactional/subjectivist; created findings
Methodology	Experimental/manipulative; verification of hypotheses; chiefly quantitative methods	Hermeneutics/dialectical; collaborative action inquiry; grounded in shared experiential content

The following section considers such choices within the process of completing the present thesis.

As can be seen within Table 3, to date, much of the research or ‘science’ of performance analysis is located within the positivist paradigm (see Chapter 2 pages 22-23), chiefly concerned with producing an ‘accurate’ and ‘reliable’ analysis of performance data. However, given the applied pedagogical nature of the present thesis and the specific research questions posed (i.e., Research Question 1 - Can an empirically grounded theory of practice be constructed to act as a reflective tool for practitioners? Research Question 2 - What can be learnt about the delivery of video-based performance analysis within a naturalistic setting working with elite athletes?

Research Question 3 - How might a coach develop their professional knowledge regarding the use of video-based performance analysis, and how and why might these interactional practices change over time in the development of a coaching identity?; see Chapter 1 page 6), a relativist ontology, subjectivist epistemology and a collaborative action inquiry, grounded in shared experiential content is required. Thus the present thesis falls within an alternative constructivist framework, concerned with understanding local and specific contexts and how shared meaning and understanding is achieved through interactions.

3.4.1 Methodological choices

In attempting to address the; what (what do coaches do?), why (why do coaches work this way?), and how (how do coaches do this in practice?) of the use of video-based performance analysis within the coaching process (see Chapter 1 page 6), it became clear that this could not be achieved by a single research method. For example, although interviews may be useful to gain an understanding of a participant's thoughts and feelings, interviewing does not allow the analysis of 'on-going' interactions within a specific context (i.e., why questions; see Chapter 1 page 6). However, studying 'on-going' interactions within a cultural context and the participant's thoughts and feelings can be achieved using a combination of ethnography and interviews (i.e., what & why questions). Whilst ethnography and ethnographic observations enable the researcher to capture 'what is said' in interactions, ethnomethodology is also concerned with talk-in-interaction or "the ways in which collectively members create and maintain a sense of order" within

interactions (Have, 2004, 14), therefore, ethnomethodology is additionally concerned with the how of interaction (see Chapter 1 page 6).

Therefore, the present thesis falls within a constructivist approach which “resists a single portrait but is better understood as a mosaic of research efforts, with diverse (but also shared) philosophical underpinnings, theoretical, methodological and empirical understanding” provides a broad framework within which the research questions may attempt to be addressed (Gubrium & Holstien, 2011, p. 341). However, it is important to note that “this does not mean, however that just anything goes under constructionist rubric” (Gubrium & Holstien, 2011, p. 341). Therefore, there is a need to highlight and account for the role of ‘analytic interplay’ within the current thesis.

Inquiry within the present thesis falls within a relativist ontology, in that “realities exist in the form of multiple mental constructions, and is socially and experientially based” (Guba, 1990, p. 27), a subjectivist epistemology where the inquirer and the inquired are fused into a single entity and “findings are literally the creation of interaction between the two of them” (Guba, 1990, p. 27), and within a dialectical methodology involving naturalistic methods which ensure an adequate dialogue between the researcher and those they interact with in order to construct a meaningful reality (Angen, 2000; Lincoln et al., 2011). Therefore, through the inquiry process the construction of meaning of actors are the foundations of knowledge (Lincoln et al., 2011). As such, this thesis attempts to gain increased knowledge of the use of video-based performance analysis through the study of participants, interpreting perceptions and interactions within a situated social context (Lincoln et al., 2011).

3.4.2 Ethnographic framework

Whilst this work draws upon a number of alternative methodological approaches to address the research questions at hand (see Chapter 1 page 6), the broad overarching framework within this thesis is that of ethnography. Wolcott (1990) describes ethnography as both a process and a product, indeed, an etymological analysis of the word ‘ethnography’ can be demonstrated to be comprised of both ethno (culture) and graphy (writing). Here then, ethnography is not only a way of collecting data but it also involves writing people (Sparkes, 1995, 2002), thus as a social practice is intertwined with ethical considerations. A point to which I will return to later in the thesis. Within this framework, the participants’ actions and accounts were studied in everyday coaching contexts in an attempt to explain interpretation of meaning, functions, and consequences of human actions and institutional practices, within both local and wider contexts (Hammersley & Atkinson, 2007). A key assumption here is that by immersing myself within the culture of the participants, I would be able to observe, record, make sense of, and communicate the practices of others.

Hammersley and Atkinson (2007) highlight that ethnographic work usually involves studying peoples actions within everyday contexts (i.e., ‘within the field’), the collection of data from a variety of sources (i.e., conversations, interviews & observations), focused upon a single setting or group of people, where the analysis involves interpretation of the meaning, functions and consequences of institutional practices. Therefore, such an approach lends itself to building a rapport with participants to explore what they do and why they do it within their professional practice (Research Question 1; see Chapter 1 page 6), how participants achieve this within their practice (Research Question 2; see Chapter 1 page 6), and how and why

this may change over time (Research Question 3; see Chapter 1 page 6). The following sections will highlight the specific data collection methods and methodological approaches undertaken.

3.4.3 Analytical bracketing

Although the methodological approach undertaken within the present thesis can be understood as a “mosaic of research efforts... this does not mean, however that just anything goes” (Gubrium & Holstien, 2011, p. 341). Therefore, there is a need to consider how the shift in focus from questions which consider the what, why and how of video-based performance analysis within the coaching process. Three complementary methodological approaches were selected to address the questions posed within the thesis; grounded theory, conversation analysis, and narrative ethnography. All three approaches fall within the interpretivist research paradigm. Ground theory is concerned with the construction of a theory from data, which has been systematically gathered and analysed through the research process (Strauss & Corbin, 1998), and therefore provides a basis for the thesis to overcome the disconnected nature of the literature within the field (see Chapter 2, p. 23), and a platform upon which to base further investigation in the use of video-based performance analysis. Therefore, a grounded theory methodology offered a great deal of potential to explore participants’ thoughts, feeling and experiences to explore the what and the why behind the use of video-based performance analysis (Chapter 4 Study 1). Conversation analysis (CA) provides a methodological approach to examine ‘talk-in-interaction’, which enables the researcher to be in more direct touch with the very phenomena under investigation (Peräkylä & Ruusuvuori, 2011). Therefore, using

conversation analysis techniques it was possible to explore the sequential organisation of interactions, examining the contextually bound rules of interaction (i.e., turn taking, grammar, phonetics, overlapping talk etc). Here then, CA provided a procedural approach for dealing with meaning making within interaction and the progress of ‘inter-subjectivity’ (Seedhouse, 2005). As such CA offered a nuanced and as yet underused methodological approach of analysing interactions within sports coaching to address some of the issues relating to the how of using video-based performance analysis feedback. Finally, narrative ethnography offered the potential to examine the creation of professional knowledge and identity over time, through the biographical analysis of the participant’s life story. Gubrium and Holstein (2008) highlight that narrative ethnography draws upon “naturalistic, constructionist, and ethnomethodological impulses and concerns, the approach focuses on the everyday narrative activity that unfolds within circumstantially situated social interaction, with an acute awareness of the myriad layers of social context that condition narrative production” (p. 251). Therefore, this complementary approach offered a great deal of potential to illuminate the temporal nature of professional knowledge and identity construction in situated interactions within video feedback sessions. Here, then narrative ethnography can be used to explore both the how and the why of interactional practices using video-based performance analysis feedback.

In an attempt to account for the shift between examining ‘what do participants do?’ (the what questions), ‘why do participants see things as they do? (the why questions)’ and ‘how participants do things?’ (the how questions), Gubrium and Holstien’s (1997, 2009, 2011) concept of analytical bracketing was used to provide procedural flexibility to account for such analytic interplay within the research process. According to Gubrium and Holstein (2011):

As analysis proceeds, the researcher intermittently orients to everyday realities as both the product of members reality-constructing procedures and as resources from which realities are reflexively constituted. At one moment, the researcher may be indifferent to the structures of everyday life in order to document their production through discursive practices. In the next analytic move, he or she brackets discursive practices in order to assess the local availability, distribution and/or regulation of resources for reality construction... Analytical bracketing amounts to an orienting procedure for alternatively focusing on the what's then the how's of interpretive practices (or vice versa) in order to assemble both a contextually scenic and a constitutive picture of everyday language in use (p. 347).

Moreover, rather than adhering to strict procedural guidelines, Gubrium and Holstein (2011) suggest that analytical bracketing is best conceptualised as being more like a 'skilled juggling act' than a strict analytic process. Indeed, Gubrium and Holstein (2009) highlight that analytical bracketing is a methodological and not an ontological approach to data analysis. Analytical bracketing is best conceived as "a way of temporarily putting some matters of empirical interest aside in order to bring others into focus", and not to question the existence or the substance of reality (Gubrium & Holstein, 2009). Therefore, in an attempt to address the first aim of the thesis in building a theoretical framework of applied practice to understand the realities of the delivery of video-based performance analysis within elite youth soccer, a grounded theory methodological approach was selected.

3.4.4 Grounded theory

A grounded theory methodology was highlighted as being able to provide the methodological flexibility to develop a new understanding of the use of video-based performance analysis beyond the traditional positivistic conception of the use of performance analysis which has dominated the literature to date (see Chapter 2 page 23). The term grounded theory refers to the construction of a theory from data, which has been systematically gathered and analysed through the research process (Strauss & Corbin, 1998). Here, a researcher does not begin with a preconceived theory in mind; rather the researcher begins with a research question or area of study and allows the theory to emerge from the data through analysis and constant comparison (Strauss & Corbin, 1998). Such an approach appeared highly salient within the present thesis as a review of the literature revealed a lack of empirically based work to address the research question (see Chapter 2 page 82-86). The strength of such an approach recognises the importance of context sensitivity and the advantages of a substantive theory as opposed to a general approach to theorising (Strauss & Corbin, 1998). The following section briefly outlines the development of Strauss' version of grounded theory.

Grounded theory has been proposed as a methodology “not only to generate theory but to ground that theory in data” (Strauss & Corbin, 1998, p 8). Grounded theory was developed by two sociologists Barney Glaser and Anselm Strauss. The early evolution of grounded theory can be traced back to the work of Glaser and Strauss examining dying within hospital settings (Glaser & Strauss, 1965). Following this work Glaser and Strauss went onto develop a fuller theory within their 1965 text

‘The Discovery of Grounded Theory’. Bryant (2009) highlights that it is widely acknowledged that one of the strengths of grounded theory was the diverse background of the two originators; Glaser’s orientations stemmed from the Columbia, New York quantitative research approach, while Strauss hailed from the Chicago School of sociology, which stresses a qualitative, ethnographic research approach. As such Strauss was strongly influenced by the thinking of men such as Park (1967), Thomas (1966), Dewey (1922), Meade (1934), Hughes (1971), and Blumer (1969) (cited in Strauss & Corbin, 1998). Indeed, it is well acknowledged that symbolic interactionism was the general framework used to develop the original version of grounded theory (Annells, 1996; Strauss & Corbin, 1998). Strauss and Corbin (1998) suggest that the thinking of Glaser towards the development of grounded theory was shaped by the following principles:

(a) the need to get out in the field to discover what is really going on; (b) the relevance of theory, grounded in data, to the development of a discipline and as a basis for social action; (c) the complexity and variability of phenomena and human action; (d) the belief that persons are actors who take an active role in responding to problematic situations; (e) the realization that persons act on the basis of meaning; (f) the understanding that meaning is defined and redefined through interaction; (g) a sensitivity to the evolving and unfolding nature of events (process); and (h) an awareness of the interrelationships among conditions (structure), actions (processes), and consequences (p. 9).

However, Bryant (2009) highlights that Glaser and Strauss fell out over the future direction of the grounded theory methodology, which saw Strauss team up with Julie Corbin and write the first edition of 'Basics of Qualitative Research'. This split between the co-founders of grounded theory saw a separation of approaches between Glaser and Strauss (with Corbin), and also the introduction of a constructivist approach by Kathy Charmaz and Antony Bryant (Charmaz, 2000; Bryant, 2002; Bryant & Charmaz, 2007). As such grounded theory has developed considerably since its early conception, particularly given an increase in methodological understanding and the postmodern movement (Corbin & Holt, 2009).

More recently there has been a great deal of debate surrounding quality and the use of grounded theory within sports research (e.g., Holt & Tamminen, 2010; Holt & Tamminen, 2010; Weed, 2009; Weed, 2010). In particular, regarding the ontological and epistemological assumptions that underpin the variants of grounded theory. For example, Weed (2009) has suggested that the work of Glaser falls within ontological realism and epistemological positivism, Strauss' should be considered (post)positivistic, falling somewhere between ontological realism and constructivism, while Charmaz's work should be considered to be ontologically constructivist and follow epistemologically interpretivism. However, although Weed (2009) acknowledges that "Strauss and Corbin (1994, p. 274) highlighted that interpretive work and ... interpretations must include the perspectives and voice of the people who we study" (p. 508), he has suggested Strauss's version of grounded theory is "undoubtedly realist". This however is not my reading of Strauss' work or indeed a view shared by Annells (1996), who Weed (2009) cites in support of this view within the 2009 article. Alternatively, Annells (1996) suggests that:

Relativism is discernible in the insistence by Strauss and Corbin (1990a) that a developed grounded theory is a rendition of “a reality that cannot be actually known, but is always interpreted” (p. 22). The claim that knowledge per se is linked closely with time and place and that truth is enacted (Strauss & Corbin, 1994) also holds a relativist ontology, which holds that reality consists of local and specific constructed realities (p. 386).

Similarly, in disagreement of Weed’s (2009) suggestion that Strauss’ version of grounded theory follows a post-positivist epistemology, Annells (1996) highlights that:

Recent presentations of the method demonstrate a divergent movement towards subjectivist and transactional epistemology. Strauss (1987) clearly identified the researcher as being actively involved with the method and not separate to the method. This subjectivist orientation is also discernible from the insistence of Strauss and Corbin (1989) that researchers using this method should draw upon their experiential knowledge to collect data, for suggesting hypotheses, when analysing data, and more recently recognizing that “ the analyst is also a crucially significant interactant” in the research process (Strauss & Corbin, 1994, p. 278).

Indeed, Annells (1996) further highlights that although some authors (e.g., Guba & Lincoln, 1989) have suggested that grounded theory research deals with

verification in the positivist sense of the word (i.e., involving statistical testing & the capturing of reality); rather verification in Strauss' version of grounded theory relates to the constant comparative data analysis through the course of a research project (see Strauss & Corbin, 1994). In further arguing the epistemological position of Strauss' work, Annells (1996) highlights:

Strauss and Corbin (1990) state that doing analysis is, in fact, making interpretations" (p. 59), and that these interpretations must be based on "multiple perspectives" (Strauss & Corbin, 1994, p. 280), which being embedded in the historical moment, are always only provisional. It could be suggested that these interpretations provide contrast and comparison between existing individual constructions regarding the inquiry focus, therefore apparently moving towards the dialectical constructivist answer to how should the inquirer go about finding out knowledge. Knowledge is created. Hence a grounded theory supposedly verified during the research process by the Strauss and Corbin evolutionary mode can be seen to be producing local and specific constructed realities in the relativistic ontological sense, but not generalizable "real" results in the positivist or (post)positivistic ontological sense (pp. 388-389).

Indeed, more recently Corbin and Holt (2009) have highlighted that "theories are constructions from data provided by participants that is interpreted, framed, and retold by researchers" (p. 113). Therefore, the Straussian version of grounded theory presented within this thesis follows a subjectivist ontology, an interpretivist

epistemology and a dialectic methodology. This is aligned with the overall ontological, epistemological, and methodological framework of the thesis as a whole.

Although a number of variations of grounded theory exist, and as such it is problematic to adopt a singular approach to assessing the quality of this work, a number of considerations have been suggested to be important when assessing grounded theory inquiry. Here, Weed (2009) suggests that grounded theory research should not be viewed as being linear and should instead be conceptualised as being an iterative process; should sample data according to issues that emerge from the analysis as a process of theoretical sampling; should include evidence of theoretical sensitivity in that the data collection is guided by the developing analysis, simulated via the knowledge of the researcher; that the analysis should follow coding, memos and concepts; constant comparison should be used to ground the theory in data; data collection should be ended at a point of theoretical saturation, when new data does not generate new theoretical insights; the theory should fit, work, and be relevant and modifiable; and finally that the theory generated from a grounded theory project should not seek to be generalizable but should be substantive in nature, speaking of the specific context examined. Whilst there are some concerns over some of the creation of lists (see Holt & Tamminen, 2010), and more general concerns over becoming a gatekeeper or part of ‘the methods police’, once contextualised against the research designs and variations of grounded theory utilised, it provides a number of useful reflexive considerations.

Data collection for the grounded theory presented within Study 1 and the narrative analysis section presented within Study 3 were conducted using interviews. The following sections provide a brief overview of the methodological consideration of the use of interviewing for each study, highlighting similarities and differences of

the interview approach undertaken. Further procedural details are provided within each respective chapter.

3.4.5 Interviews

Given that the present thesis was concerned with examining both the what, why and how of the use of video-based performance analysis, interviewing was selected as a data collection method capable of examining the participants' perspectives, thought processes and life experiences regarding the use of video-based feedback in practice (Patton, 2002). From this position, interviewing allows us to "enter into the other person's perspective" (Patton, 2002, p. 341). However, there are a number of approaches to interviewing which range from totally unstructured interactions, through semi-structured situations to highly structured interview approaches (Bernard, 2000). Furthermore, interviews may be conducted face-to-face, over the phone, through email, via conference calls, with a single participant or with multiple participants within a focus group design. Interview may be used either singularly within the research process or as part of a wider methodological approach as within the ethnographic framework of the present thesis. Due to the flexibility, relative ease of collecting data, and the possibility to uncover unobservable complexities, interviewing is one of the most popular methods of data collection within social science research (Bernard, 2000; Kvale & Brinkmann, 2009; Seidman, 2006). Indeed, within sports coaching, Gilbert and Trudel (2004) highlighted that from a review of the coaching science literature from 1970-2001, 26.4% of all studies used interviews as a method of data collection.

Importantly, for the purpose of the present thesis, Bernard (2000, p. 9) highlights that “at the heart of interviewing is an interest in other individuals’ stories because they are of worth”. Indeed, Seidman (2006, p. 7) highlighted that “I interview because I am interested in other peoples’ stories. Most simply put, stories are a way of knowing”, therefore, the process of interviews may be considered to be a process of meaning-making of experiences through interaction (interviewer-interviewee).

As opposed to the traditional simple and unproblematic representation of interviews as a data collection method, more recently interviewing has been viewed as a social practice embedded within society which involves ethical decisions (Kvale & Brinkmann, 2009). For example, Barbour and Schostak (2011) have highlighted that issues of power, social position, value, trust, meaning, interpretation, and uncertainty all affect the interview process. Moreover, interviews should not be viewed unproblematically, as at times, interviews can involve the messiness of encounters with others, become performative, and be affected by hidden agendas and suspicion (Barbour & Schostak, 2011). Therefore, within the present thesis interviews are not considered unproblematic factual accounts of interactions which are free from the constraints of any other social practice within the research process.

For the purpose of this thesis, interviewing is considered to be one of co-construction, where the research is actively involved in creating findings through interaction and inter-subjectivity (Lincoln et al., 2011). Here, Kvale and Brinkmann (2009) use ‘the traveller’ metaphor to depict the interview process as a journey with the interviewer wandering through the landscape co-creating knowledge with the participant is a ‘truer’ representation of the interview process.

Interviews were used within the present thesis within Study 1 and Study 3, and fall within both a grounded theory and a narrative practice methodological approach

respectively. Both sets of interviews for Study 1 and Study 3 were individual, face-to-face, and semi-structured in nature, with questions pre-planned using an interview guide (Gratton & Jones, 2004; Strauss & Corbin, 1998). Here, open-ended questions were used to explore the participants' views within a focused field of inquiry. Open-ended questions were used, as opposed to closed questions, in an attempt to allow the participant the freedom to explore the concept raised within the interview from their own perspective. That is, although semi-structured in nature, the interviews were flexible allowing the participant the opportunity to explore related matters within their own experience. Additionally, both sets of participants from Study 1 and Study 3 were known to me through my work with the coaches as a performance analyst. Whilst knowing the participants may be considered a potential source of bias, access to such elite environments is particularly problematic (Parker, 1996; Potrac et al., 2007), and the previous rapport that I developed with the participants allowed for a greater depth of access and greater theoretical sensitivity to the research question (Athens, 1984; Strauss & Corbin, 1998).

However, drawing upon the work of Barbour and Schostak (2011), it is important to acknowledge my social position and how this may have impacted power relations relative to the other social actors. Within both the international and Premier League academy context, I was positioned within a hierarchy below the Head Coaches, although I was paid for my role and expertise within both positions, and thus recognised as a 'legitimate' member of the support staff. Therefore, the previous working relationship that was built between myself and the participants included a large degree of trust regarding the data collection and the anonymous representation of the findings. Furthermore, in an attempt to represent the meaning of the participants' utterances, a number of procedures were utilised (Barbour & Schostak,

2011). For example, during the interview process I adopted the position of an ‘active listener’, often rephrasing and paraphrasing the participants’ utterances to ensure clarity of meaning (Barbour & Schostak, 2011; Smith & Sparkes, 2005, 2008b). Furthermore, once transcribed the interviews were returned to the participants to comment upon their accuracy as a form of member checking (Patton, 2002). Through the process of member checking all of the participants agreed that the transcription was an accurate representation of the interview. Interestingly, one of the participants (Derek) commented that he was not used to seeing his words within conversations written down, as he was more aware of the way that he wrote rather than how he spoke. At this point I reassured Derek that this was a normal reaction to seeing interview transcriptions, and that often participants start sentences that they do not finish as their ‘train of thought’ changed. Throughout the process I used my supervisor to assist me in the interpretation of the evolving corpus of data as a ‘critical friend’, which involved listening to interview audio recordings and viewing videoing recordings together (Barbour & Schostak, 2011; Sparkes, 2000). Finally, I kept reflexive notes that highlighted contextual information which helped me to interpret and situate my analysis within that moment, and understand my own thoughts and feelings at the time of the interview.

Although similar, the construction of the interview guide differed significantly from Study 1, which involved drawing upon findings from previous fieldwork within another coaching context (Groom & Cushion, 2004; see Appendix 3), while the construction of the interview guide for Study 3 was constructed via an analysis of ethnographic observations of the participant’s interactional practices (Study 2). Indeed, a number of other differences existed in the interview approach undertaken in Study 1 from that undertaken within Study 3 over and above ‘what I did with the

data'. For example, within Study 1 an iterative process was used, where although a standard interview guide was used to explore the practices of the elite coaches, as new issues developed within the data collection these were further explored within the subsequent interviews. For example, as the interviews progressed the coaches were asked to provide more specific examples of how elements of their practice were related (e.g., Social Environment, Coaching & Delivery Philosophy, Recipient Qualities, Presentation Format, Delivery Process, Session Design, Delivery Approach, & Targeted Outcomes) . In particular within Study 1, a number of probes were used to highlight examples of the use of video-based feedback from the participants' practices, along with probes used to examine why the participant used the video in that way. Indeed, Study 1 focused upon examining patterns across participants in the development of an empirically grounded theory. Whereas within Study 3, more attention was paid to allowing the participant to discuss his experiences and practices with as little input from myself as possible to encourage the creation of a 'fuller' and more 'coherent' narrative. The following section highlights a number of key methodological issues that were considered when drawing upon conversation analysis as an appropriate methodological approach within Study 2.

3.4.6 Conversation analysis (CA)

Conversation analysis (CA) was selected as a methodological approach which was capable of providing a detailed analysis of the interactions that occur within the video-feedback room, in particular to address questions relating to how do interactants achieve their interactional goals (Halkowski, 1990)? Therefore, this method was highlighted as an, as yet, unused but potentially fruitful methodological approach to

understand interactions within sports coaching, in detail, and further explore some of the *how's* of interactional practices within video-feedback sessions.

CA was historically developed within ethnomethodology (Garfinkel, 1967), principally by the sociologists Harvey Sacks, Emanuel Schegloff and Gail Jefferson, with the purpose of studying 'talk in action' or 'speech-exchange systems' (Sacks et al., 1974). Whilst ethnography involves "the close observation of the actual, 'natural' situations in which people live their lives" (Have, 2004, p. 6), ethnomethodology, however, is concerned with "socially shared procedures used to establish and maintain 'a sense of social structure', i.e. an intelligible accountable local social order" (Have, 2004, p. 16). Sacks et al. (1974) have suggested that as conversations can accommodate a wide range of situations, an analysis of conversation can reveal the twin features of being context-free (as a 'speech-exchange system'), and yet be capable of revealing extraordinary context-sensitivity (i.e., sensitive to places, times, & identities of parties within interactions). Epistemologically, ethnomethodology is located within a subjectivist phenomenological theoretical perspective, with the aim of examining 'common-sense thinking' (Seedhouse, 2005). Ontologically, ethnomethodology's position is associated with constructionism, in that; social phenomena and meanings are constantly being accomplished by social actors (Seedhouse, 2005). As such, CA puts educational events at the centre of the study, examining the social organisation of such activities. In this regard, the examples of talk and interaction can be used to show concrete illustrations of data analysis (Mercer, 2010). Importantly, CA has been described as being able to demonstrate how participants build mutual understanding from one action to the next (Have, 2000), to "portray the progress of the participant's intersubjectivity" (Seedhouse, 2005, p. 263). Therefore, the CA analytical approach presented within this thesis follows a

subjectivist ontology, an interpretivist epistemology and a dialectic methodology. This is aligned with the overall ontological, epistemological, and methodological framework of the thesis as a whole.

Mercer (2010) highlights that a particular strength of CA is that transcribed talk remains throughout the analysis, rather than being reduced to categories at an early stage. Therefore, researchers do not need to make initial judgements about the meaning of the data which cannot be revised (Mercer, 2010). Consequently, CA differs from Critical Discourse Analysis (CDA) in that CA is interested in what is going on in exchanges between participants, whilst CDA begins with imposing the analyst's own concerns upon the research project (Schegloff, 1997). However, CA as an approach has not been without its criticisms. Indeed, despite CA having its origins in the discipline of sociology, CA is frequently criticised for being unresponsive to the 'sociological agenda' – class, power, ideology and so forth (Hutchby & Wooffitt, 2008). Although, "CA can be seen as dealing with a possible analysis of power, where power is viewed in terms of differential distributions of discursive resources which enable certain participants to achieve interactional effects that are not available, or are differentially available, to others in the settings" (Hutchby & Wooffitt, 2008, pp. 216-217). It is the 'pure' CA approach to describing conversation without the use of such theoretical frameworks which has caused CA to remain a relatively unused approach within modern social research. Indeed, drawing upon the work of Goodwin and Heritage (1990), Heritage and Clayman (2010) highlight that "social interaction is the very bedrock of social life. It is the primary medium through which cultures are transmitted, relationships are sustained, identities are affirmed and social structures of all sorts are reproduced" (p. 7). Therefore, for the purpose of the present thesis an applied version of CA was utilised, which examines interactional practices within

institutional settings drawing upon an amalgamation of social theory (Mori & Zuengler, 2008). Here, Have (2000, p. 189) further explains that “in pure CA, the focus is on the local practices of turn-taking, sequential organisation, etc., in and for themselves, while in applied CA attention shifts to the tensions between those local practices and any larger structures in which these are embedded, such as institutional rules, instructions, accounting obligations, etc”. Therefore, within applied CA research the techniques and procedure of CA (i.e., detailed transcription process & the detailed phonetic analysis of utterances) are used in combination with social theory to link micro level interactional practices to the macro level institutional context. Using such an approach a large body of work exists which has examined the relationship between interactions, identities and institutions within settings such as calls to emergency services, doctor patient interactions, trials, juries and dispute resolution, and news and political communication (Heritage & Clayman, 2010).

3.4.7 Narrative Ethnography

Gubrium and Holstein (2008, p. 247) suggest that the term narrative practice can be used to describe a ‘second narrative turn’ which “takes us outside of stories themselves to the occasions and practical actions associated with the story construction and storytelling”. That is, narrative practice encompasses the content, their internal organisation, as well as the communicative conditions and resources surrounding how narratives are assembled and conveyed in everyday life (Gubrium & Holstein, 2008). Indeed, it has been suggested that “narrativity can contribute to our knowledge of individual and group experience and is often juxtaposed with the typically flat, thin contributions of positivistic methods” (Gubrium & Holstein, 2008,

pp. 2454-246). Moreover, it has been suggested that the turn to narrative practices by practitioners within applied fields can be attributed “partly as a consequence of their dissatisfaction with, and lack of confidence in, post-positivism, and what can be called neo-realism” (Smith, 2010, p. 87). Such dissatisfaction stems from the lack of a temporal, emotional, contextual and situated analysis of peoples experiences (Smith, 2010).

Gubrium and Holstein (2008) explain that narrative ethnography is “the ethnographic study of narrativity” (p. 250). Gubrium and Holstein (2008) further explain that:

Narratives are not simply reflections of experience, nor are they descriptive free-for-alls. Not just anything goes when it comes to storying experience. Rather, narratives comprise of the interplay between experience, storying practices, descriptive resources, purposes at hand, audiences, and the environments that condition story telling. Narrative ethnography provides the analytical platform, tools, and sensibilities for capturing the rich and variegated contours of everyday narrative practice (pp. 250-251).

Gubrium and Holstein (2008) highlight the importance of considering narrative environments, and suggest that local contingent of storytelling are best captured ethnographically, as this method offers a view of the actual circumstances of narrativity. Therefore, a narrative ethnographic approach offers the potential to not only examine the narratives why but also explore the how of the use of video-based

performance analysis feedback as stories told in situ within institutional settings. This is important because “each narrative environment affirms certain established stories and ways of narrating experience; they are going concerns that narratively construct, reproduce and privilege particular accounts for institutional purposes”(Gubrium & Holstein, 2008, p. 253). Furthermore, drawing upon the ethnographic study of interactions in situ issues of narrative control can be explored which relate to “narrative rights, obligations, and power” which must “all be interactionally accomplished” (Gubrium & Holstein, 2009, p. 109). Of particular interest to the present thesis are formal methods of narrative control which “are shaped by institutional influences including rules, guidelines, roles, and the like that are explicitly designed to shape and constrain interaction”, which “shapes interaction-and storytelling- in particular ways” (Gubrium & Holstein, 2009, p. 110). Therefore, in this case narrative ethnography offered a complementary methodological approach to understanding some of the *how*’s of interaction practices and also some of the *why*’s behind interactional practices as understood through narrative. Indeed, the narrative ethnography approach presented within this thesis followed a subjectivist ontology, an interpretivist epistemology and a dialectic methodology. Again, this is aligned with the overall ontological, epistemological, and methodological framework of the thesis as a whole.

3.5.1 Ethical issues

Following institutional ethical approval for the programme of work proposed within the thesis, key stakeholders within the two contexts (i.e., English FA & Albion FC) were contacted. During face-to-face meetings with Head of Coach Education at the FA, Tony (pseudonym), and the Academy Director at Albion FC, Neil

(pseudonym), both parties agreed that they saw great value in the programme of work and were keen to participate in the studies. Indeed, in his dual role as Head of Coach Education, but also a practicing international youth coach, Tony agreed to take part as a participant within Study 1. Following the approval of Neil the Academy Director at Albion FC, I further explained the programme of work to the U18 Team Head Coach. Once both had agreed to support the project, I presented the proposal to the players at Albion FC who were keen to receive video-based feedback for the first time, and have this process evaluated.

Following this, all of the participants for the three studies were contacted and provided with forms outlining voluntary informed consent (VIC) or voluntary informed assent (VIA) for the players aged 16-19. The purpose of the VIC/VIA was to inform the participants about the nature of the studies, and the potential harms and benefits of participation. For the players Neil also additionally signed a consent form as an appropriate adult (Studies 2 & 3). The participants were also informed that each of the studies form part of a wider research process (the PhD). As part of this process, I highlighted to the participants that some of the findings may be submitted for publication in peer reviewed journals, and it was agreed with all of the participants that they would remain anonymous, and that their names would be replaced with pseudonyms.

Data for the interviews was stored on a password protected computer, with participants' name removed from the transcriptions and replaced with a code (e.g., C1-C14). Similarly, the video recorded data from the ethnographic observations was captured to a Sports Code[®] and stored on a password protected hard drive.

Throughout the process participants were informed that they could withdraw at any time without any loss to themselves; none of the participant chose to withdraw from the studies.

3.5.2 Participants and context

Fourteen youth international coaches (11 male & 3 female) participated in Study 1 in the development of the grounded theory. I gained access to the fourteen international coaches through my work as a performance analyst with each of them with their respective international soccer teams. During a period of 24 months I worked with each of the coaches with either a Men's U16, U19's, U20's squad or a Women's U15, U17, U19, or Senior squad. Within this period I staffed 66 full international matches at major European and World Championships. Using pseudonym the following section introduces the international level participant coaches.

David was a 51 year old soccer international coach with a total of 34 years of coaching experience, with 6 years of full time professional coaching experience. David's main role was working as Women's senior team assistant and a Women's U21 Head Coach. David held the UEFA Pro Licence and had previously played semi-professional football, although had never received video-feedback as a player.

Paul was a 43 year old international soccer coach with a total of 15 years of coaching experience, with 12 of those years in full time professional soccer. Paul's main role was as a Men's U20 Head Coach. At the time of interview Paul held the

UEFA A Licence, and was completing his UEFA Pro Licence. Paul was an ex-professional soccer player and had received video-based feedback as a player himself.

Claire was a 38 year old international soccer coach with 19 years of coaching experience, 12 of those years working full time in professional soccer. Claire was a Women's senior team coach and held the UEFA Pro Licence and was an ex-international soccer player, although Claire had never received video feedback as a player.

Tom was a 53 year old international soccer coach with 30 years experience of coaching, with 10 of those years in full time professional soccer. Tom was the Head Coach of the U15 development squad and assistant coach of the U16 Men's team. Tom held the UEFA A Licence and was an ex-semi-professional player who had never received video-feedback as a player.

Lee was a 51 year old international soccer coach with 28 years experience of coaching, with 16 of those years being in full time professional soccer. Lee was the Men's U19 Head Coach and held the UEFA Pro Licence. Lee had previously played semi-professional soccer although had never received video-based feedback as a player.

Jim was a 61 year old international soccer coach with 35 years coaching experience, with 27 of those years working in full time professional soccer. Jim was a Men's U18 team Head Coach and held the UEFA Pro Licence. Jim had previously played semi-professional soccer but had not received video based feedback as a player.

Mary was a 44 year old international soccer coach with 17 years coaching experience, with 10 of those years being working within full time professional soccer. Mary was the Head Coach at the Women's National Player Development Centre and the Women's U17 team. Mary held the UEFA A Licence and had previously played regional level soccer but had never received video-based feedback as a player.

Nigel was a 42 year old international goalkeeping coach, with 8 years of coaching experience, all of which were working full time within professional soccer. Nigel worked with both the Men's and Women's teams as a goalkeeping coach and held the UEFA A Licence. Nigel had a full playing career, playing at the highest domestic level within England. Nigel had experienced receiving video-based feedback as a professional goalkeeper.

Helen was a 38 year old international coach with 10 years experience, all within full time professional soccer. Helen was the Head Coach of the Women's U19 team and held the UEFA A Licence. Helen was an ex-international soccer player who had received video-based feedback as a player.

Billy was a 43 year old international goalkeeping coach with 8 years experience of coaching, all of which was working within full time professional soccer. Billy worked with the Men's U16-U19 teams as a goalkeeping coach and held the UEFA A Licence. Billy was an ex-professional goalkeeper, and had played at the highest domestic and European level.

Malcolm was a 54 year old international soccer coach with 30 years of full time professional coaching experience. Malcolm was the Assistant Coach of the Men's U17 team and the Head Coach of the Men's U18 team. Additionally, Malcolm

held the UEFA Pro Licence. Malcolm had played professionally at reserve team level although had never received video-feedback as a player.

Tony was a 42 year old international soccer coach with 20 years of coaching experience, of which 5 of those years were working in full time professional soccer. Tony worked across the Men's U16-U20 squads as a coach and player development advisor. Tony held the UEFA Pro Licence and a PhD in Sports Psychology. Tony had previously played youth international football and professionally at reserve team level.

Derek was a 38 year old international soccer coach with 19 years coaching experience, of which 15 of those years were working full time within professional soccer. Derek was the Assistant Coach for the Men's U21 team and held the UEFA Pro Licence. Derek had previously played professional soccer at reserve team level but had never received video-based feedback.

Alex was a 54 year old international goalkeeping coach with 36 year years of coaching experience, with 20 of those years working within full time professional soccer. Alex was the Men's U19 team goalkeeping coach and held the UEFA Pro Licence. Alex had a full professional playing career as a goalkeeper playing at the highest domestic level within England.

The England international soccer team structure and associated major competitive commitments:

Men's Senior Team WC and EC	Women's Senior Team WC and EC
Men's U21 Team EC	Women's U23 Team EC
Men's U20 Team WC	Women's U20 Team WC
Men's U19 Team EC	Womens U19 Team EC
Men's U18 Team F	Women's U17 Team EC
Men's U17 Team EC	Women's U15 Development Squad F
Men's U16 Team VS	
Men's U15 Development Squad F	

Key:

WC = World Championship

EC = European Championship

VS = Victory Shield Home Nations Tournament

F = Friendly Fixtures

Within the ethnographic approach undertaken within Studies 1 and 2 the Head Coach of a Premier League Academy team (Albion FC) was observed in his interactions with the players in performance analysis video-feedback sessions over a 10-month period. Access to Michael at Albion FC was achieved through my supervisor, who at the time was working as an academy youth team coach. When Study 2 commenced, Michael (pseudonym) was a 34 year old U18 team Head Coach. At this time Michael had 14 years coaching experience (5 years part time in professional soccer & 9 years full time in professional soccer). Michael held the

UEFA A Licence and had previously played semi-professional soccer. At the conclusion of Study 3 Michael was a 38 year old First Team Coach in the English Premier League, working at the highest European and domestic level, and had been using video in his coaching practice for 10 years.

In addition, a number of Michael's interactions with the academy first (aged 16-17) and second year (aged 18-19) scholars were recorded. Similarly to Michael, the players' names have been replaced with pseudonyms. The following section outlines a brief biography of the players who were recorded and reported in interaction within the thesis:

- James was a 2nd year scholar and central defender. James was the team captain and had represented and captained England at youth international level.
- Chris was a 1st year scholar and central midfield player.
- Tom was a 1st year scholar and central midfield player.
- Jack was also a 2nd year scholar and former England youth international player.
- Warren was a second year scholar and central midfield player.

The club structure with Albion FC:

First Team Manager 'Gaffer'

Reserve Team Manager 'Pat'

Assistant reserve Team Manager 'Chris'

Academy Director 'Ted'

U18 Team Head Coach 'Michael'

U18 Team Assistant/GK Coach
'Dave'

U18 Team Fitness Coach 'Sam'

U16 Team Head Coach 'John'

3.5.3 Phases of data collection

Figure 7 highlights the initial field work undertaken for the thesis and the three distinct phases of data collection.

Prep-Work: Start of Field Work U17 Championship Team

- 6 months of PA support – coach evaluation (Groom & Cushion, 2004; Appendix 3).
- Development of concepts for grounded theory interview guide.



Phase 1: Start of grounded theory data collection

with England Coaches (12 Months data collection).

- Continued to work on the road with squads and collect data.



Data collection complete

Phase 2: Start of PA Work at Albion FC

- 6 Months of PA work emersion. Thesis development.
- Head Coach Sacked
- New Head Coach ‘Michael’ Appointed
- 10 Month Ethnography with new Head Coach.
- Worked as performance analyst
- Filmed video feedback sessions
- Conversation analysis work



Phase 3: Revisited ‘Michael’ at Rovers FC

- Narrative analysis and interview work
- Video reflections



Data collection complete

Figure 7. Research timeline: Two year engagement within the field.

3.5.4 Problems I faced

Whilst the final ‘product’ of the thesis is presented neatly packaged around a literature review, methodology and a series of studies, the reality of the research ‘process’ is far from straight forward and unproblematic. Indeed, during the ethnographic field work I experienced a number of issues; some of my own doing and some relating to the context within which I immersed myself. For example, upon securing my placement working at Albion FC as a performance analysis and building a working relationship with the coaches, players and staff, the first Head Coach that I started to work with was sacked after only 3 months of field work. This was particularly challenging as the plan of the research had been ‘sold’ to the first Head Coach and he was ‘on board’ with my work. Fortunately during my immersion within the context I had also managed to ‘sell’ my research proposal and my services as a valued member of staff to other key stakeholders. For example, the Academy Director was keen that I should continue to provide this support to the U18 group under the guidance of the new U18 coach ‘Michael’. Again, I was fortunate that I had already developed a relationship with Michael, who at the time of the initial field work was the Head Coach of the U16 team. Michael was an enthusiastic young coach and keen to build video-based performance analysis into his coaching practice, although was an inexperienced user of video at the time. Following Michaels appointment to the U18 team, I followed his team for a full football season (10 months). Although the performances of the team as a whole were generally disappointing to the staff and Michael, there were a number of memorable results particularly in the FA Youth Cup playing at senior team stadiums (one involving an exciting penalty shootout win at a 40,000 seated stadium). However, none of the players featured within the thesis have

gone on to play regular first team football at Albion FC, which is one of the difficulties evident within professional football within the UK. In Michael's words: "It's really, really, really tough".

The process of ethnography was also a challenge. The 10 months of field work included many experiences of uncertainty and confusion. Whilst going through the process of the thesis I have come to realise that this is typical of ethnographic studies, given the relatively unstructured research design and process of data analysis (Hammersley & Atkinson, 2007), however, at the time this felt frustrating. For example, I would record instances and interactions to address my research problem and the specific research questions I set out to investigate, knowing that something important was happening but at the same time not knowing quite how to make sense of these interactions (Study 2). Indeed, it was only after reviewing the interactions to try to make sense of what was happening that I was drawn towards conversation analysis as an insightful methodological approach.

This thesis would not have been possible without the assistance of a number of coaches who acted as participants and I am very grateful of their time and the chance to learn from their experiences and insight. In particular, I owe a great debt to Michael, who not only allowed me to undertake the 10 month ethnography with him at Albion FC but also allowed me to revisit him at other clubs as his career progressed. However, Michael's rise to the top of English and European football also made it difficult to meet at times, and perhaps get the same level of continued access that I may have desired. In particular, Michael now coaches abroad with a top European team. However, this is one of the realities of undertaking research within a high level performance context, and I am grateful for the time I received.

From a methodological view point the use of three complementary but as yet under used methodologies for exploring sports coaching provided its own set of problems. The selection of methodological approaches were driven by the research problems posed within the thesis, and there have been a number of times during this process where I have questioned if it would not be easier to have selected one single methodological approach. I am sure the answer to the question is: yes. However, in challenging myself to tackle different methodological approaches I have found a great deal of satisfaction in seeing how each approach not only complements but adds to understanding of the use of video-based performance analysis within the coaching process. This methodological exploration has had a number of consequences. Firstly, it has allowed me to better understand the limits and tension within the metaphysical paradigm debate presented within Chapter 3, especially regarding the legitimacy and accommodation of inquiry approach (i.e., commensurable or incommensurable), which in turn has increased my knowledge as a developing researcher. Indeed, there is more need to engage with such reflexive conversations when alternative methodological approaches are used within a single research programme. However, this methodological exploration has come at a cost. The time required to undertake three methodological approaches has significantly impacted upon the time it has taken me to fulfil the thesis.

3.5.5 Section conclusion

This chapter has provided a detailed overview of the methodological approach undertaken within the thesis; specifically with regard to the over arching ethnographic framework, ontological (relativist), epistemological (subjectivist), and methodological

(collaborative action inquiry; grounded in shared experiential content) positions adopted. It is argued that these novel methodological approaches within the field of performance analysis and sports coaching research offer the potential to better connect the disjointed nature of the literature (see Chapter 2 pages 88-89), whilst providing an avenue to explore some of the realities of the use of performance analysis within the coaching process (see Chapter 2 pages 90-92), therefore addressing the research questions posed within the thesis (i.e., Research Question 1 - Can an empirically grounded theory of practice be constructed to act as a reflective tool for practitioners? Research Question 2 - What can be learnt about the delivery of video-based performance analysis within a naturalistic setting working with elite athletes? Research Question 3 - How might a coach develop their professional knowledge regarding the use of video-based performance analysis, and how and why might these interactional practices change over time in the development of a coaching identity?; see Chapter 1 page 6).

The following chapter outlines Study 1, addressing Research Question 1 (i.e., Research Question 1 - What can be learned about the pedagogical rationale behind the use of video-based performance analysis within the coaching process, and can an empirically grounded theory of practice be constructed to act as a reflective tool for practitioners? Specifically, what do coaches do and why do coaches do this?).

CHAPTER FOUR: STUDY 1

The delivery of video-based performance analysis in elite youth soccer: Towards a grounded theory

4.1 Introduction

Given the disjointed nature of the performance analysis, video-based feedback, and sports coaching literature regarding the use of video-based performance analysis within the coaching process (Chapter 2 pages 88-89), chapter four addresses Research Question 1; what can be learned about the pedagogical rationale behind the use of video-based performance analysis within the coaching process, and can an empirically grounded theory of practice be constructed to act as a reflective tool for practitioners? Specifically, what do coaches do and why do coaches do this?

The analysis of athletic performance has been located within recent coaching discourse (Lyle, 2002; Stratton et al., 2004), where Lyle (2002) identified performance analysis as one of the key building blocks of the coaching process; the ability of a coach to assess performance, diagnose problems and give corrective technical information to athletes is central to effective coaching. Furthermore, the development of video and computer technology means that coaches have a greater number of options available to provide feedback to athletes (Ives, Straub, & Shelley, 2002; Stratton et al., 2004). In sports such as soccer, video-based performance analysis is so prevalent that most, if not all, professional teams engage in this form of analysis (James, 2006). However, we know little of what elite soccer coaches do in their practice (Smith & Cushion, 2006). Video-based performance analysis is seen as

an important 'tool,' as it can be used to provide feedback to athletes to modify behaviour and improve understanding (Court, 2004; Groom & Cushion, 2004). Therefore, there appears a perceived 'practical efficacy' and 'value' to the use of video-based performance analysis by coaches. However, the delivery of this information is often largely unstructured, based around critical incidents in performance, and therefore predominately reactive in nature. To this end, Stratton et al. (2004, p. 132) have suggested that "it is not yet clear how best to integrate this technology into coaching practice." That is, an empirically-based framework for those engaged in the delivery of video-based performance analysis has not been achieved. In light of this, pedagogical guides based upon an understanding of the coach, the athlete, knowledge, and the learning environment to coaching practice remain unclear and under-researched (Armour, 2004; Bartlett, 2001).

Given the importance of the topic to coaches, it is surprising that such little attention has been paid to the pedagogical issues underpinning practice, instead research in this area has focused upon: (1) the identification of movement and performance patterns within competition (2) the identification of key performance indicators in sport, (3) Perturbations within sports data, and (4) the measurement of physiological work rate profiles (see Chapter 2 page 11). Like coaching more generally, performance analysis is assumed to be a known, linear, and unproblematic sequence (Cushion et al., 2006). This is reflected in the literature by being depicted via simplistic flow charts and schemas; often illustrated with an unproblematic shift from performance, observation, planning training and practice (e.g., Carling et al., 2005; Hughes & Franks, 2004; see Chapter 2 pages 25-30 & 88-89). Moreover, these

simplistic models and schemas are models for a process (i.e., idealistic representations) rather than models of a process (i.e., generated via empirical research) (Cushion, et al., 2006; Lyle, 2002; see Chapter 2 pages 25-30 & 88-89).

In-line with such criticism, Voight (2007) has highlighted the value and need for more evidence-based theories that can guide coaching practitioners. One such example of using empirical data to build theory is the work of Côté et al. (1995), who presented a ‘mental model’ of coaching knowledge (see Chapter 2 pages 55-56). This approach has been praised as a valuable example, since it was derived from empirical data, therefore, has great potential for explaining coaching practice (Lyle, 2002). This developing area of research has offered an important insight into elite coaching practice and demonstrates that the coaches themselves are a rich source of information worthy of academic study (e.g., Côté, et al., 1995; Jones et al., 2003; Potrac et al., 2002; see Chapter 2 pages 55-56 & 70-82).

In this regard, Franks (2002) has called for more evidence-based practice research to inform coaching practice. Similar examples of evidence-based practice approaches may be found in the applied sports psychology literature. Where typically, elite athletes’ perceptions and experiences have been assessed using a qualitative interview methodology (e.g., Andersen, Miles, Robinson, Mahoney, 2004; Gould, Dieffenbach, & Moffett, 2002). Such research is essential to develop professional knowledge and practice. Importantly for sport psychology practitioners, Ives et al. (2002, p. 243) have suggested that “video may help bridge the gap between the services offered by a sport psychologist and the skills and training that coaches offer.” Moreover, given the prevalence of the use of video-based feedback in top-level

soccer, it is likely that sport psychologists may be called upon for advice regarding the delivery of video-based performance analysis sessions. Therefore, the purpose of Study 1 was to build a theoretical framework to understand the delivery of video-based performance analysis by coaches, building towards a grounded theory of applied practice (see Chapter 3 pages 94-97).

4.2 Method

4.2.1 Participants

Participants were 14 England youth soccer coaches (M age = 46.6 years, SD = 7.3) of mixed gender (11 male and 3 female). A short biography of each of the participants is present within Chapter 3 on pages 126-129. Four participants coached female England national teams and ten participants coached male England national teams. At the time of interview, the sample was representative of the population of England national youth soccer coaches (i.e., 14 of the 17 England youth soccer coaches were interviewed). Participants were selected using purposive theoretical sampling to ensure that data gathering was driven by concepts derived from the evolving theory and making comparisons to ensure that the concepts and theory generated fit the phenomena (Strauss & Corbin, 1998). No new concepts, subcategories and categories were unearthed after interview number 12. Therefore, the data collection was ended at this point of theoretical saturation (Strauss & Corbin, 1998). Initial access to the participants was gained by drawing upon coaches that I had previously worked with as performance analyst. This also allowed for a greater sensitivity to the theoretical relevance of the developing concepts (Strauss & Corbin,

1998, p. 205). In addition, a greater degree of access in the interviews was achieved because of a previous rapport (Athens, 1984). That is, the participant coaches were willing to talk about their experiences openly and honestly to assist in the development of knowledge regarding the phenomena. Whilst prior knowledge of the participant coaches may be considered a potential point of bias, access to elite populations are often dependent on the researcher undertaking a secondary support role or via an institutional evaluation program (e.g., Greenleaf, Gould & Dieffenbach, 2001; Gould, Dieffenbach, & Moffett, 2002).

An expert-systems ideological approach similar to that of Côté et al. (1995) underpinned the present study (the expertise paradigm). In this respect, the elite nature of the coaches interviewed ensured information-rich cases (Creswell, 2009), that would yield insightful data relevant to understanding Research Question 1 (i.e., what do coaches do and why do coaches do this? see Chapter 1 page 6). Which in turn could be useful in the education of coaching practitioners (Voight, 2007).

Importantly, all participants had a minimum of three years practical experience of using video-based analysis in their coaching practice, which was representative of the sample population. The sample also exceeded the 10 years general coaching experience criteria adopted within a number of investigations which examine expertise within sports coaching (e.g., Côté et al., 1995; Gilbert et al., 2009; see Chapter 2 page 111). Participants had a mean of 22 years ($SD = 10$) coaching experience, and 13.6 years ($SD = 7.5$) of full-time professional coaching experience. All participants held the top Union of European Football Associations (UEFA) Advanced license, and a further 8 participants additionally held the UEFA

Professional License (award for coaches to work in the senior professional game in Europe). Following institutional ethics approval, participants were given information relating to the nature of the research and completed a written consent form (see Appendix 4).

4.2.2 Design and procedure

The methodology selected was grounded theory (Strauss & Corbin, 1998; see Chapter 3 pages 109-115), whereby I began with an area of study and developed theory from the data. This approach was selected because grounded theories can offer insight, enhance understanding, and provide a meaningful guide to action (Strauss & Corbin, 1998). Table 4, illustrates a number of key definitions, which are discussed in the Methods section.

Table 4. Grounded theory key definitions (Adapted from Strauss & Corbin, 1998).

Term	Definition
Axial Coding	The process of relating categories to their subcategories.
Categories	Concepts that stand for a phenomena.
Coding	The analytical process through which data are fractured, conceptualised, and integrated to form theory.
Concepts	The building blocks of a theory.
Diagram	Visual device that depicts the relationship among concepts.
Memos	Written records of analysis that may vary in type and form.
Open Coding	The analytic process through which concepts are identified and their properties and dimensions discovered in the data.
Process	Sequences of evolving action/interaction, changes in which can be traced to changes in structural conditions.
Selective Coding	The process of integrating and refining the theory.
Subcategories	Concepts that pertain to a category, giving it further clarification and specification.
Theory	A set of well-developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to explain or predict phenomena.

Data collection was conducted over a twelve-month period using a combination of open-ended and semi-structured interviews (see Chapter 3 pages 115-119), based upon the developing concepts of the coaches' experiences and perceptions of using video-based performance analysis in their coaching practice (Strauss & Corbin, 1998). That is, the grounded theory presented was derived from interplay between induction and deduction (Strauss & Corbin, 1998). An interview guide was developed, as suggested by Strauss and Corbin (1998), from preliminary field work (Groom & Cushion, 2004; see Appendix 3). The initial phase of the interview involved describing the nature of the research and exploring the coaches' background and demographics (e.g., age, role, qualifications, previous coaching

positions, and time in their current post; see Appendix 5). At the start of each interview, open questions were asked to generate initial lines of enquiry (e.g., “How do you use video analysis in your practice? What kind of things do you like to show the players?”). Following this, questions were derived from previous field work (Groom & Cushion, 2004; Appendix 3) and developing themes in the data (e.g., “How would you use the analysis with an individual player? Why do you use the analysis with the players like that?”; see Appendix 5). Again, how and why questions were used as a probe, along with a request for specific examples from the coach’s practice to illustrate the points made (e.g., “Can you think of any examples in your practice where using the analysis has been successful? Can you think of any examples in your practice where using the analysis has been unsuccessful?”; see Appendix 5). As issues arose in the interview situation, these were explored until the point of theoretical saturation, where the participant did not have any more to say and repeated previously divulged data (Strauss & Corbin, 1998).

With regard to the quality of the data collected, I conducted all interviews myself after receiving formal doctoral research methods training. The research process was overseen by my supervisor (an experienced qualitative researcher). The interviews were conducted in a quiet private location at the participant’s place of work, all interviews were audio recorded and transcribed verbatim, ranging in duration from 30 to 70 minutes. Additionally, I listened to the recordings of all interviews with my supervisor who provided feedback regarding interview technique to control for potential interviewer bias. For example, during this process the importance of highlighting specific examples from the coaches’ professional practice

to assist with the theory building was discussed, whilst trying to minimise my own verbal input.

4.2.3 Data analysis

Following the guidelines of Strauss and Corbin (1998), data were analysed manually using a six stage process: (1) as each interview was conducted it was immediately transcribed verbatim. Each transcript was fed back to the coach to ensure that the transcribed data were a true representation and articulation of their ideas and experiences, and that they felt that they had the opportunity to ‘tell their story’ (see Chapter 3 page 118). (2) Via open coding, concepts were identified and their properties and dimensions discovered. Data were broken down into significant pieces of information and initially analysed independently by myself and a fellow PhD student (Lee Nelson), to control for potential bias. The process was applied to ensure that my past experiences and previous rapport working with the coaches, was acknowledge through my own analysis of the data but also compared to an independent coder who had no previous experience of working with the coaches. This process was not deemed to be a test of ‘truth’ or ‘triangulation’ but one of analytical clarity regarding the thought process behind the coding procedures. For example raw data extracts which related to the concept ‘social environment’ (i.e., role interaction & power) were highlighted within the transcripts, labeled, and organized into related features of the concept, if they shared common characteristics and key words (i.e., role, “Helen [Understand] it’s the same roles, same system”, interaction Derek “there are very few opportunities to interact with players in a meaningful way”, power Jim

“I’ve given people a rollicking”). If the concepts could not be grouped, as it represented a fundamentally different concept, a new concept was created. (3) Via Axial coding, the data were reassembled into categories and their related subcategories, and concepts were redefined to form more precise explanations of the phenomenon. This coding for process was used to identify linkages between categories, dimensions, conditions, actions/interactions, and consequences associated with the phenomenon (Strauss & Corbin, 1998). The axial coding process involved asking conceptual questions of the data and its relationship to other data. For example, relating a category to its subcategory through statements denoting how they relate to each other (Strauss & Corbin, 1998). (4) Via selective coding, three categories (Contextual Factors, Delivery Approach & Targeted Outcome) were highlighted as providing ‘analytic power.’ At this point the memos regarding the links between concepts, subcategories and categories provided a framework to depict the coaches’ experiences regarding the delivery of video-based performance analysis.

Examples of theoretical memos (TM):

TM1: The explanatory power of the grounded theory of the delivery of video-based performance analysis, lies within the knowledge-based cognitive process engaged in by the coach in the planning, delivery and modification of the video-based feedback intervention (in action), “between” the General Dimensions of the model (Contextual Factors, Delivery Approach and Targeted Outcomes), and the *interaction* “within” the General Dimensions of the model at an internal and external level (i.e., participant internal factors Coaching and Delivery Philosophy, Recipient Qualities; participant external factors Intervention), in guiding the intervention towards the desired behavioural outcome. That is, the cognitive process, which coaches’ work through, and the Interaction within the process have been identified, represented schematically and relationship between concepts illustrated via a systematic data driven methodology.

TM2: Consciously, data have not been abstracted to a highly conceptual level, to allow for the explanatory power of the theory within the specific environment, to remain practically grounded, and therefore better able to guide practitioners' actions, predict and describe behaviours and relationships within those behaviours. Whilst, the "generalisability" of the theory maybe limited to highly related situations (i.e., video-based feedback by sports coaches), the substantive nature of the theory (substantive theories being specific and formal theories being more generalisable, see Glaser & Strauss, 1967, pp.32-34), lends itself to the practical applications of the theory in related settings, with an increased level of ecological validity, coupled with a higher level of integrity of the raw data (less abstraction), being the associated reciprocal benefits of this approach to theorizing.

TM3: The model may start with performance or training as the central element to dictating action; furthermore the coach might not initiate the intervention stage after a single episode of performance or training or even a combined episode of performance and training and may wait until multiple episodes have been undertaken to initiate the delivery intervention (related to Process of Delivery; Interviews). The theory specifically relates to those interventions that are induced via video intervention and not typical role related coaching actions (e.g. technical instruction in practice in the absence of video). The theory aims only to describe, understand and highlight relationships within the context of video based performance analysis interventions.

This was used to integrate and refine categories to form a larger theoretical scheme (collectively with my supervisor). No disagreements were present in the conversations of the analysis of the concepts, subcategories and categories. (5) A literature review was delayed until the scheme of concepts, subcategories, and categories had been developed (Holt & Dunn, 2004; Strauss & Corbin, 1998). Once the data had been analysed the literature review was conducted to contextualise the findings within the existing coaching literature (e.g., Chapter 2 pages 54-58, 59-62, 64-68, & 73-81). (6) A member-checking technique was used, which involved two of the participants being re-contacted at various points throughout the study to seek their views on categories from the data analysis in a process similar to Holt and Dunn (2004). Specifically, the coaches were asked in face-to-face meetings to run through

‘real-world’ examples of how interpretations from the data fitted into their coaching practice. The data collection and analysis of data ended once no new categories were developed from the data, that is, theoretical saturation was reached (Strauss & Corbin, 1998). At this point, both coaches reported that they could not think of any scenarios in which the grounded theory could not be used to understand their applied practice. The member-checking technique with the two participant coaches was not audio recorded nor were they subjected to the analytic coding procedures. Instead, these participants reflected on the structure and design of the emerging theory. Finally, whilst difficult to depict otherwise, in a clear and transparent manner, the theory building process was not linear, and relied upon the constant comparison and analysis of data and continued theoretical sampling based on the developing themes (an iterative process; Strauss & Corbin, 1998).

4.3 Results and Discussion

Results of the grounded theory are presented with an emphasis on richly contextualised verbatim text, demonstrating not only concepts but relationships between concepts. In addition the findings from the review of literature are incorporated into a results and discussion section. The results revealed three categories, Contextual Factors (Figure 8), Delivery Approach (Figure 9), and Targeted Outcome (Figure 10). Each of these categories is described and explained using subcategories and associated concepts. Figure 11, depicts an integration of all concepts into a grounded theory.

4.3.1 Contextual Factors

The Contextual Factors framed the delivery of video-based analysis. Specifically, the Contextual Factors consisted of six subcategories; social environment, coaching and delivery philosophy, recipient qualities, presentation format, session design, and delivery process. Factors relating to role, power and interaction were evident within the social environment of the delivery of video-based feedback. This can be seen depicted in Figure 11, as the context within which the performance analysis was applied. The following excerpt highlights an example of interaction:

I use the footage as the way in, the tool in, to technical, emotional social and physical work. I'd say, 'look, this is why we're doing this, this week, this is why we're doing this, next week,' and so on and over a program of time. I also use it as a forum for communication with the player because there are very few occasions to interact in a meaningful way with the player with the game in front of them (Derek).

Also the historical use of video-based feedback to reinforce coercive or punishment power (see Chapter 2 page 72) was highlighted:

I was at United [pseudonym] with people like Player A, and Player B, and Player C. If we got beat on a Saturday they'd be saying to me, 'bloody hell Coach A and Coach B will have us in there for an hour and a half with the

bloody video on', and we did in the old days. In the old days it would be more as a punishment rather than doing something constructive (Jim).

Implicitly within the social environment roles such as 'coach' and 'player' are also acted out. This is supported by the research which demonstrated that within professional and international soccer, such organizations often impose strict institutional demands where players learn to conform to the coaches requests and 'obey orders' (Cushion & Jones, 2006; Holt & Dunn, 2004). Indeed, Cassidy, Jones and Potrac (2009) have suggested that coaches need to be mindful of the power dominated nature of the coach-athlete relationship, if coaches are to be successful in obtaining the trust, respect and confidence of the athletes and ultimately develop a positive learning environment. Helen highlighted the importance of the players understanding their role: "they went through each other's individual clips together because it's the same role, same system. They need to have a common understanding together."

Coaching and delivery philosophy was identified as being an important representation of what the coaches' were trying to achieve and how they would go about achieving their goal. It is important to note that the coaching and delivery philosophy was often shaped by how the coaches' viewed their role, as being about winning games or developing players. As Tony pointed out, "it depends if you are developmental or purely winning orientated in regard to how you go about the delivery." The coaches often strived to keep the video-based performance analysis game related, as Nigel suggested "everything I do is related to the game." Also, David

considered that “it’s important to have an open mind” within your philosophy. The coaches also highlighted that a great deal of care needed to be given to the construction of the video”. Claire highlighted the need to “be aware of the positive and negative clips, and always end with positive images.” The following excerpt highlights how important previous negative experiences of receiving video-based performance analysis have been in shaping the philosophy. In this example, Nigel highlights how they had previously experienced the delivery of video-based performance analysis as an English top flight player:

When I was a player all I was ever shown was how crap I was, and I know how I felt afterwards, and I know how I felt coming to the game on Saturday ... So I'm very careful of what I want the players to see, and I'll always leave them on a high. I am really very cautious. I didn't enjoy it myself. I didn't enjoy being singled out in front of eighteen people, because you can see I've made a mistake, it's obvious I've made a mistake, and the coaches turned it into, ‘that's your fault’. What I wanted him to do was help me correct the mistake; ‘what did I do wrong?’ (Nigel).

Therefore, previous negative experiences of receiving video-based performance analysis as an athlete evoked negative emotions for this participant coach. These negative emotions were especially strong when the feedback was received in front of a peer audience. Importantly, the potential negative impact upon the athlete of the misuse of the video-based performance analysis is highlighted.

Therefore, the potential effects of the medium of video to negatively impact the athlete and their learning should be considered. Whilst still in its infancy, the theorizing regarding the mechanism by which video impacts human cognition has been described by Dowrick (1991) as ‘self-confrontational’ in nature (see Chapter 2 page 33). That is, that viewing past behaviours can disrupt the natural evolutionary benefits associated with the degradation of memory or the creation of a positive glow, which usually serves to soften the negative impact of previous events (Dowrick, 1991). Again, the power-dominated nature of the coach-athlete relationship mirrors the finding of Cushion and Jones (2006; 2012) in professional youth soccer. Moreover, the findings of the work of Potrac et al. (2002) suggest that coaches should give careful consideration and reflection to the way in which they present themselves and interact with athletes in their desire to hold sway and influence (see Chapter 2 pages 61-62). Here, Cassidy et al. (2009) suggests that a more equitable power sharing relationship between the coach and athlete is more conducive to a successful positive learning environment. However, given the findings of recent empirical work (e.g., Cushion & Jones, 2006, 2012; Purdy et al., 2008) further work needs to be undertaken within elite environments to examine the use of social power within performance analysis feedback sessions to better understand the realities of practice (see Chapter 2 pages 76-81; Chapter 5).

For the participant coaches, coaching and delivery philosophy was highlighted to be constructed over time and with an accumulation of experience. As David suggests “it develops as you become more knowledgeable.” Also a desire to share this accumulation of coaching knowledge was evident. Importantly, formal coach

education training regarding the use of video-based performance analysis remains limited. Therefore coaches develop their knowledge base through experience and socialization process (Cushion, Armour, & Jones, 2003). This concept is further developed within Chapter 6. Similarly, Helen identified the importance of “sharing my knowledge and experience with the players.” Furthermore, David suggested that it was necessary to “encourage players to ‘take responsibility’ and use self-analysis through the video. In this regard Claire highlighted the use of an athlete-centered coaching and delivery philosophy “I’ve kind of tried to change my philosophy to make it more player-centered, and allow them, if you like, to learn through their mistakes and take ownership of the process.” However, in a recent critique of notions of athlete ‘centered coaching’, Nelson, Cushion, Potrac and Groom (2012) have highlighted that at present much of the discourse of athlete centered coaching remains a-theoretical and often rhetoric. Here, Nelson et al. (2012) highlight that the application of the work of Carl Rogers, for example, would require coaches to consider new educational goals, focus on the facilitation of learning rather than the process of instruction, and become more comfortable with relinquishing power. This concept is further developed within Chapter 6.

The delivery process was conceptualised as the pedagogical reasoning (i.e., involving consideration of the coach, athlete, knowledge & the learning environment) regarding the coaches in the planning and implementation of the video-based performance analysis. The coaches often noted that the recipient’s qualities were just as important. The coaches suggested that effective delivery must have an understanding of the players you are working with. Jim highlighted that “you want

them to be creative.” Whilst Paul highlighted that “they have to be gifted.” Furthermore, Jim demanded that the players have “a good work ethic, with honesty and integrity in their training, and be willing to learn.” Interestingly, similar findings were presented by Holt and Dunn (2004) regarding the psychological competencies associated with soccer success during adolescence. Moreover, in the present study understanding the psychology of the recipient was identified as being important:

It depends very much on the human being you’re dealing with, some don’t respond, whatever presentation format you use. Whether it’s your video analysis presentation of training or the match. Keep it short. Player A would sit there for four hours, no problem at all. Again, Player B was a student of the game. Player C, no, I had to keep Player C’s down to a minute, a minute and a half (Alex).

Therefore, this study demonstrates the complex relationship between player, coach and context, mirroring findings from previous studies with elite soccer coaches (Cushion & Jones, 2006, 2012; Jones, et al., 2003; Potrac, et al., 2002). In that, the delivery of performance analysis will be dependent on coaching philosophy, knowing the athletes as individuals, knowing what they like doing and what they do not, whilst creating an environment where athletes can be open about not understanding issues without the fear of being judged. However, as yet the realities of interactions within performance analysis feedback sessions remain unexplored (see Chapter 5). Also

within the Contextual Factors, the coaches identified the importance of having reflective players. As Tom pointed out “you want them to take it away and reflect on it later.” Finally, the following example demonstrates the interconnected nature of the delivery process, as illustrated in Figure 11:

It [performance analysis] creates a critical awareness of what they actually do and don't do, that therefore triggers a responsibility. So if I know what I'm doing well or I'm not doing well I have a responsibility to be better. So, effective use of the video with a player would trigger a commitment process to improvement. So therefore then, it's linked to training and then you're into your cycle again of goal, review, train, game, review, train ... That commitment to that process will help the individuals themselves take ownership of that process. It's in a non-critical framework, so it's not just reviewing when we lose, it's not reviewing just when they play badly, it's a continual review process (Tony).

The presentation format consisted of a number of alternatives from which the coaches could present the video-based performance analysis to the players. These consisted of individual sessions, small group sessions, and team sessions. For example, Billy suggested “personally, I tend to sit down with the player, have a one-to-one conversation really, and find out his thoughts on the game, give him my feedback and what I feel his performance was, and then go through the analysis with him.” Whilst in a small group session Helen highlights that “what we do is get them

to assess their own performances We give them our opinion of the game and just set them tasks, split them up into groups, it might be defenders - list our defensive strengths and weaknesses” (Helen). Finally in a team presentation format Mary highlights that “I see it [video based performance analysis] more as a preparation tool for the team play.”

Session design relates to the way in which the coaches planned and implemented the video-based performance analysis. Specifically, this related to the focus of the session (i.e., what the sessions was about), and the coaches’ aims regarding the psychology of how they would deliver this information. As Malcolm acknowledged “the psychology of what you are doing is all interlinked.” Particular attention was paid by Nigel who was conscious of not over-loading the players with too much information, “it would be 15mins, 20mins top whack.” The following example from the interviews further demonstrates the relationship between having a focus to the session and how that relates to the recipient’s qualities of concentration and attention; “When you’re dealing with first team players like at City [pseudonym] you have to edit it [the video] to keep their attention span focused on what they’re doing” (Paul). The complex social environment and interactions between the psychology of delivery, the recipient’s qualities, the session design, and presentation format, was alluded to by the coaches. For example:

There was one specific player at United that I was always having a little bit of a run in with him about his work ethic. Coach A said to me, ‘take him away do a 1on1 with him on the video’, and that player responded very, very well

1on1, and he didn't respond well to the group atmosphere It's about dealing 1on1 with individual personalities and also the psychology of it, when to give them the good stuff, and when to give them the not so good stuff (Malcolm).

Therefore, findings of the present study build upon previous pedagogically based coaching research. For example, Potrac et al. (2002) using a case study approach, reported that an elite soccer coach was conscious of coaching points and ensuring that they directly related to physical practice that could hold the players concentration (Chapter 2 page 61). Similarly, Jones et al. (2003) highlighted the danger of giving the player 'too much' information and the associated negative effects of such coaching practice upon the athlete's capacities (see Chapter 2 pages 74-75).

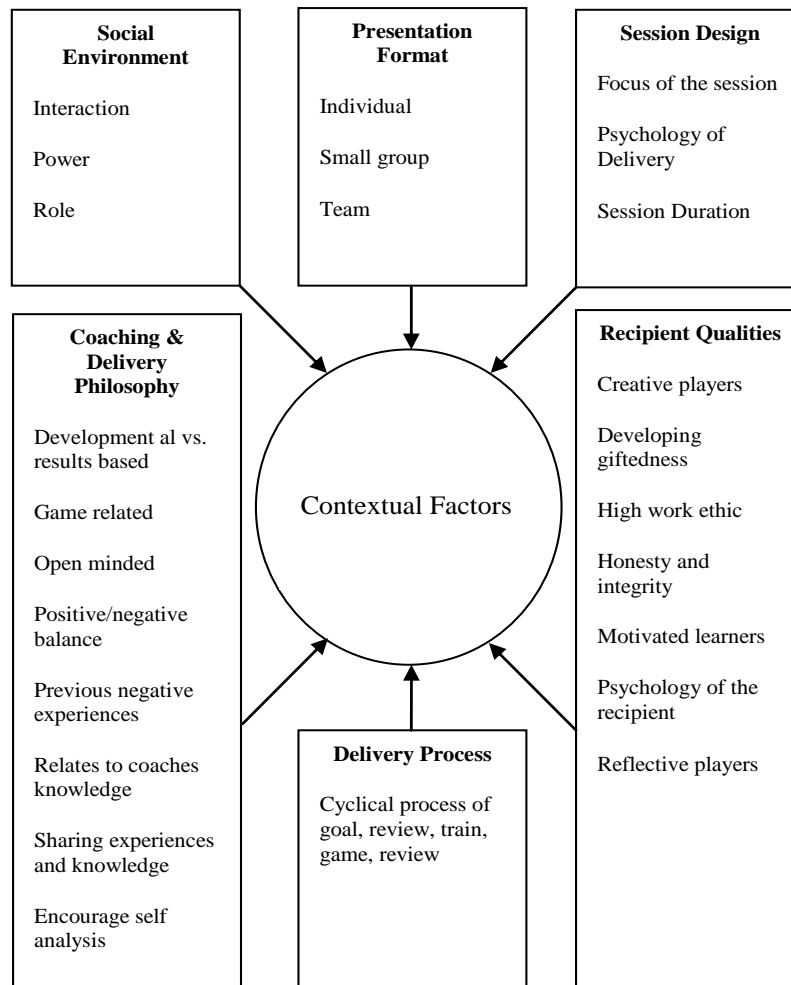


Figure 8. Overview of concepts, subcategories, and categories pertaining to Contextual Factors, which framed the use of video-based performance analysis by England youth soccer coaches.

4.3.2 Delivery Approach

Within Delivery Approach six subcategories were highlighted; motivational videos, opposition analysis, performance feedback, performance modeling, performance review, and training. In regard to the use of motivational videos designed by using montages of good play edited with emotive music, Lee highlighted that “when I speak to the players, most of them like the motivational tapes, they

choose the music and it's them in action." Here, Lee highlights a perceived relationship between video-based self modeling and self efficacy (see Chapter 2 pages 31-52).

The participant coaches also used the video-based performance analysis to analyse the upcoming opponents. David highlights that "we would show them the tactical patterns that the other team tried to use to exploit space, or create space." Furthermore, Paul used "edited versions of other teams weaknesses" to show the players before they played against the team. Interestingly, the coaches highlighted that they were considerate of the way in which they present the opposition to their own players. The coaches were particularly concerned with giving a false impression of the team through the editing of 'good' and 'bad' examples of play. The coaches were mindful of creating the impression that the opposition teams were better than they were by showing a large number of good passages of play or worse than they were by showing only the opposition's weaknesses. Helen suggests that in the player's mind "perception of the opposition, that is the key thing." However, Paul noted that "it gives them [the players] a boost to see there's a weakness in the opposition". Therefore, Paul highlights a perceived relationship between video-based modeling and efficacy (see Chapter 2 pages 31-52).

The coaches also highlighted the use of video-based performance analysis to provide performance feedback. Often the coaches would talk over the video-based performance analysis sessions and provide augmented feedback to the players. David highlighted how they had used video editing technology to "add commentary after the game on the players DVD," providing specific individualised feedback. Helen

pointed out that “I use it [video-based performance analysis] more so the players gain an appreciation of what they are actually doing, which is often not what they think they’re doing.” Therefore, in this example video was used as a tool for self-reflection.

Furthermore, Billy highlighted how he had found that video-based performance analysis often “reinforces your thoughts on performance.” Claire further noted that the video was useful to “highlight the errors that players are making.” Additionally, Billy highlights the use of video-based performance analysis to “feedback information to the club team, which the player had come from.” Similarly, Tony highlighted how he had used video-based performance analysis to “feed information back to other coaches.” Finally, Derek highlighted how he had used the video to “reinforce teaching points with the players.”

The coaches also highlighted the use of video in providing a visual ‘model’ of performance to the players. With regard to the positive modeling of good performance, Mary points out that “I try to show them positive images.” Whilst Malcolm highlighted the use of negative modeling by showing the players’ examples of bad performance and suggesting “look, [at the video images] that’s why we need to do the work.” Additionally, Paul highlighted the way in which both positive and negative modeling can be combined, “I show one situation of an unsuccessful performance, and then six or seven of them doing great.” Such perceptions are, in part, supported by the theoretical work of Bandura (1976, 1986, 1997) and also some of the empirical work within the video-based modeling literature (e.g., Bunker et al., 1976; Clark & Ste-Marie, 2007; Hall & Errmeyer, 1983; Hazden et al., 1990; Rikli &

Smith, 1980; Starek & McCullagh, 1999; Van Wieringen et al., 1989; see Chapter 2 pages 34-52).

In the interviews the coaches often noted that they were cautious of showing too many negative examples. As Tom highlighted “I tend to shy away from showing them their mistakes. I’d rather get clips of when they were doing it well and emphasizes this is the way to do it properly.” From a theoretical perspective, this perceptions mirrors the findings from the social science literature regarding the potential negative effects of viewing past negative experiences (see Chapter 2 pages 31-33). Therefore, video-based performance analysis was used to improve a number of social psychological aspects of their athletes’ development. The video was specifically used to create a form of social learning (Bandura, 1997) to model target behaviours via mastery experiences (positive self-modeling), vicarious modeling (expert modeling), and verbal persuasion (coach feedback).

The coaches also noted the importance of trust in coach-athlete relationship. The following demonstrates this point:

If you’re lucky you can get the trust with the players and a good relationship with the players, they can actually say, ‘gaffer, they’re getting in down the left every time’, and you can say, ‘well no, he’s not doing his job in front of him, so that’s why’, and they [the player in question] pull you to task. ‘Let’s watch the video then.’ Then the video gets watched, generally they’re wrong. I don’t mean that from an autocratic point of view, I just mean they’re not as

experienced in analysing the game as we [coaches] are, but there are times when they're right and you have to then take it on-board (Paul).

Tom further noted that “learning something new takes quite a lot of support and trust from the coach, and understanding of what’s happening when people have something new to take on board.” Such findings are mirrored more broadly within evaluative coach-athlete relationship research (e.g., Greenleaf et al, 2001; see Chapter 2 pages 64-70). However, there is a further need to examine how this is accomplished in situ within video-based performance analysis feedback session (Chapter 5).

Within the delivery approach, a subcategory of training was identified as an important factor. Jim suggested that “we video training, and I go back and edit it to show to the players.” Thus demonstrating that the analysis of performance is not restricted to competitive performance alone but can be extended to training situations. Moreover, David highlighted the use of the video-based performance analysis to inform training sessions:

I think it’s good to analyse goals you’ve conceded. I think that as part of doing that you must then work on what you need to do to prevent that happening again. On the pitch, and in the classroom if you want to, through discussions and on the tactics boards, and have images ready if you’re going to do that, that show it being done correctly to support the work you do on the pitch (David).

Paul demonstrates that an important element for the coaches was the relationship between the video analysis work and the practical “on pitch” training sessions “we bring them into the video room, they might watch something that we’re going to work on and then they’ve got a visual already and then we go straight into training.”

Finally, performance review was identified as a subcategory within delivery approach, which would often consist of viewing a video of the entire game. This match review was highlighted as being important by Tony who preferred to give specific individual feedback to the players “only after having seen the video of the game.” Interestingly, Tom highlighted the use of the video for coaches in “analysing the game when the emotions have gone.” Also, David highlighted a similar benefit for the players when they are able to “see themselves removed from the emotions.” Therefore, the delayed reviewing of the video appears to have a psychologically useful effect upon both coach and player (see Chapter 2 pages 31-33).

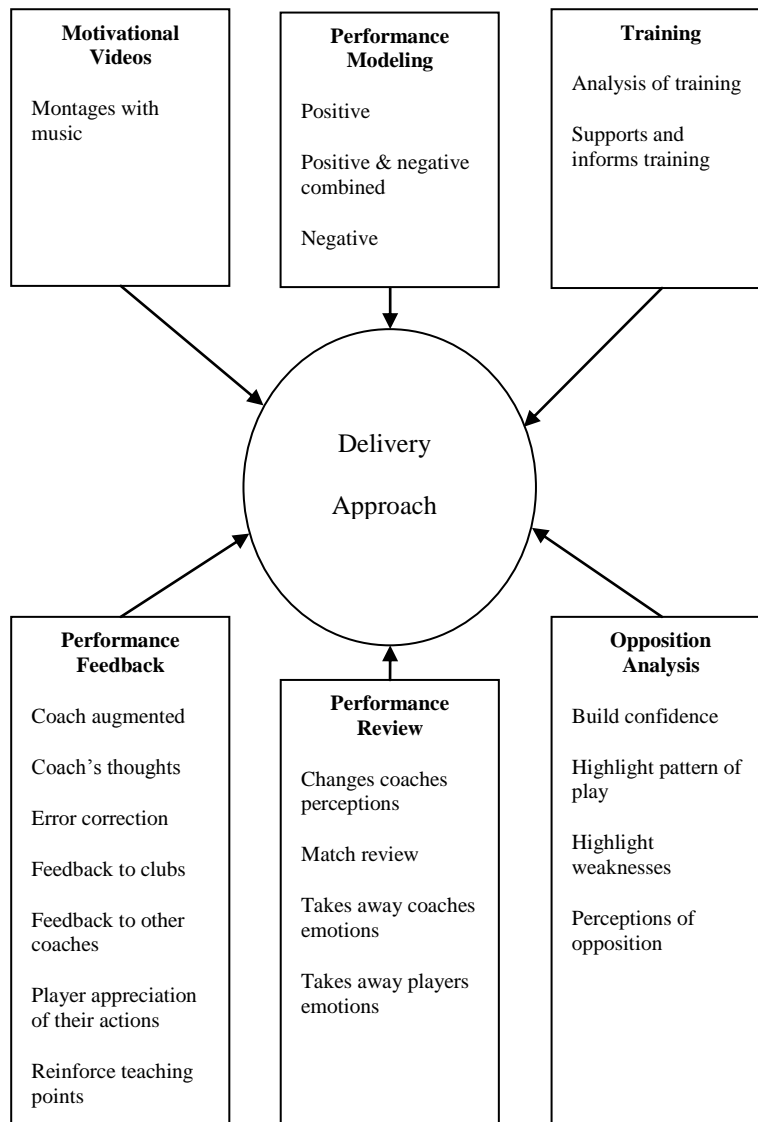


Figure 9. Overview of concepts, subcategories, and categories pertaining to the Delivery Approach of video-based performance analysis used by England youth soccer coaches.

4.3.3 Targeted Outcome

Within Targeted Outcome, four subcategories were identified: change behaviour, facilitate learning, improve efficacy, and increase motivation. These may

be defined as the 'end goal' of the coaches' interventions. Within the subcategory change behaviour, the coaches highlighted the concept that the video-based performance feedback would cause a change in knowledge. Jim suggested that "it could expand their understanding" based on watching the feedback. The coaches also highlighted that changes in behaviour may not always occur in isolation, particularly with technical behaviour changes. Alex further highlights that "it took 6-9 months to change his ways in combination with the work on the pitch, the video was fantastic for him." The video was identified as being important to change the behaviours of the players, as David pointed out "I think that it [video-based performance analysis] made a big difference to her game." In relation to player behaviour change, the coaches suggested that the video had been useful for their own professional continuous development (CPD). Mary highlighted this was particularly useful when coaches "get themselves videoed when coaching sessions."

The subcategory facilitate learning, highlighted the use of video-based performance analysis to develop a mutual understanding between the coach and player. That is, getting the coach and athlete on the same page. Helen noted the importance of "a clear common understanding so that it's [video-based performance analysis] not misinterpreted." David further highlighted that the video can be useful "to stimulate dialogue between coach and player." In terms of decision-making, Mary highlighted an example of the use of video in analysing "decisions regarding when to pass the ball and when to take players on." Similarly, this was used to develop game understanding, as Lee pointed out that "It [video-based performance analysis] reinforces their understanding. There's nothing clearer than a player looking at his

own performance.” Finally, video was highlighted as an important tool for learning. Jim contended that “it [video-based performance analysis] is the most significant of all teaching tools” (see Chapter 2 pages 31-33).

Within the subcategory of improve efficacy, Derek highlighted that, “you can talk about confidence undoubtedly. It [video-based performance analysis] can build players up and help them with confidence, I think, by putting instant pictures in their head”. Therefore, in agreement with the theorizing of Bandura (1986) and some of the empirical finding within the video-based modeling literature (e.g., Bunker et al., 1976; Clark & Ste-Marie, 2007; Hall & Errmeyer, 1983; Hazden et al., 1990; Rikli & Smith, 1980; Starek & McCullagh, 1999; Van Wieringen et al., 1989; see Chapter 2 pages 34-52), both Billy and Derek highlighted a perceived relationship between performance accomplishment, vicarious learning and self efficacy (see Chapter 2 pages 31-33). Furthermore, when working with goalkeepers Billy highlighted that:

Sometimes in game situations, goalkeepers get quite down on themselves. They might have played well for eighty-nine minutes, then the one thing that might not be good is what they remember. But the video evidence really enforces all the good things that they have done... So I think by showing good examples of how they have played, seeing themselves performing well, performing the tasks well, is massive in re-building their confidence (Billy).

As well as the individual benefits of using the video to increase individual players' efficacy, the coaches suggest that the video could also be used to build team cohesion. Mary highlighted how they had achieved this in the past:

We made a real effort to use the video as much as we could. And the players responded. They appreciated it. I remember one night we just sat up clipping the video and we put some music to it, really crude, but it really seemed to help with the mood and the atmosphere of the players. It was like they'd appreciated what had been done. But at the same time they were watching themselves do good things. So I think, it helps with the team building and team bonding, the sort of feel good factor within the group (Mary).

Within the subcategory of increase motivation, the coaches used motivational videos or montages at key points when working with squads. For example, before important matches or at the end of a team meeting to remind the player what they had achieved. David highlighted how the coaches had described confidence and motivation to be linked together, "there's the use of video from a motivational point of view. You show all the best clips of this, this, this and this, to provide confidence and a motivational aspect leading up to a game" (David). Similarly, Bandura (1986) highlights that motivation is improved through tangible vicarious, social, and self evaluation of performance (see Chapter 2 pages 31-32).

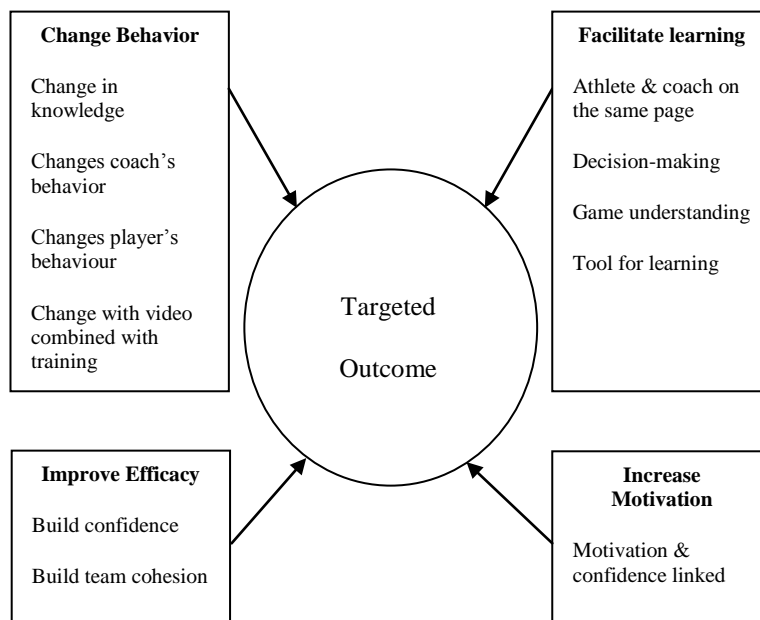


Figure 10. Overview of concepts, subcategories, and categories pertaining to the Targeted Outcome of video-based performance analysis by England youth soccer coaches.

4.4 Toward a Grounded Theory

The main objective of this first study was to build a theoretical framework to understand the delivery of video-based performance analysis, developing a grounded theory of applied practice. Therefore, results were placed into an organizational framework with the literature review to see how and where the theory fits (Strauss & Corbin, 1998). Figure 11, demonstrates a grounded theory of the interactions and relationships between themes in the interview data. In this regard, the work by Côté et al. (1995) and Lyle's (2002) subsequent critique of 'the mental model' was useful to situate the data within the process of coaching. Within Figure 11, performance, analysis and training are central elements of the phenomena. The delivery process

starts from the three central elements, within the grounded theory (i.e., performance, analysis and training). The shaded arrows represent the cyclical nature of the delivery process. At a point where the coach decides that a coaching intervention is required, a number of options are available to initialise the process. That is, based upon the analysis of a performance, a training session or a combination of both the coach may decide to plan the intervention starting with; presentation format, session design, delivery approach or targeted outcome. For example, if the coach has identified that a change in behaviour is their initial focus, the next decision may be to decide if this is specific to the whole team or an individual in the team. As an example, based on the decision that it is to be delivered to an individual, the session design can be planned (i.e., focus, duration and psychology of delivery). The next decision for the coach to make may be which delivery approach best suits the desired behaviour change? For example, the coach may select to deliver a session based around performance modeling, in which the player may view a number of positive and negative examples of their performance. Here, the work of Bandura (1976, 1986) was particularly useful regarding observational learning in developing the relationships between the recipient's qualities, delivery approach, and targeted outcome. Whilst this is depicted in a simplistic cyclical fashion, inherent in the delivery of video-based performance analysis are the contextual factors, which frame the delivery (i.e., social environment, coaching and delivery philosophy, recipient qualities and the delivery process). However, there is a further need to explore some of the realities of the delivery of video-based performance analysis in situ (Chapter 5). Whilst we use the term contextual factors similar to Côté et al. (1995) to represent personal variables of the

coach and athlete, the conceptualisation of these factors diagrammatically is more similar to Gilbert and Trudel's (2001) representation of a 'role frame'. That is, rather than being a 'process' feature of the grounded theory the contextual factors 'frame' the phenomena. In addition, to the personal variables of the coach and athlete there is a recognition of the social environment. This understanding was developed through the integration of contemporary coaching practice research, which recognises coaching as a complex social process (e.g., Cushion & Jones, 2006; Jones et al., 2002; Jones et al., 2003; Potrac et al., 2002). Therefore, in the delivery of the video-based performance analysis coaches should be aware of such social environmental factors and how they may affect the process (i.e., each others role and the acting of that role, how the interaction between the coach and player is negotiated, and the use of power regarding the influence attempt by the coach and compliance of the athlete). In addition, the coaching and delivery philosophy displayed by the coach may be seen as an influential factor, which may influence compliance or resistance from the player/s (see Chapter 5). Additionally, the contribution, or lack of, from the player/s themselves will impact the delivery of video based performance analysis and how the process is negotiated by the coach (see Chapter 5).

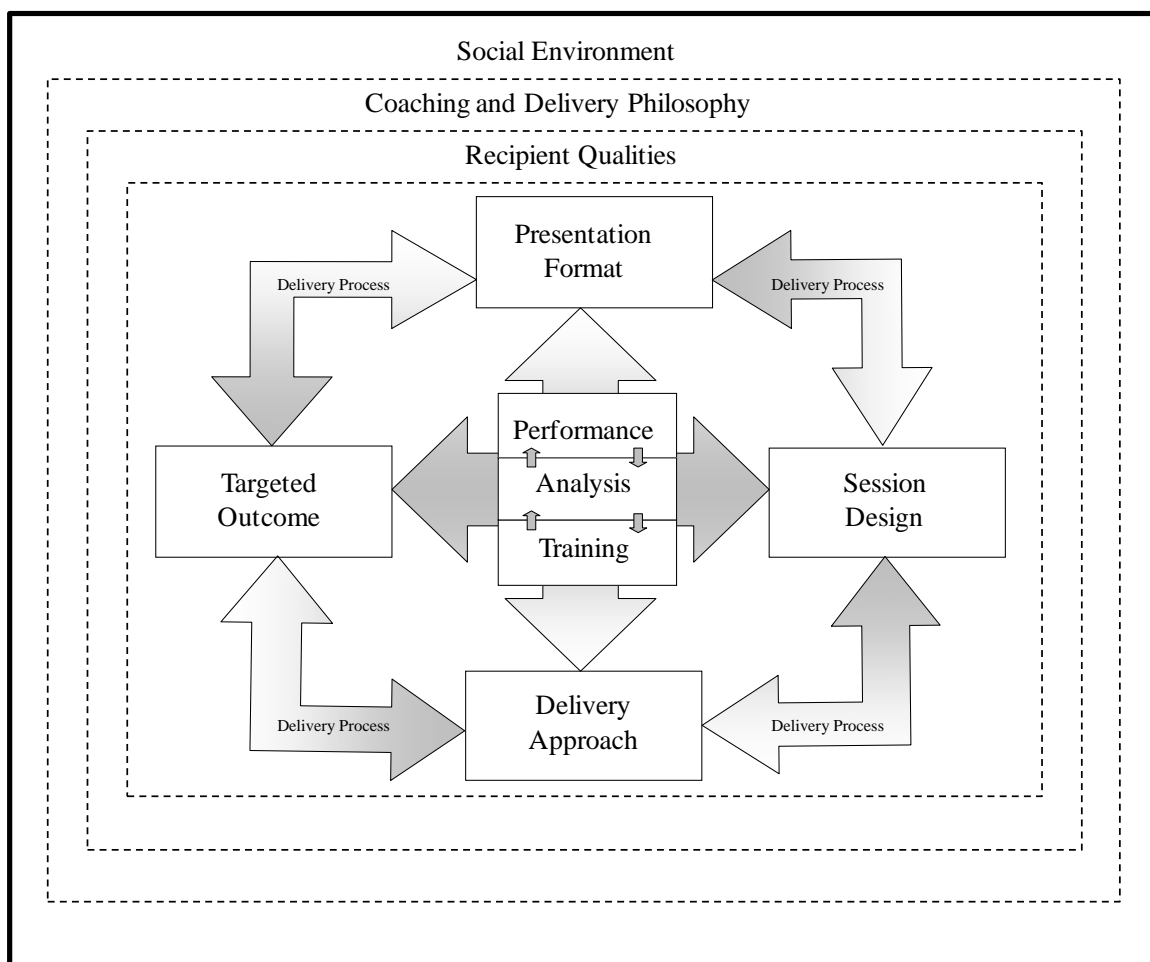


Figure 11. A grounded theory of the delivery of video-based performance analysis.

4.5 Conclusion

Study one has presented a grounded theoretical framework to understand the delivery of video-based performance analysis. These findings build upon features of a coaching process model suggested by Lyle (2002), adding rich empirical data describing the interlinked processes of the delivery of video-based performance analysis, which can be understood in a cyclical process manner in practice. Moreover, the present study has extended the simplistic and unproblematic nature of previous literature (Carling et al., 2005; Hughes & Franks, 2004) by unearthing some of the

complexities of dynamic psychological and social activities inherent within the delivery of video-based performance analysis. Furthermore, via the analysis of empirical data (i.e., personal experiences, emotions, and pedagogical reasoning of the participant coaches'), it is argued that this is a more realistic representation and offers greater potential for coach education than previous research (Lyle, 2002; Voight, 2007). It is hoped that this more realistic presentation of the delivery of video-based performance analysis highlights some of the complexity that coaching practitioners should consider. Specifically, as the use of technology increases in sport both practitioners and researchers should be aware that even the most intuitively appealing technology requires thoughtful and reflective application to understand its effects within human interactions (Ives et al., 2002).

Therefore, Study 1 'paints a valuable picture' regarding some of the what that underpin the use of video based performance analysis within coaching. Indeed, a particular strength of the study is that for the first time an empirically based account of the use of video-based performance analysis within the coaching process exists. It is argued here that this represents a substantial advancement within our understanding of the use of video-based performance within the coaching process, specifically building upon the work of Franks et al. (1987). Importantly, this work represents a number of potential avenues for future use. The first is to provided practitioners with the opportunity to reflect upon their current practice and question the alignment between their desired Targeted Outcomes (i.e., behaviour change, learning, improve efficacy etc) and consider if their current practices are optimal to achieve these end goals (see Chapters 5 & 6). The second relates to the development of the field,

specifically, with regards to the development of a ‘distinct body of knowledge’ regarding the use of video-based performance analysis. Here, researchers may test the variation in the theory and whether it works to explain other contexts and other participants experiencing similar phenomena (Holt & Dunn, 2004; Strauss & Corbin, 1998). In doing so, this may change the theory from a substantive theory towards a more general theory (Strauss & Corbin, 1998).

However, whilst Study 1 has provided an empirically based theoretical framework as a guide to better understanding the complexities inherent within the delivery of video-based performance analysis and started to address some of the questions regarding the what of video-based performance analysis, there remains a paucity in our understanding of the how of performance analysis. Indeed, such a situation is unsurprising given that most coaches who are able to use video-based performance analysis within a structured coaching framework rely upon maintaining their competitive edge. Consequently, similarly to general coaching behaviour research, there is a certain degree of ‘mystique’ surrounding what elite coaches actually do and the methods that they use to produce successful teams (Potrac et al., 2007; Smith & Cushion, 2006). Therefore, the purpose of Study 2 is to further explore through a specific case study the how regarding the delivery of video-based performance analysis within the coaching process.

CHAPTER FIVE: STUDY 2

Analysing coach-athlete 'talk in interaction' within the delivery of video-based performance feedback in elite youth soccer

5.1 Introduction

A number of important issues have been highlighted from the results of Study 1. In building upon earlier work highlighting the use of video-based performance analysis within the coaching process (i.e., Franks et al., 1983; Hughes, 2008; Hughes & Franks, 1997; Robertson, 1999; see Chapter 2 pages 25-30), Study 1 has highlighted some of the complexity which coaches consider to be important when using video-based performance analysis. For example, it was highlighted that a number of Contextual Factors influence the interactions that take place between coach and athlete (see Chapter 4 pages 150-159). These may be very different depending upon factors such as the coaches' philosophy, the social environment created, the presentation format selected, the design of the session, the delivery process and the recipient's qualities. Moreover, rather than a singular 'all encompassing' conception of video-based performance feedback a number of alternative Delivery Approaches were highlighted (see Chapter 4 pages 159-165), each with its own specific purpose. For example, the use of motivational videos, performance modelling, the use for training, performance feedback, performance review and opposition analysis. Finally, in an attempt to understand the underpinning rationale for the use of video-based performance analysis a number of Targeted Outcomes were highlighted by the coaches. They were, to change behaviour, to facilitate learning, and to increase the efficacy and motivation of the athletes (see Chapter 4 pages 165-169). Although, the empirical data illustrated that the process was far from a simplistic linear process (i.e.,

Alex highlighted that “It depends very much on the human being you’re dealing with, some don’t respond, whatever presentation format you use” & that “it took 6-9 months to change his ways in combination with the work on the pitch, the video was fantastic for him”; see Chapter 4 page 155 & 166).

However, whilst Study 1 sought to develop an empirically based grounded theory which highlighted what the elite participant coaches considered being important in the way that they delivered video-based performance analysis (i.e., their pedagogical reasoning), how coaches actually deliver this information within real coaching contexts remains unexplored (Chapter 1 page 2, & 5-6; Chapter 2 page 91). Indeed, whilst the reliance solely upon interview data reflects much of what we understand about sports coaching (Culver, Gilbert, & Trudel, 2003; Gilbert & Trudel, 2004; see Chapter 2 page 58), and as such an examination of alternative methodologies within the social science literature which enables researchers to be in more direct touch with the very phenomena under investigation remains necessary (Peräkylä & Ruusuvuori, 2011). In an attempt to address these limitations, the purpose of Study 2 is to explore coach-athlete interactions within performance analysis ‘in situ’. Specifically, to examine how interactional tasks are achieved through the use of talk, within video-based feedback sessions. The significance of this study will be to illuminate some of the mystique surrounding the use of video-based performance analysis within elite contexts, whilst addressing Research Question 2; what can be learnt about the delivery of video-based performance analysis within a naturalistic setting working with elite athletes? Specifically, how might a coach use video-based performance analysis feedback within the coaching process to achieve interactional goals (see Chapter 1 page 6)?

Indeed, increasingly, coaching scholars have illustrated the value of a socio-pedagogical analysis of practice to better understand the ‘messy realities’ of sports coaching (e.g., Cushion & Jones, 2006; Jones et al., 2003; Potrac et al., 2002; Purdy et al., 2008). However, within the performance analysis literature, little attention has been paid to how such socio-pedagogical factors impact upon coaching practice (Stratton et al., 2004; Chapter 1 page 2, & 5-6; Chapter 2 page 88-92). Alternatively, idealistic and unproblematic representations for the use of performance analysis within the coaching process (i.e., Franks et al., 1983, Robertson, 1999) have continued to dominate the literature (e.g., Hughes & Franks, 1997, 2004, 2008; see Chapter 2 pages 25-30). Recognising this difference would seem important because, “the current set of models result in a presentation of the coaching process that is often reduced in complexity and scale, and the essential social-cultural elements of the process are often underplayed” (Cushion et al., 2006, p. 83; see Chapter 2 pages 88-92).

Indeed, within the performance analysis literature to date, more attention has been paid to performance analysis as a method to record sports performance data in an ‘accurate’ and ‘reliable’ manner (cf. Hughes & Franks 1997, 2004, 2008; Chapter 2 page 9). Consequently, it has been suggested that this situation has lead to a disconnection between the academic study of performance analysis and the realities of the application of performance analysis in practice by coaches in the field (Franks, 2004; Chapter 1 page 2; Chapter 2 page 88-89; Study 1 Chapter 4). This is particularly surprising given the increased use of video-based performance analysis technology within elite sporting environments (Carling et al., 2005; James, 2006; Chapter 1 page 2), and that performance analysis has been firmly located within the

coaching process (e.g., Carling et al., 2005; Hughes, 2008; Hughes & Franks, 2008; Chapter 1 page 1; Chapter 2 page 9).

However, recent work taken from the perspective of both the coach and athlete has highlighted some of the complexities inherent within the delivery of video-based performance analysis (Study 1 Chapter 4). For example, effects on athlete learning or non-learning have been found to relate to different preferences for receiving performance analysis feedback, thus demonstrating the importance of understanding athletes as individuals (Study 1 Chapter 4). In addition, the effectiveness of coach-athlete interactions has been highlighted to be affected by a number of complex interacting social factors such as coaching knowledge, power, respect and the suitability of the learning environment (Study 1 Chapter 4).

Whilst these early investigations (e.g., Study 1 Chapter 4) have provided some rich initial insights about coaches' video-based practices and athlete's perceptions and experiences of receiving video-based coaching respectively, the data from both studies relied upon retrospective interview data. Consequently, many 'blank spaces' remain in relation to our understanding the pedagogical use of video-based performance analysis within sports coaching (Study 1 Chapter 4; Nelson et al., 2011; Stratton et al., 2004). Therefore, additional investigation is required 'in situ' if we are to further understand the applied use of video-based performance analysis and the interactions that occur between coach and athlete during these sessions. Indeed, Jones et al. (2010) have highlighted the need for the use of innovative and diverse methodologies that capture the nuances, initiation and reaction sequences within coaching's temporal process, as traditional research methods often miss these important features, on which much of the reality of coaching actually rests.

Therefore, the aim of Study 2 is to provide a detailed examination of the pedagogical interactions between an elite level youth football coach and his players during the team's video-based performance analysis coaching sessions. Indeed, in building upon some of the findings of Study 1 regarding the need to further understand the interactions that occur within video-based feedback sessions and some of the realities of use of social power within video-based feedback sessions (Chapter 4 page 150-151, 152). For example, within Study 1, Derek highlighted that "I also use it as a forum for communication with the player because there are very few occasions to interact in a meaningful way with the player with the game in front of them" (see Chapter 4 page 150). Whilst Malcolm highlighted that "there was one specific player at United that I was always having a little bit of a run in with him about his work ethic. Coach A said to me, 'take him away do a 1-on-1 with him on the video', and that player responded very, very well 1-on-1, and he didn't respond well to the group atmosphere" (see Chapter 4 pages 157-158). However, Nigel alluded to some of the effects of negative interactions between an athlete and a coach, stating that "I am really very cautious. I didn't enjoy it myself. I didn't enjoy being singled out in front of eighteen people, because you can see I've made a mistake, it's obvious I've made a mistake, and the coaches turned it into, 'that's your fault'. What I wanted him to do was help me correct the mistake; 'what did I do wrong?'" Therefore, this Study principally focuses on exploring coach-athlete 'talking in action' by drawing upon analytical concepts from conversation analysis (Heritage & Clayman, 2010; Sack et al., 1974; Schegloff, 2007; see Chapter 3 pages 119-122). Indeed, within the social science literature, a large body of work exists which highlights the value of presenting a detailed analysis of talk in action, within such settings as calls to emergency

services, doctor-patient interactions, and courtroom trials (Heritage & Clayman, 2010).

Study 2 therefore attempts to extend existing understanding in relation to how practitioners use video-based technologies along with verbal communication in an attempt to coach athletes. The goal here is to examine how interactional tasks are accomplished through the use of talk (Halkowski, 1990; Heritage & Clayman, 2010). Moreover, in an attempt to further our theoretical understanding of coaching and provide more than a description of ‘what happened’, a theoretical framework is suggested to ‘make sense’ of the interactions between the coach and athletes (Jones, 2009). Based upon the findings of previous research highlighting the value of a ‘social power’ analysis of coach behaviour (e.g., Jones et al., 2002; Jones et al., 2004; Potrac et al., 2002; Potrac et al., 2007), the work of Raven (1992, 1993, 2001) was used to interpret the findings of the present study. Raven’s work was selected to compliment the analytical concepts of conversation analysis, at the micro-level of social interaction in coaching.

5.2 Theoretical framework

“Social power can be conceived as the resources one person has available so that he or she can influence another person to do what that person would not have done otherwise” (Raven et al., 1998, p. 307). French and Raven’s (1959) classic social power typology has been characterised as the most frequently utilised model of dyadic power in the social psychological and industrial/organisational literature (Podsakoff & Schriesheim, 1985; Raven et al., 1998). As such, it has been described as the most comprehensive and insightful theory in social influence research (House, 1993), and

has been used in a number of social settings such as family relations, education, health and medicine (Koslowsky & Schwarzwald, 2001).

However, French and Ravens (1959) original typology has been subject to methodological and substantive concerns regarding the single measurement of each power base (e.g., Podsakoff & Schriesheim, 1985). In addition, it is recognised that a number of sources of power are evident in a constellation (e.g., ‘expert power’ and ‘informational power’) with higher and lesser degrees of each basis, rather than any one single source of power (Koslowsky & Schwarzwald, 2001). As such, the original unidimensional typology of social power was re-conceptualised by Raven (1992, 1993, 2001), into a multidimensional Power/Interaction Model of Interpersonal Influence. For example, coercion (e.g., “threaten some punishment such as loss of pay”, Raven, 2001, p. 218) was developed to include personal coercion (i.e., threat of disapproval or dislike) and impersonal coercion (i.e., threat of punishment). In addition, reward (e.g., “offer of promotion or salary increase”, Raven, 2001, p. 218) was developed to include impersonal reward (i.e. “promise of monetary or non-monetary compensation”, Raven, 2001, p. 218) and personal reward (i.e., promise to like or approve). Legitimacy (e.g., “emphasises that the supervisor has the right to prescribe such behaviour and the subordinate has an obligation to comply”, Raven, 2001, p. 218) was developed to include positional (i.e., “supervisor has the right to influence a subordinate”, Raven, 2001, p. 220), reciprocity (i.e., “returning of a favour or good turn”, Raven, 2001, p. 218), equity (i.e. “requires that something should be done to compensate hard work or harm”, Raven, 2001, p. 220) and dependence (i.e., “obligation to help those who cannot help themselves”, Raven, 2001, p. 220). While expert power (e.g., “the supervisor knows what is best”, Raven, 2001, p. 218) and reference power (e.g., “appeal to a sense of mutual identification, or for a desire for

such identification”, Raven, 2001, p. 218), which were originally considered only in a positive form, were developed to include positive (i.e., the influence attempt produces the intended change) and negative (i.e., the influence attempt produces a change in the opposite direction) dimensions (French & Raven, 2001). Finally, informational power (e.g., “carefully explain to the subordinate why the changed behaviour is ultimately preferable”, Raven, 2001, p. 218) was developed to include a direct (i.e., direct communication – ‘you need to do this’) and indirect (i.e., suggestive communication – ‘I have heard that this works well in this situation’) dimension (Raven, 2001). Importantly, the target ‘understanding the reason’ differentiates informational power from expert power (Raven, 2004).

Drawing upon Raven’s (1992, 1993, 2001) Power/Interaction Model of Interpersonal Influence, Koslowsky and Schwarzwald (2001) have suggested that the tactics available to an influencing agent can be said to emanate from either personal (i.e., education, experience & popularity) or positional/organisational factors (i.e., granted to the agent by the institutional role). Additionally, it has been suggested that such power tactics can be further differentiated as ‘hard-soft’, referring to the amount of freedom that the target feels in choosing whether or not to comply. ‘Hard tactics’ (i.e., coercion, reward, legitimacy of position, equity & reciprocity) have been highlighted to be relatively unfriendly, controlling and coercive (Pierro et al., 2008). Alternatively, ‘soft tactics’ (i.e., expert, referent & informational power as well as legitimacy of dependence) represent influence with the target feeling freer in their decision to comply with the influencing agent (Pierro et al., 2008). ‘Hard’ and ‘soft tactics’ differ in the origin of the resource, with ‘hard tactics’ stemming from organizational resources, whereas ‘soft tactics’ are considered personal (Schwarzwald et al., 2006).

From the perspective of the influencing agent, Raven's (1992, 1993, 2001) framework consists of: (1) The motivation to influence (e.g., a need for power, a need to demonstrate independence, a need to satisfy a role requirement, a need to enhance one's self-esteem and self-efficacy, a desire to harm or benefit the target, and a desire for status in the eyes of a third party); (2) The assessment of available power resources and cost associated with evoking each resource (e.g., coercion, reward, legitimacy, expert, reference & informational); (3) Preparing the stage for influence, via the use of impression management, to set the scene for particular power strategies (e.g., expertise through self-promotion, authorisation to establish formal legitimate power of equity & surveillance); (4) Implementing the power strategy and its aftermath, which questions whether the target, post influence, feels resentful towards the agent (e.g., what was the cost of the influence attempt?). Based upon an evaluation by the agent of the cost of the influence attempt, the agent will re-evaluate their basis of social power.

Moreover, in relation to the present study, Raven (2001) has highlighted that "there are concerns that an overemphasis on experimental control and quantification had lead researchers to ignore richer data that could be obtained from ongoing observations in the real world" (pp. 225-226). Indeed, more recently, Schwarzwald et al. (2006) have suggested that future studies should consider developing a more direct observational approach to examining social power that does not rely on self-report measurements. The re-conceptualised model is of particular utility for the purposes of the present study as Raven (1992) highlights that "this model was developed as a guide for research, and for an analysis of on-going interactive situations" (p. 239).

5.2.1 Theoretical considerations

Following a conversation analysis approach to analysing the classroom interactions, the work of Raven (1992, 1993, 2001) was selected in an attempt to explain the origins of the social organisation of power within the context (Jones, 2009). However, in selecting one theoretical framework over another, it is important to recognise that as a researcher my position is not value free and the direction of Study 2 and the language and terminology used clearly reflects preferences for particular theoretical positions (Wright, 2008). Consequently, readers of differing theoretical orientations will read and engage in my data and consider the findings and conclusions, they may find themselves drawn to other potential interpretations. In an attempt to address this issue, I engaged in reflexive conversations with my supervisor, where the data prompted the need for explanation (Wright, 2008). During these conversations, alternative theoretical interpretations were discussed. For example, this process involved watching the video recordings of the sessions together and then discussing how and where a number of social theorists work may be useful in understanding the on-going interactions (e.g., Pierre Bourdieu's 1990 concepts of habitus, field, capital and symbolic violence, Michel Foucault's 1991, 1994 concepts of the panopticon & technologies of the self & Bertram H. Raven's 2001 Power/Interaction Model of Interpersonal Influence) before a final decision was taken based upon the empirical data to use the work of Bertram H. Raven. Here, Wright (2008, p. 6) suggests "the ontological and epistemological positions underpinning most contemporary qualitative methodologies take reality to be contingent on context and meaning constituted through the interactions of participants and researchers". In this regard, I concur with the views of Potrac and Jones (2009) that as a researchers I

have the final responsibility for the text and that we should consequently engage in rigorous interpretation.

5.3 Context and Method

A Football Association (F.A.) English Premier League soccer academy¹ U18 team was selected using purposive sampling as the context for the present case study. Access to the context was negotiated by my supervisor, an academy coach who was working with a different age-group team within the context. This allowed for a greater degree of access because of a previous rapport with the research team (Athens, 1984). Within such settings, the interactions between coaches and players during traditional ‘on pitch’ coaching sessions have been demonstrated to be highly influenced by power (Cushion & Jones, 2006, 2012). Furthermore, that “players in these academies are constantly scrutinised by coaches who are in-turn predominantly judged, despite the official developmental ethos, on game results” (Cushion & Jones, 2006, p. 146). In such settings the production of institutional discourse can be described as an interaction between participant’s current institutional role (i.e., coach/athlete) and their current discursive role (i.e., coach questioner/athlete respondent; Thornborrow, 2002; cf. Cushion & Jones, 2006, 2012).

5.3.1 Participants

Michael (pseudonym) a 34 year old male U18 team Head Coach as observed in his interactions with 22 academy players within six video-based performance analysis feedback sessions. All players were full-time professionals, aged between 16-

¹ A Premier League Academy is the highest ranking youth development scheme within England, and is a mandatory requirement for membership to the English Premier League. Premier League Academies aim to provide education and support to young players during their transition into and out of, full-time professional football.

19 years. Michael held the Union of European Football Associations (UEFA) Advanced Licence award. However, he was an inexperienced user of video-based performance analysis feedback in his coaching practice at the outset of the study. For example, within Chapter 6, Michael highlighted that “I think when I started at Albion FC full time I was full of enthusiasm, looking back now, it was a great experience and... you know you can do all the qualifications you like but until you get out there, do it and experience it, I probably thought that I knew more than I did and looking back now some of the things that I did”. Therefore, the present study represented Michael’s early practice experiences of using video-based feedback. Following institutional ethical approval, informed consent was obtained from the coach and players before commencement of the study (see Appendix 6 & 7; see Chapter 3 page 124- 126).

5.3.2 Procedure

An ethnographic framework (see Chapter 3 pages 105-106) enabled me to analyse behaviours and interactions between the coach and the athletes ‘in situ’ within video-based performance analysis feedback sessions. This involved immersion in the context as a member of the staff undertaking the role of performance analyst, providing technical video analysis support for a 10-month season. Previous experience as a performance analyst with international youth teams allowed me to be accepted by the coaching staff and engage in ‘shop talk’ and related topics with the coaching staff (Cushion & Jones, 2006).

The study followed six home match–debrief cycles over the 10-month competitive season. On match days (Saturday) I filmed the games for analysis. Following each game, Michael highlighted ‘critical incidents’ that he would like to

explore in the post match debrief session (the following Monday). The games were analysed by using a Sports Tec™ SportsCode™ Pro digital video analysis system. During this process key match incidents were marked ('coded') for future recall by the coach, based around actions in both the attacking and defending thirds of the pitch (e.g., attacking entries, crosses, shots, free kicks, corners & throw- ins etc).

Interactions within six video feedback sessions were recorded (audio & visual) via a video camera that was placed at the back of the classroom. The camera was placed in such a way that it captured the coach (Michael), the players, myself, and the video content on a SMART board™ (interactive screen). The video recordings were transcribed verbatim and checked for accuracy.

5.4 Data analysis

Data collection and analysis of 'talk' was conducted using an applied conversation analysis (CA) approach (Heritage & Clayman, 2010; Sacks et al., 1974; Schegloff, 2007), with the aim of understanding educational interactions. CA is 'the systematic analysis of the talk produced in everyday situations of human interaction: talk-in-interaction' (Hutchby & Wooffitt, 2008, p. 11).

5.4.1 Conversation analysis as an analytical tool

Actions accomplished by talk operate through turns-at-talk (Schegloff, 2007). Turn taking is a process by which interactants allocate the right or obligation to participate in an interaction, which is interactionally managed (locally within the interaction) and structurally constrained (Sacks et al., 1974). The building blocks by which turns are created are known as turn constructional units (TCUs), which consists of grammar (i.e., sentences, clauses, phrases, & lexical items), phonetics (i.e., rising

& falling of intonation), and a recognisable action within a context (Schegloff, 2007). When analysing talk in interaction “one wants to write down not only what has been said, but how it has been said” (Have, 2007, p. 94) thus capturing phonetic properties of utterances. Therefore, the transcription includes details such as spaces and silences, overlapping speech, pace, stretches, stresses and volume (Have, 2007; Sacks et al., 1974; Schegloff, 2007). In addition to the transcription of ‘words spoken’ in standard orthography, vocal sounds that can be interpreted as words (i.e., ‘mmm’, ‘eh’, ‘uh’ etc), or that might play a role in the interaction are also transcribed (Have, 2007; Sacks et al., 1974; Schegloff, 2007). See Table 5 for conventions used in transcription.

Table 5. Conversation analysis transcription symbols (cf. Heritage & Clayman, 2010; Schegloff, 2007).

Symbol	Meaning
[Beginning of overlapping talk.
]	End of overlapping talk.
=	Lines connected by two equals signs by different speaker indicates that the second followed the first with no discernable silence between them, or was 'latched' to it.
(0.5)	Number in parentheses indicates silence, represented in tenths of seconds.
(.)	A dot in parentheses indicates a 'micropause', audible but not readily measurable; ordinary less than 0.2 seconds.
.	Punctuation marks are not used grammatically, but to indicate intonation. The period indicates a falling, or final, intonation contour, not necessarily the end of a sentence.
?	A question mark indicates rising intonation, not necessarily a question.
,	A comma indicates continuing intonation not necessarily a clause boundary.
::	Colons are used to indicate the prolongation or stretching of the sound just proceeding them. The more colons the longer the stretching.
<u>word</u>	Underlining is used to indicate some form of stress or emphasis, either by increased loudness or pitch. The more underlining the greater the emphasis. Underlining sometimes is placed under the first letter or two of a word.
WOrd	Especially loud talk is indicated by upper case. The louder, the more letters in upper case.
-	A hyphen after a word or part of a word indicates a cut-off or self-interruption.
↑ ↓	The up and down arrows mark sharper intonation rises or falls.
> <	The combination of 'more than' and 'less than' symbols indicates that the talk between them is compressed or rushed.
°	The degree sign indicates that the talk following it was markedly quiet or soft.
°°	When there are two degree signs, the talk between them is markedly softer than the talk around it.
()	When all or part of an utterance is in parentheses, or the speaker identification is, this indicates uncertainty on the transcriber's part, but represents a likely possibility. Empty parentheses indicate that something is being said inaudibly (or in some cases, speaker identification cannot be achieved).
(())	Double parentheses are used to mark transcriber's description of events, rather than representations of them. Thus ((coughs)), ((sniff)) etc.

Basic turn allocation respondents are selected in one of two ways. First, those in which next turn is allocated by current speaker's selecting next speaker, or second, those where a next turn is allocated by self-selection (Sacks et al., 1974). The allocation of turns is governed by a basic set of rules, firstly: (a) when turns are allocated by the current speaker, the "party selected has the right and is obliged to take the next turn to speak" (Sacks et al., 1974, p. 704); (b) "If the turn-so-far does not select a party to take the next turn, then self selection may but need not be instituted" (Sacks et al., 1974, p. 704). The first starter acquires the right to a turn, and transfer occurs at that place, and (c) "If the turn-so-far is constructed in a way as not to involve the use of a current speaker selects next technique, then the current speaker may, but need not continue, unless another self-selects" (Sacks et al., 1974, p. 704). Secondly, if at the initial "transition-relevance place of an initial turn-constructural unit neither a nor b has operated, and following the provision of c, the current speaker has continued, then the rule-set a-c re-applies at the next transition-relevance place, and recurs at each transition-relevance place until transfer is effected" (Sacks et al., 1974, p. 704). In addition, Schegloff (2007, p. 13) suggests that conversational sequences can be understood to comprise of 'adjacency pairs', composed of a minimum of: (a) "two turns, (b) by different speakers, (c) adjacently placed; that is one after the other", (d) "that these two turns are relatively ordered (first part - initiation/second part - response)", and (e) "that the pair types are related (i.e. greeting-greeting, question-answer, offer – accept/decline etc)".

However, applied (or institutional) CA has been outlined as a variation from 'pure' CA, whereby 'institutional talk' as opposed to 'everyday talk' is examined within a broader theoretical framework (Have, 2007; Heritage, 2005). Have (2000, p.

189) further explains that “in pure CA, the focus is on the local practices of turn-taking, sequential organisation, etc., in and for themselves, while in applied CA attention shifts to the tensions between those local practices and any larger structures in which these are embedded, such as institutional rules, instructions, accounting obligations, etc”. Here, Heritage (2005, p. 106) outlines three features of institutional talk that may be considered to be different from ‘everyday conversation’:

1. The interaction normally involves the participants in specific goal orientations that are tied to their institutional-relevant identities (i.e., coach-athlete).
2. The interaction involves special constraints upon what will be treated as allowable contributions to the business in hand (i.e., topic focus & sequential organization).
3. The interaction is associated with inferential frameworks and procedures that are particular to specific institutional contexts (i.e., English Premier League Academy).

Furthermore, Heritage (2005) highlighted that “the challenge has been to identify and describe the range of practices through which identities – and whatever form of power and inequality may be associated with them – are linked to specific actions in interaction” (p. 110). More recently, CA has been described as “an evolving field of inquiry” (Hutchby & Wooffitt, 2008, p. 182), with many extensions to early CA approaches evident within the literature (Hutchby & Wooffitt, 2008; Richards, 2005; Seedhouse, 2005). In this regard, it has been suggested that CA is able to provide “a ‘holistic’ portrayal of language use that reveals the reflexive relationship

between form, function, sequence and social identity and social/institutional context” (Seedhouse, 2005, p. 263). Whilst typical early CA research does not include a theoretical basis, the application of CA to classroom research has seen an amalgamation of different theoretical frameworks (Mori & Zuengler, 2008). However, this method should not be interpreted as an attempt to generalise coach-athlete interactions from the present study to all coach athlete-relationships. The purpose here is to examine and explain how the social world operates locally through peoples actions (Mercer, 2010), through a detailed analysis of the interactions of the participant coach (Michael) with a group of athletes.

5.5 Results and Discussion

Extract 1, players and coach watch the first of the three goals conceded on Saturday from a free kick:

1 Michael: Alright inswinging free kick (.) we have ↑two on 'im initially (0.4) one
2 comes off i:t, (1.2) >so we don't< need two out there (.) cos it's >not a
3 sh-< (.) it's not a shot so he's done the right thing coming off i:t (.) but
4 then, (.) whoever it is (.) I'm >not exactly< sure who it is runs back in
5 and (0.4) doe:s (.) does nothing (.) look at this (3.6) one player here
6 unmarked (1.0) marked by him (0.8) °(?)° (0.6) one player here (2.4)
7 unma::rked (.) so o:ne for one man (0.4) one for one man (.) >one for
8 one man< (2.8) >(another) one< (0.8) one for one (man)/(there)
9 James: ((coughs))
10 (0.4)
11 Michael: °Is that (one of ours)°
12 James: No: °no° (.) that's me I come across
13 Michael: That's you, (.) no that's you there isn't it
14 James: °Yeah°
15 Michael: So who's that
16 Chris: [(Tom plays there (.) Tom was there)]
17 Player?: [(?)]
18 Michael: Right (.) so he:'s, (.) we have to say that he's unmarked (then)/(man)
19 (.) he's not marked the right side (0.8) okay, (0.6) ↑is he marked?
20 James: °I was (?) (at the back)°
21 Michael: You just said you were marking 'im,
22 James: °Yeah°
23 Michael: Okay
24 Michael: Right both those players unma:rked
25 Player?: (?)
26 Michael: Right
27 Warren: One of the refs (.) blocking o:ff (.) the deep one
28 (0.8)
29 Warren: One of our players (near the) refs
30 Michael: There=
31 Warren: =Yeah screening off
32 Michael: °Yeah° (.) this playe:r (we'll) take that that's a (?) the ball that's okay
33 (.) SO BASically we've gone ONE (.) two (.) three (.) FOUR players

34 unmarked (0.6) four players unmarked (.) in a set piece (2.8) from the
 35 sta:rt
 36 (13.8)
 37 Michael: ↑Now wha:t they do: he:re (.)just pause it there (.) they swing the ball
 38 to the back po:st (.) and >they already got< two against o:ne and our
 39 player gets stuck right under it ca:n't get their feet sorted out t- to head
 40 it away (.) our central players get dra::wn to that ba:ll (.) and ↑they
 41 leave the other two at the back post (1.2) so we 'ave (.) two against one
 42 he:re and then we end up wi:th, (.) well it ends up with all these three
 43 are not ma:rkcd (.) cos all the players get drawn to the ball and don't
 44 think anything about ma:rking the:m, (0.4) °>just run it again<°
 45 (13.8)
 46 Michael: °Just run it back just a second plea:se° (3.8) °just go slow (.) go slow°
 47 (3.8) °and stop there° (2.0) now chaps we've got too many players that
 48 aren't getting in amongst them and getting tight enough look at this
 49 here (.) <one (.) two> three players (.) doing nothing (.) nothing at all
 50 (1.8) an overload here, (.) players that aren't getting marked (.) I mean
 51 here (.) it seems like we:'re (.) we're tight enough but there's two
 52 agains- see we've got two against one he:re (.) and then two against
 53 one there, (.) in the two most crucial areas of the goal, (11.8) players
 54 on the fringes of things (.) outside of everything (0.6) one two three
 55 four (?) next one

In the interactional example² in lines 1-8, Michael augments the video picture of the situation in which a goal was conceded from a free kick. Michael uses a combination of ‘expert power’ and ‘direct informational power’ (Raven, 1992, 1993) to persuade the players that his analysis of the unfolding events is correct. Such an approach is theorised to relate to a soft tactic, emanating from the coach’s personal resources (i.e., coaching knowledge; for further discussion regarding the importance of coaching knowledge see Chapter 6). In line 11, Michael questions the players to identify a player in the picture. James starts to speak to identify himself as the player in question (line 12), thus responding to the invitation to speak (adjacency pair). In line 13, Michael rejects James’ analysis of his position and again invites James to re-respond to the question to which James responds affirmatively in line 14 (adjacency pair). Again in line 15, Michael questions the group as to the identity of a player, to which Chris accepts the invitation to speak (adjacency pair), offering Tom as the response (lines 16). In lines 18-19, Michael further explains his reasoning for highlighting the players as being ‘unmarked’ via a combination of ‘direct informational’ and ‘expert power’ (Raven, 2001). In an attempt to correct player understanding, ‘surveillance’ is suggested to be unimportant, as future reward or punishment based on the influence attempt is not offered (Raven, 2001).

Again in the closing remark of line 19, Michael asked a closed question to the group, with a particular emphasis on the point (‘↑is he marked?’) to which James accepts Michael’s invitation to speak (adjacency pair), in a quieter tone (‘°I was (?) (at the back)°’), identifying himself as marking the player in question (line 20). However, in line 21, Michael directly challenges James’ (‘You just said you were marking ‘im’), to which James responds affirmatively (adjacency pair), in a

² Coach-athlete talk is discussed in the present tense as the interactions unfold (cf., Halkowski, 1990; Heritage & Clayman, 2010; Schegloff, 2007).

markedly softer tone (line 22). In line 22, James corrects his previous interaction (Jefferson, 1972), in agreement with Michael (‘°Yeah°’). Jefferson (1972) describes such an error as an ‘interactional’ error, when one party is attempting to speak appropriately to a co-participant. In line 24, Michael reinforces this correction (‘Right both those players unma:rked’). In line 25, one of the players mumbles inaudibly. To which Michael, responds (‘Right’). At this point Warren explains that the referee is blocking off one of the players that should be marked (lines 27-29). In line 30, Michael responds in an attempt to understand Warren’s assessment (‘There=’). To which Warren confirms Michael’s understanding of the situation in line 31 (adjacency pair), ‘latching’ [(=)] onto Michael’s utterance (‘=Yeah screening off’). In lines 32-52, Michael continues with a tactical analysis of the unfolding situation on the video screen using both ‘direct informational’ and ‘expert power’ to influence the players to accept his evaluation of the event (Raven, 1992, 1993).

In line 46-53, Michael highlights the players that are not performing their roles and responsibilities in the situation (‘now chaps we’ve got too many players that aren’t getting in amongst them and getting tight enough’). Similarly, in lines 47-49, Michael highlights how the players are doing ‘nothing’ (‘look at this here (.) <one (.) two> three players (.) doing nothing (.) nothing at all (1.8) an overload here, (.) players that aren’t getting marked’). Michael’s utterances are delivered with pauses in talk [(.)], communicating a disbelief in the unfolding tactical situation. This form of influence maybe understood as ‘legitimate power of responsibility’ (Raven, 1992, 1993), where unless the players fulfil their defensive roles individually (lines 52-53 ‘players on the fringes of things (.) outside of everything (0.6) one two three four’), the collective defensive roles and responsibilities of the team and Michael’s goals as coach cannot be achieved. Indeed, the lexical choice of ‘we’ rather than

‘you’ throughout (lines 1, 2, 33, 40, 46, 49, 50) suggests that Michael is trying to create a sense of shared responsibility within the group as a collective identity (Heritage, 2005). A similar desire for control ‘over’ athletes to achieve “work-task-related identity” (Heritage, 2005, p. 111) has been demonstrated in a number of investigations into elite level coach-athlete interactions (e. g., Cushion & Jones 2006; Jowett & Cockerill, 2003, Jones et al., 2004; Potrac et al., 2002; Purdy et al., 2008; see Chapter 2 pages 66-68 & 77-81). Indeed, research by Jowett (2003, p. 455) highlighted that the coach ‘explained the importance of being able to influence and exert power on the athlete in a constructive way in order to make the athlete benefit [teach/coach/instruct]’. However, it has been suggested that such power struggles can compromise the quality of the coach-athlete relationship and its effectiveness (Jowett, 2000; Jowett & Cockerill, 2003; see Chapter 2 pages 66-68), which may lead to coach-athlete conflict and the ‘withdrawal of best efforts’ from athletes (Purdy et al., 2008; see Chapter 2 pages 80-81). Therefore, future research may consider the long term impacts of the prolonged use of institutional power by coaches and how this affects the coach-athlete relationship (see Chapter 4 page 154).

Extract 2, players and coach watch the second of the three goals conceded on Saturday (the second from a free kick). The video plays and the coaches and players watch in silence. Once finished I returned to the start of the clip with the set up of the free kick paused: In the opening section, Michael counts the players on the SMART board™ interactive screen.

1 Michael: One for one he:re, (2.8) one for one the:re, (0.8) TWO (0.6) on the
2 one ↑there, (2.2) one for one (0.4) °one for one° (.) one for one (.) so
3 STRAIGHT awa:y from the start again (.) we're outnumbered in the
4 middle.
5 (10.4)

6 Michael: >C'n you stop there<, (1.0) °one (.) two (.) three° (.)°one (two
7 three)°° (.) right look listen (.) we got ONE (1.2) t:wo (.) three (.) four
8 (.) five (.) six (0.4) sev:en (.) and I'm not sure but- (0.6) on the (ball)
9 we should have one (that would be ei:ght) (0.4) (and then) two (.) (up
10 sorting out there) I assume that's we might have have two on the ball
11 one there (1.4) ↑if they've got one on the edge, (0.4) one on the edge
12 (.) do we need two players here (.) (there and there) (1.8) (who's got)
13 (.) one's got to go back onto him, (.) you can't have a free player (0.4)
14 okay (.) just run that again slowly, (.) now Player 8 has got to better
15 on that he's not in here but he has to do better here on thi:s first
16 (header) (he lets) them get across the front of him, (.) but thi:s, (.) so
17 ↑that has to be better and now the next bit now the next bit now the
18 next bit (0.4) keep going (3.8) (°is he here°) (P8 that's your man) just
19 let 'im go (0.4) just come ri:ght off (you)/(him) (2.8) three mistakes
20 <number one we don't get marked up early enough in the box, (.)
21 man for man we don't win that header, (0.4) and people swi:tching off
22 <again look stop there >just a< minute (.) just ↑(peo-), (.) you're not
23 near anybody,

24 James: (I ju-)

25 Michael: You're not (.) you're not (.) and ↑you're not (.) there's too many
26 players that a:ren't (bu:y) people locking in on people >getting<
27 goalsi:de of people (0.4) what were you saying P1?

28 James: Cos I was ma:rking (?) (the man) (?) (my 'ead) (.) (and as I was
29 marking the) sta:rt 'ee runs out (.) and another person runs in now
30 look (.) (here) (look) look what's going on there

31 Michael: Your man runs out

32 James: Yeah (.) he runs ou:t and another [(one)]

33 Michael: [So did] you stay with that (man)

34 James: No

35 Michael: Why not

36 James: No I (tr-) what's that (.) P2 had two (runners)

37 Michael: Yeah

38 James: And I 'ad one

39 Michael: Yeah

40 James: My man runs out, and P2's man runs across and I stayed with 'im

41 Michael: So why didn't y- (.) wh- my question is why don't you stay with your

42 man

43 (0.4)

44 James: Cos 'ees run out to: (.) (to look he's on the edge of the box now, and

45 the other man is more dangerous) hasn't followed in

46 Michael: It's

47 James: (?)

48 Michael: We need to stay with our men (.) in the box (0.4) we can't even get

49 marking right (.) never mind switching across people and passing

50 people on in the box (.) we can't even get ↑that right (.) ↓show them

51 that one more time.

52 (18.0)

In the opening monologue of Extract 2 (lines 1-2), Michael counts how many of the opposition players are marked by the team. Michael uses a forceful ‘mode’ of communication (Raven, 2001) in an authoritarian manner to address the team (‘STRAIGHT away from the start again (.) we’re outnumbered in the middle’). This can be seen as a display of ‘legitimate power of responsibility’ (Raven, 1992, 1993) by Michael (hard power tactic), with the players for ‘failing him’, and not fulfilling their roles within the team. In lines 6-20, Michael attempts to capture the players’ attention (‘look right listen’) and continues with an influence attempt using both ‘expert power’ and ‘direct informational power’ (soft power tactics, Raven, 1992, 1993). In line 16, Michael directly challenges James (‘that’s your man. Yeah? You just let him come right off you’) for not fulfilling his role via a ‘legitimate power of responsibility’ influence attempt (Raven, 1992, 1993). However, no transition relevancy place or invitation to talk is offered to James to explain his actions and Michael’s talk remains continuous (Sacks et al., 1974).

In lines 17-20, Michael summarises the three mistakes that he felt led to the goal (‘we don’t get marked up early enough in the box, (.) man for man we don’t win that header, (0.4) and people swi:tching off’) and proceeds to directly challenge players within the team through using the ‘hard tactic’ of ‘legitimate power of responsibility’ (Raven, 1992, 1993, 2001). In line 21, James starts to talk but stops prematurely (‘I ju-’) thus repairing the trouble (Jefferson, 1974, Sacks et al., 1974, Schegloff, 1992), and allowing Michael to continue (lines 22-24). In lines 25-27, James takes a turn to speak (adjacency pair) when invited by Michael (‘what were you saying James?’). In response to lines 25-27, James initiates a preparatory resistance attempt, developing a counter argument (French & Raven, 2001; Raven, 1992, 1993). In line 28, Michael attempts to understand the point that was made in

lines 25-27, which James continues in line 29 (adjacency pair). In line 30, Michael's overlaps James', causing James to repair this trouble by stopping (Heritage & Clayman, 2010; Jefferson, 1974; Sacks et al., 1974; Schegloff, 1992). Michael offers a question to James and invites James to speak again ('did you stay with that man'), to which James responds (adjacency pair) negatively (line 31). Michael again invites James to speak and clarify his decision (line 32). In lines 33, 35, and 37 James tries to explain the reason behind his decision to change the player that he is marking ('there were two runners, and that 'his man runs out, and Jack's man runs across'), to which Michael offers verbal encouragement (lines 34 and 36). Through this interaction James' resistance to the influence attempt can further be understood by a 're-evaluation of others' (French & Raven, 2001; Raven, 1992, 1993), in respect to the actions of fellow teammates.

In line 38, Michael questions James ('So why didn't y- (.) wh- my question is why don't you stay with your man'), to which James responds (adjacency pair), in lines 40-41 with an explanation of his decision to change the player that he is marking (i.e., that the player that ran into the box is more dangerous). Therefore, resisting Michael's interpretation of the event and associated influence attempt, through a counter argument (Raven, 1992, 1993). In lines 42 and 43, both Michael and James start to talk, whereby James repairs the error enabling Michael to speak (Heritage & Clayman, 2010; Jefferson, 1974; Sacks et al., 1974; Schegloff, 1992). Following this repair, in lines 44-46, Michael 'presents himself' (Goffman, 1959; Strauss, 1959, 1997) in an authoritative ('we need to sta:y with our men (.) in the box') and sarcastic manner ('we can't even get marking right (.) never mind switching across people and passing people on in the box (.) we can't even get ↑that right'), with emphasis upon the 'mode' of delivery (Raven, 1992). Here Michael

‘managed the disagreement’ with a display of institutional authority (Clayman & Heritage, 2002a; Clayman & Heritage, 2002b; Greatbatch, 1992; Heritage, 2005), in an attempt to retain respect and control over the group interactions (Jowett, 2003; Jowett & Cockerill, 2003; McArdle et al., 2010; Potrac et al., 2002; Purdy et al., 2008; see Chapter 2 pages 77-80). Here, James can be seen to be responsive to the interactional constraints which are institutional in character and origin by refraining to talk (Heritage, 2005). Such interactional practices are in contrast to findings from alternative coaching contexts, which highlight the importance of fostering respect and developing athletes’ autonomy (d’Arripe-Longueville et al., 2001; see Chapter 4 page 150-155). Importantly, Raven (1992) suggests that the agent not only chooses the power base, but also the power ‘mode’, in which the influence is exerted (i.e., loud, forceful, threatening or in a soft, friendly, light-hearted approach). Whilst the empirical evidence on the effects of ‘mode’ is still quite limited, this has been suggested to be even more important at times than the basis of power (Raven, 1992). Consequently, the relationship between the nature of the influence attempt and the aftermath upon the target appears a salient area for future research.

Finally, in line 46 Michael gives the instruction ‘to view the goal again’. This may be viewed as a ‘coercive power’ influence attempt (Raven, 1992, 1993), or punishment for poor performance, given that the players have already watched and discussed the video a number of times. This may also be viewed as an attempt by Michael to reassert his authority over the group to ‘soften the players up’ for future influence attempts (Raven, 1992, 1993). Similar exercises of power, using ‘preparatory devices’ and ‘manipulation strategies’ have previously been demonstrated within the coaching literature (Cushion & Jones, 2006; Jones et al., 2004; Potrac & Jones, 2009; see Chapter 4 page 150-155).

5.6 Toward an understanding of institutional talk in performance analysis feedback sessions

Study 2 demonstrates that Michael could be seen to have presented a “work-task-related identity” in his interactions with the players (Heritage, 2005, p. 111). Specifically, Michael could be seen to exercise control over the sequential organisation of the sessions, via asymmetrical turn-taking allocations, control over the topic of discussion and the use of questioning (i.e., adjacency paired interactions; coach request for information – athlete response) to reinforce his social basis of power (Raven, 1992, 1993). The sequential organization of the interaction was the primary means by which Michael’s institutional identity was established and maintained (i.e., Head Coach). This was demonstrated in the asymmetry in institutional talk, which “both reflects and embodies differential access to resources and to power” (Heritage, 2005, p.114). As such, the interaction of the players was ‘constrained’ to predominately answering questions and responding to invitations to speak from Michael (Heritage, 2005). Indeed, within the context of a large group, control over topic and speakership is often restricted to a single guiding individual, whose authority is thereby reinforced (Heritage, 2005). That is, the turn-taking system offers the participants constrained interactional affordances (Heritage, 2005). Here, the participants (i.e., players) recognised that they should follow these interactional rules as a moral obligation, therefore the turn-taking system can be seen to be an act of normative organization in its own right (Heritage, 2005).

As such, a local social structure was created within the interaction between Michael and the players, in which a particular “work-task-related identity” (Heritage, 2005, p. 111), that of the Head Coaches role being instructional, correctional and to

modify behaviour, was sustained by Michael within the interactions (Cushion & Jones, 2006; Halkowski, 1990; Heritage, 2005; Jones et al., 2003; Jowett, 2003; Jones et al., 2004; McArdle et al., 2010; Potrac et al., 2002; Potrac et al., 2007; Purdy et al., 2008; see Chapter 150-155).

5.7 Conclusion

In building upon the findings of Chapter 4 which highlighted the importance of considering Contextual Factors (Chapter 4 page 150-159), the Delivery Approach (Chapter 4 page 159-165), and Target Outcomes (Chapter 4 page 165-169) in the delivery of video-based performance analysis within the coaching process, Study 2 examined the interactions that occurred between a coach and group of athletes within an elite-level junior soccer environment. Analysis of the interactions revealed that the coach attempted to exercise control over the sequential organisation of the sessions, via asymmetrical turn-taking allocations, an unequal opportunity to talk, control over the topic of discussion within the interactions, and the use of questioning to select speakers to take turns to talk and reinforce his interactional goals. The work of Raven (1992, 1993, 2001) was used to understand and critique coaching discourse ‘in situ’. Raven’s (1992, 1993, 2001) work illuminated the origin of the power sources of a number of interactional practices. For example, to achieve the desired interactional tasks, the participant coach used a combination of ‘expert’ (i.e., the coach knows best) and ‘informational’ power (i.e., the coach carefully explains preferable behaviour), emanating from the coach’s personal knowledge (soft power tactics; see Chapter 6). The agent’s power resource here is one of ‘credibility’ (Koslowsky & Schwarzwald, 2001). In addition, within the interactions, the participant coach drew upon his institutional role to highlight a ‘legitimate power

of responsibility' (i.e., the institutional role of the coach affords the right to prescribe behaviour) in that, the athletes should adhere to his interactional requests (hard power tactic). Within this institutional role, the agent drew upon a 'normative' power resource for such influence attempts (Koslowsky & Schwarzwald, 2001). Finally, in this case the multiple viewing of negative past performances can be understood to be a 'coercive power' influence attempt, as a form of punishment for poor performance (hard power tactic). Here, negative images of poor performance were used by the coach to reassert his authority over the group to 'soften the players up' for future influence attempts (Raven, 1992, 1993). In such instances, the agent's power resource was one of 'control' to achieve interactional goals (Halkowski, 1990; Koslowsky & Schwarzwald, 2001). Similarly, within elite Judo, d'Arripe-Longuville et al. (1998) highlighted the use of unfair selection process, provoking athletes verbally using aggressive, ironic tones and negative feedback, displaying indifference and an intentional lack of interest in the athletes, communicating threats regarding selection, and exhibiting favouritism to some athletes (see Chapter 2 pages 67-68).

These findings add to the growing body of research in sports coaching which highlight the dominant authoritarian discourse within coach-athlete relationships (e.g., Cushion & Jones, 2006; Potrac et al, 2002; Purdy et al., 2008; see Chapter 2 pages 77-81). Specifically, 'coaching content' or a 'coaching agenda' was delivered 'to athletes' within an asymmetrical power relationship, which was produced and legitimised within a hierarchical institutional context. Here, recent research has highlighted how openness and honesty from athletes receiving post performance debriefing was constrained by the perceived power of the coach (McArdle et al., 2010). Similarly, within the present study substantive 'discrepancies in experience,

technical knowledge, and rights to express knowledge' restricted the athletes' interactions within the institutional context (Heritage, 2005, p. 114), which may result in unintended consequences (i.e., loss of respect, athlete resistance, non-learning, cf. Nelson et al., 2011). Here, coaches' should be mindful of how the power-relations within such feedback sessions may impact upon athlete learning. Interrogating practice in this way could impact upon the nature of the coach-athlete relationship (Cushion & Jones, 2006, 2012; Chapter 2 pages 77-81; Chapter 4 page 77-81; see Chapter 6).

Given the case study approach undertaken Within Study 2, the research findings speak specifically of the context and relationships investigated. In addition, it is important to recognise that the exchanges presented represent the early practice experiences of the participant coach using video-based performance analysis feedback (see Chapter 4 page 77-81 & Chapter 6). Therefore, generalising the findings of the present study to other contexts and different coach-athlete relationships should be treated carefully. Indeed, despite the strength of CA as a method for providing a rich account of patterns within micro-level interactions with specific illustrative examples, like other forms of qualitative research, employing CA often leaves researchers open to the charge of selecting particular examples to support their arguments (Mercer, 2010). As such, it is important to acknowledge that the interactions that were recorded 'in shot' are only part of a much wider range of social interactions (Hammersley, 2003). In this regard, Sacks (1984) highlighted that "other things, to be sure, happened, but at least what was on the tape had happened" (p. 26). However, the 'analytical power' of the present study is further supported by previous findings within similar elite sports coaching contexts which have highlighted similar coach-led, authoritarian coach-athlete interactions (e.g., d'Arripe-

Longuville et al., 1998; Cushion & Jones, 2006, 2012; Purdy et al., 2008; see Chapter 2 pages 77-81).

Therefore, it is argued within this thesis that Study 2 has illuminated some of the ‘mystique’ regarding how coaching practitioners may use their institutional resources in an attempt to influence athletes in combination with the use of video-based performance analysis. To date, this remains the only study of its kind to explore, in detail, what is said between coach and athlete within such contexts. Indeed, similarly to Study 1, there remains a dual usage of such findings. Firstly, in building upon the grounded theory presented in Study 1, the richer empirical interactional data illuminates the complexities of how coaches may go about achieving their Targeted Outcomes through the use of a number of alternative interactional practices. This is particularly relevant with such institutional settings, where within the institutional role of the coach a number of action alternatives exist upon which to influence the athletes. That is, within Study 2 it was demonstrated that such practices can be understood to consist of a number of soft and hard power tactics, which have the potential to illicit positive or negative consequences for the athletes (see page 180-183). Secondly, that from an applied perspective an analysis of such practices holds the potential to show participants recorded data and pointing out the relevance of particular interactional practices, which it has been suggested can be revelatory in highlighting the potential for reflexivity and change (Heritage & Clayman, 2010). In this regard, coaches may not only reflect upon what was said (i.e. the technical and tactical content), but also ‘how it was said’ and what the likely consequences of such interactional practices would be for the athlete learner (Cushion & Jones, 2012; Groom et al., 2011; Nelson et al., 2011). Therefore, of particular interest for the purposes of coach education, an examination of the ‘whys’

behind such educational practices may illuminate the cultural production and reproduction of such behaviours (Cushion et al., 2003; Goffman, 1959; Jones et al., 2002; Jones et al., 2003; Strauss, 1959, 1997; see Chapter 2 pages 73-81). Consequently, future work should consider how coaches' beliefs regarding athlete learning impact upon their coaching behaviour (Cushion, 2010), particularly with the evolving use of video-based performance analysis feedback (Chapter 4 pages 150-155; see Chapter 6). Indeed, Raven (1992) suggests that the Power/Interaction Model of Interpersonal Influence 'may be useful for those who are in positions of influence, to help them understand more clearly the bases for their own actions, and the possibilities of alternatives' (p. 240).

With this in mind, the aim of the final study of this thesis (Chapter 6) is to examine some of the 'whys' behind the use of such interactional practices, to reflectively explore the interconnection between coaching knowledge, pedagogical reasoning, and coaching identity (see Chapter 4 page 150-155). Indeed, drawing upon the suggestion of Heritage and Clayman (2010) the presentation of the interactional practices evident within Study 2 will be explored regarding Michael's evolving biography.

CHAPTER SIX: STUDY 3

6.1 Introduction

Study 2 employed a conversation analysis approach to examine the detail of the ‘hows’ regarding the delivery of video based performance analysis. Indeed, it was highlighted that the exercise of social power within the coaching role via control over the sequential organisation of coach-athlete interactions was the primary means by which Michael established and maintained his institutional identity (see Chapter 5 pages 195-197 & 200-202). However, there are a number of limitations to utilising a conversation analysis approach. Firstly, the focus upon conversations limits the analyst’s interest to utterances which include a dialogue between the coach and athlete. Whilst this may not appear problematic in everyday conversation, within institutional settings utterances may take the form of either dialogue or monologue (cf. Cushion & Jones, 2006). The procedures of conversation analysis, however, necessitate a privileging of interactional dialogue rather than monologue. This is particularly problematic within authoritarian cultures such as elite youth soccer. Indeed, research by Cushion and Jones (2006, 2012) has highlighted that coach-athlete interactions can frequently consist of coaching monologue ‘delivered to’ players in a didactic manner. Secondly, whilst the detail in transcription may be considered an analytical strength of using a conversation analysis approach, this inevitably reduces the audience for such work to ‘the initiated’ (Riessman, 2005). Thirdly, whilst a particular strength of conversation analysis is the emphasis upon the analysis of ‘concrete’ empirical data captured in situ, conversation analysis provides little understanding towards the ‘why’ behind interactional practices. Finally, rather

than considering the construction of identity to be reflected within a particular moment in time (i.e., as a simplistic singular narrative analysis of identity), Cushion (2011) has highlighted that through learning processes identity is developed and transformed within a situated context and the learner is always ‘becoming’. Indeed, Ezzy (1998) suggests that “one of the most important consequences of a narrative conception of the self is that it incorporates temporality” (p. 239). As such, it is important to explore the impact of temporality in the creation of a coaching identity rather than finalising people within a particular moment in time (Franks, 2004; Sparkes, 1995). A logical progression, therefore, would be to attempt to address these limitations in an attempt to further understand a fuller range of interactional behaviours within situated coaching contexts, the reason behind these behaviours, and how this relates to a developing coaching identity. For example, within Study 1 David highlighted that his coaching and video-based feedback delivery philosophy “develops as you become more knowledgeable” (see Chapter 4 page 153-154).

Therefore, the purpose of this study is to explore the ‘in situ’ narrative construction of coaching identity within video-based feedback sessions. The significance of this work lies in uncovering how coaching identities are formed, contextually situated, performed in-interaction and linked to biographical changes over time (Bamberg, 2010; Cushion, 2011; Phoenix & Sparkes, 2009). As such, narrative practices provide an innovative and diverse methodological approach to better capture the nuances on which much of coaching actually rests (Jones et al., 2010). Indeed, given the growing recognition of the importance of social interactions between coaches and athletes within a situated context (e.g., Cushion & Jones, 2006, 2012; Jones, 2006; Jones, 2009; Jones et al., 2004; see Chapter 2 pages 73-81),

utilising emergent narrative practices offers coaching researchers the opportunity to expand the methodological repertoire within the field (Smith & Sparkes, 2009).

The chapter is reported in the following way. Firstly, a methodological overview of the potential of narrative analysis as a parsimonious methodology to attempt to further understand the research question is highlighted. Secondly, a theoretical framework is suggested in an attempt to “link the personal to the institutional” (Jones, 2009, p. 380). Thirdly, a detailed method section is presented which introduces the participant coach and the analytical approach undertaken. Fourthly, a results and discussion section is presented. The final element to this chapter is to highlight a number of future areas of inquiry to better understand the delivery of video-based performance analysis within the coaching process.

6.2 Narrative Analysis

Over recent years, the ‘narrative turn’ has received increased attention within the social science literature, as a growing number of researchers have acknowledged that we live in a story-shaped world (Smith & Sparkes, 2008a; Smith & Sparkes, 2008b; Smith & Sparkes, 2009a), and that “storytelling is an ontological condition of human life” (Phoenix & Sparkes, 2009, p. 219). Indeed, from a constructivist narrative analysis epistemology, Smith and Sparkes (2006) have highlighted that “identities are treated as something people create, do, and perform in relation to a particular audience and in different contexts” (p. 180). Methodologically, narrative analysis has been utilised to explore the construction and performance of identities through the telling and showing of stories in diverse ways (Bamberg, 2010; Phoenix

& Sparkes, 2009; Smith & Sparkes, 2009a, 2009b). As such, Smith and Sparkes (2006) have highlighted that:

Stories that people tell and hear from others form the warp and weft of who they are and what they do. They are cultural resources that, in significant measure, give substance and texture to people lives. In this sense, stories shape identity, guide action, and constitute our mode of being (pp. 169-170).

However, sports coaching researchers have given limited consideration to the potential of narrative analysis. Such a position is not surprising given that “it is difficult to define categorically what narrative inquiry is because it can mean different things to different people” (Smith, 2010, p. 87). Whilst the explicit use of the term narrative analysis or narrative practices has yet to be fully explored within the sports coaching literature, it could be argued that a number of researchers have started to explore the potential use of stories for coach education (see Chapter 2 pages 73-81). For example, the work of Jones et al. (2003, 2004) examined the interconnection between coaches’ lives and their professional practice. Here, a story analyst approach (Smith & Sparkes, 2009) was utilised to illustrate how sports coaches constructed their knowledge and paid attention to the creation of a learning environment, their role within the coaching process, how their interactions with athletes affected subsequent learning and the role of power within the coach-athlete relationship. The significance of this work reflected not only ‘what the participant knew’ but also ‘who the participant was’ as a coach and person. Therefore, Jones et al. (2003) suggested that such an approach is able to assist in the understanding of personal and professional

identities and associated knowledge, thus is better able to “problematise the predominant rationality of much of the coaching research and question the role of coach education programmes in the development of coaching knowledge” (Jones et al., 2003, p. 213). From a storytellers approach (Smith & Sparkes, 2009), the recent autoethnographic work of Jones (2006, 2009) and Purdy et al. (2008) has also ‘added weight’ to the value of a storied approach to understanding the personal dilemmas of a dysfluent coach, the importance of caring in sports coaching, and a dysfunctional coach-athlete relationship respectively. The value of such work lies in its ability to illuminate power relations within the coaching context thus “linking the individual to the institutional” (Jones, 2009, p. 380). In this regard, Smith and Sparkes (2009) have recently suggests that “stories and an analysis of them may breathe real bodies and the messiness and complexity of being human” (p. 280, original emphasis).

Whilst the value of a storied approach to better understanding sports coaching has started to be explored, a number of gaps exist in our current understanding, particularly related to the temporality of identity construction. Indeed, a methodological reliance upon interviews or introspection as the sole source of empirical data has limited an understanding of nuances in-interaction (Culver, Gilbert, & Trudel, 2003). In an attempt to address these methodological limitations, more recently researchers have turned to ethnographic methodologies to explore interactional practices ‘in situ’ (e.g., Cushion & Jones, 2006, 2012; Purdy et al., 2008; see Chapter 2 pages 77-81). Here, the work of Cushion and Jones (2006) and Purdy et al. (2008) have highlighted the power struggles between coaches and athletes within authoritarian cultures in elite youth soccer and elite rowing respectively. Indeed, drawing upon rich empirical data from the field this ethnographic work has

demonstrated the importance of analysing interactions within their situated context (see Chapter 2 pages 77-81).

Unsurprisingly, Gubrium and Holstein (1999) have suggested that in the practice of fieldwork there is considerable overlap between narrative and ethnography. Moreover, that postmodern sensibilities have made researchers more conscious of their representational strategies and how they ‘write culture’, reducing the epistemological status of the ethnographer towards stories in rather than of the field (Gubrium & Holstein, 1999). As such, Gubrium and Holstein (2008) have recently outlined narrative ethnography as an emergent method within social science research. Such an approach relies upon “being on the scene of story construction and storytelling and considering how stories are shaped by the contingencies of communication” (Gubrium & Holstein, 2008, p. 250). Importantly, Gubrium and Holstein (2008) highlight the need to examine narratives in full social context. Indeed, such an approach has proved valuable to examining organisational differences and institutional discourse (Gubrium, 1992; Miller, 1997). Indeed, within an ethnographic framework, Study 2 highlighted that the control over the sequential organization of the interactions was the primary means by which the coach’s institutional identity was established and maintained (see Chapter 5 page 193-204). However, there is a further need to examine the temporal construction of coaching knowledge and how this relates to a ‘coaching identity’ in an attempt to illuminate how such interactional practices are culturally produced and reproduced.

6.3 Theoretical framework: Identity, the self and self knowledge

The call for interdisciplinary theorising regarding coaching as a human social action (Jones & Turner, 2006) remains challenging, as much of the previously highlighted research draws strongly from the separate disciplines of sociology (e.g., Cushion & Jones, 2006, 2012; Jones et al., 2003; Potrac et al., 2002; Purdy et al., 2008; see Chapter 2 pages 70-81) and psychology (e.g., Gallimore & Tharp, 2004; Gould, Dieffenbach, & Moffett, 2002; Jowett & Cockerill, 2003; Pocwardowski, Barott, & Henschen, 2002; Smith, Smoll, & Curtis, 2007; Smith, Smoll, & Hunt, 1977; Tharp & Gallimore, 1976, 2004; see Chapter 2 pages 58-68). At best, such theorising maybe described as multidisciplinary rather than interdisciplinary in its conception. However, the recognition of the potential to fuse concepts from sociology and psychology has been present in the early work of Strauss (1959, 1997). Although Anselm Strauss is probably best known for his work developing grounded theory with Barney Glazer (see Chapter 3 page 109-115), Bryant (2009) highlights that while Glazer's published work is devoted to almost entirely grounded theory, Strauss's research interests were much more diverse encompassing his wider methodological work in interaction, medical practices and medical sociology. Indeed, Bryant (2009) highlights that Strauss's highly regarded work 'Mirrors and Masks' (Strauss, 1959, 1997), which appeared at the same time as Goffman's 'The Presentation of Self in Everyday Life' (Goffman, 1959), is far more widely known in Germany than Goffman's work. In addition, in his recent work entitled 'Much ado about Goffman' Denzin (2002) suggests that Goffman's (1959) writings on 'face work' and his 'dramaturgical framework' should be located within his historical moment. Indeed, Denzin (2002) suggests that:

This sociology was only superficially performative. Goffman's actors (and actresses) performed reasonably well-defined roles, thereby demonstrating the utility of a functional model of role behaviour. His actors kept front and back stage separate, managed role distance, and hewed to well-defined scripts as they engaged in the performances. While his actors occasionally slipped and stumbled and experienced embarrassment, in the main their performances sustained ritually organized systems of social activity (p. 107).

As such Denzin (2002) suggests that Goffman's framework could be misinterpreted to be based upon humanistic, interpretive, and subjective inquiry, rather than a rigorously structural naturalistic observer. Furthermore, in "turning Goffman back on himself" Denzin (2002, p.105), highlights that there appears to be a confusion as to whether "the dramaturgical framework is either a scaffold, built to be taken down or an end point of the analysis, as a way or ordering facts" (p. 107). As such Denzin (2002) suggests that similarly to Goffman, Strauss's (1959) "Mirrors and Masks builds a bridge between sociology and social psychology" (p. 110), with a down to earth social psychology regarding; analysis of language, meaning, identity, self-appraisals, structural interaction processes, transformations in identity, however Strauss's work 'opens doors' and 'leads us in directions' that Goffman's does not. Therefore, while Goffman's writing has been well used to explore how coaches construct a 'coaching front' or coaching identity (e.g., Jones et al., 2002; Jones et al., 2003; Jones et al., 2004; Jones, Potrac, Cushion, & Ronglan, 2011; Potrac et al., 2002; Potrac & Jones, 2009; see Chapter 2 pages 61-62; 70-77), the writing of Strauss remains, as yet, unexplored within the coaching literature. Therefore, given the possibility to explore new theoretical explanations of coaching, and thus broaden

coaching's theoretical and empirical basis, aligned with methodological concerns regarding the alignment of method, methodology and the use of theory, Strauss' work appears to hold a great deal of potential to achieve such aims. Indeed, using the theorising of Strauss (1959, 1997), in addition to the recent work of Smith and Sparkes (2008a) enables a more humanistic conception of the coach as not only a social actor, but as a person, a self with a constructed identity. Importantly, for Strauss (1959, 1997), central to any discussion of identity is the use of language in action. As language is used to name, define and set boundaries around things (the giving of identity; Strauss, 1959, 1997). Language is also used to structure and re-structure objects within members of classes (Strauss, 1959, 1997). Strauss (1997) highlighted that "the nature or essence of an object does not reside mysteriously within the object itself but is dependent upon how it is defined by the namer" (p. 22). Similarly, the same principle may be applied to the construction of identity, in the belonging to different groups and categories defined by the namer. For example, a coach may define a number of athletes as 'good players', in that they displayed physical, technical and tactical proficiency's valued by the coach (cf. Cushion & Jones, 2006). Indeed, Cushion and Jones (2006) highlighted how such categories and associated identities can be formed as boundaries defining athletes as 'good players', 'favourites' and 'rejects' in the coaches evaluations. Moreover, as well as the ability to use language to categorise others, humans have the capacity to use language to categorise their own actions (Strauss, 1997). Indeed, via self-appraisal a person may be both the 'object' being appraised and the 'subject' making the judgement upon the action (Strauss, 1997). Strauss (1997) highlights that:

Any man can be both [subject & object], simultaneously; having acted, he may make his act an object of scrutiny. He may take as many different stances towards it as his vocabulary permits, just as he may towards another's. His own act maybe his object of scorn, denial, discount, blame, attack, shame, disapproval, a yardstick for future endeavours, a cross to bear, a sign of personal brilliance, or anything else that he has the capacity to view it as (pp. 34-35).

Therefore, identity, a sense of self, and self knowledge are fundamentally connected (Smith & Sparkes, 2008a; Strauss, 1997). Thus, "self-appraisal leads to decisions: to avoid acts, to make amends, to do better, to repent, to do as well as" (Strauss, 1997, p. 35). Strauss (1997) further highlights the importance of others appraisal of our 'selves' as important in the development of self and identity. In that, our appraisals of our 'selves' and our identity is influenced by others appraisals of us, "shaped by the larger socio-cultural matrix of our being-in-the-world" (Smith & Sparkes, 2008a, p. 6). Here, Strauss (1997) uses the analogy of a mirror to describe how judgments of others are received in the co-construction of self and identity. Within Strauss's (1997) framework:

Identity as a concept is as fully elusive as is everyone's sense of his own personal identity. But whatever else it may be, identity is connected with the fateful appraisals made of oneself-by oneself and by others. Everyone presents himself to others and to himself, and sees himself in the mirrors of their judgments. The masks he then and thereafter presents to the world and its

citizens are fashioned upon his anticipations of their judgements. The others present themselves too; they wear their own brand of mask and they get appraised in turn (p. 11).

Importantly, Strauss (1997) highlighted that as identity and the self are reliant upon knowledge “as learning continues, revisions of concepts continue; and as long as revision takes place, reorganisation of behaviour takes place” (p. 27). Thus the naming and identity may be viewed as a dynamic continual process. Indeed, more recently Smith and Sparkes (2008a) have suggested that narrative literature on selves and identity “delineates them as constituted via narratives in and through time” (p. 7). Moreover, Strauss (1997) suggests that “the student of identity must necessarily be deeply interested in interaction for it is in, and because of, face-to-face interaction that so much appraisal – of self and others – occurs” (p. 46). For example, temporal changes in ones behaviours and resulting emotion may lead to a re-categorisation of the person. Indeed, Strauss (1997) suggested that the “establishment of one’s own identity to oneself is as important in interaction as to establish it for the other” (p. 49). Where “the identification of the situation depends upon making interlocking discriminations concerning relevant events, things, and persons – including oneself” (Strauss, 1997, p. 49). In such situations the other can observe the current identity through interactions and adjust their behaviour accordingly, by presenting their self in an apologetic manner if the other appraises the reason for the anger as to be their doing or via an act of resistance to displays of anger should the other feel unfairly treated. Strauss (1997) suggests that while sociologists tend to focus upon the structured nature of interactions via the analysis of institutional roles (e.g., teacher-student or coach-athlete), psychologists tend to pay more attention to the interpersonal

processes but under stress the importance of structural aspects of interaction. In this regard, Strauss (1997) highlights the concept of transformations of identity, where as a person moves in and out of, and up and down, within social structures the person's identity changes. To date, the effects of transformations of identity have been the predominant focus of the sports psychology literature (e.g., Phoenix et al., 2005; Lavalley & Robinson, 2007; Brewer, et al., 2010). However, with regards to concepts of identity, the self, and self knowledge, transformations of identity may be a feature of the creation of positive self narrative in the development of professional knowledge (see Chapter 4 page 153-154; 172-174). That is, Study 3 will address Research Question 3, how might a coach develop their professional knowledge regarding the use of video-based performance analysis, and how and why might these interactional practices change over time in the development of a coaching identity?

6.4 Method

6.4.1 The participant and context

The Head Coach from Study 2 Michael (pseudonym) was contacted and informed of an interest in further exploring the development of his coaching identity over the course of his professional coaching career (see Chapter 3 pages 124-125; 130-132 Appendix 8 VIC). Methodologically, a case study design was selected to better “capture the often chaotic, complex and ambiguous” narrative and working practices of Michael (Jones et al., 2003, p. 214; see Chapter 2 pages 70-81). Indeed, an idiographic approach is important in addressing a fundamental problem within the sports coaching literature (Jones et al., 2003; see Chapter 2 pages 70-73), in that not enough time, has been taken to describe and interpret the ‘lifeworlds’ of social actors

(Strean, 1998). Following the 10 month ethnography at Albion FC, additional data were collected 4 years later in an attempt to explore the temporal nature of coaching identity and Michael's career path within the sport. This as yet unused approach to explore the temporality of identity construction within sports coaching offers the potential to not only explore empirical evidence of coach-athlete interactions 'in situ' but further investigate the role of experience, socialisation and 'critical incidents' within biographies which shape practices over time. At the start of the ethnographic data collection Michael was a 34 old academy Head Coach. At the conclusion of the data collection Michael had progressed to become Premier League 1st team assistant manager.

Drawing upon the recent work of Côte and Gilbert (2009), the case is made for Michael to be viewed as an 'expert coach', and therefore an information-rich case that would yield insightful data follows (Creswell, 2009). Michael possessed the highest level of soccer coaching qualification available in Europe the UEFA Advanced Licence, in addition to the UEFA Professional Licence, which is a supplementary award only available to those working at the highest level of professional football. In addition, Michael has over 10 years experience of professional soccer coaching. Previously, Michael had spent an additional 5 years coaching part-time with a Premier League soccer academy. In total, Michael has accumulated over 15 years of performance coaching experience. During his work in professional (performance) soccer, Michael has demonstrated a track record of successful performance outcomes at both youth and senior level, winning a number of domestic trophies at the highest level of competition within England. Furthermore, Michael has worked in a number of different roles within performance coaching. His first role was as a part-time

assistant U14's coach with a Premier League club (Rovers FC¹). Michael progressed through the age groups as a part-time coach, with his final part-time position being that of U15's coach. Following this Michael was offered an opportunity to work in a full time capacity as an education officer at a different Premier League club (Albion FC²). This represented a 'step up' for Michael as he was working full-time within a Premier League club, although the training and contact with the players remained at nights (training) and at weekends (games) because they were still schoolboys (U16's). Michael then progressed to become the Head Coach of the U18 team at Albion FC (site of ethnographic enquiry). As the U18 team were professional youth players undertaking youth playing contracts, this was Michaels first opportunity to coach a team full time all week. Additionally, whilst working at Albion FC Michael has also coached both a Senior and U21 European international football team.

Following three years in this position at Albion FC, Michael was offered the opportunity to coach the U18 team back at his original employers Rovers FC (a top flight European team). After two years as Head Coach of the U18 team at Rovers FC, Michael was offered the opportunity to become Head Coach of the reserve team. This position allowed Michael to work with the best younger players from the U18 group as well as some of the talented players who were 'on the fringes' of the first team. This position involved monitoring potential players for the first team as well as ensuring that players were receiving a structured players' development programme, including loaning players out to play first team football at other professional clubs. Following this Michael spent two years working with the first team at Rovers FC.

¹ Club name replaced with a pseudonym.

² Club name replaced with a pseudonym.

Knowing and having previously worked with Michael allowed for a greater sensitivity to the theoretical relevance of the developing concepts (Strauss & Corbin, 1998). In addition, a greater degree of access in the interviews was achieved because of a previous rapport (Athens, 1984). That is, Michael was willing to talk about his experiences openly and honestly to assist in understanding how he had constructed his coaching knowledge and a sense of his coaching identity. Importantly, adopting a reflective pose in order to learn from one's practices has been highlighted to be an additional characteristic of expertise in sports coaching (Abraham et al., 2006). Whilst prior knowledge of the participant coach may be considered a potential point of bias, access to elite populations are often dependent on the researcher undertaking a secondary support role or via an institutional evaluation program (e.g., Greenleaf et al., 2001; Gould et al., 2002). Within the present study, a number of measures were undertaken to reduce the risk of researcher bias: (1) The video recording of Michael's interactional practices were viewed and discussed with my supervisor (see Chapter 5 page 208), and (2) the interactional examples were selected after two independent analyses by myself and a fellow PhD student (Lee Nelson; see Chapter 4 page 146-149).

6.4.2 Procedure

Data were collected with an overt ethnographic framework (Hammersley & Atkinson, 2007), that included video recorded observations of video-based feedback sessions, and 3 in-depth 2 hr semi-structured interviews with Michael, which included reviewing video of past interactional practices using an interpersonal process recall (IPR) approach (Kagan & Kagan, 1991; see Appendix 9). Within this framework, initially the participants' actions and accounts were studied in everyday coaching

contexts, rather than under conditions created by the researcher (Hammersley & Atkinson, 2007). Such a methodological approach is particularly useful for the present study as Hammersley and Atkinson (2007) explain that within an ethnographic approach “the analysis of data involves interpretation of the meaning, functions, and consequences of human actions and institutional practices, and how these are implicated in local and perhaps also wider, contexts” (p. 3).

The same 10 video-feedback sessions from the 10 months ethnography in Study 2 were analysed using a complementary narrative ethnographic approach (Gubrium & Holstein, 1999, 2008). Here, Gubrium and Holstein (2008) explain that narrative ethnography is “the ethnographic study of narrativity” (p. 250). Furthermore, the value of this methodological approach for the present study is highlighted by Gubrium and Holstein’s (2008) description of their version of narrative ethnography that accommodates “naturalistic, constructionist, and ethnomethodological impulses and concerns, the approach focuses on the everyday narrative activity that unfolds within circumstantially situated social interaction, with an acute awareness of the myriad layers of social context that condition narrative production” (p. 251).

6.4.3 Ethnographic interactional data

The transcription of ‘talk’ was conducted using a standard ethnographic transcription approach to enable a fuller narrative form and become more visible with less ‘fracturing’ of the data (cf. Cushion & Jones, 2006, 2012; Riessman, 2005). Therefore, this form of transcription was selected to complement the narrative analysis of data, thus allowing a ‘clearer’ and more integrated biographical picture of Michael’s life events.

6.4.4 Interviews

In addition to the analysis of interactions apparent within Michael's early coaching practice, of central concern to the present study was how Michael constructed and re-constructed his coaching identity over time. To achieve a temporal analysis of Michael's coaching identity three interviews were utilised, which broadly followed an interpersonal process recall (IPR) approach (Kagan & Kagan, 1991). Video taken from the ethnographic observations was used to highlight some of Michael's early interaction practices and to stimulate discussion. Kagan and Kagan (1991) highlighted that as a research tool, interpersonal process recall is a way to examine and improve the interactional practices of those who require a high degree of competence in human interaction and often forms the core education of care service professionals (e.g., counsellors, mental health workers, physicians, teachers, & medical student). In reviewing their work using IPR Kagan and Kagan (1991) highlighted that:

The extent of the knowledge, the depth of understandings, the multiple layers of meanings that are known to people as they interact with each other and that could be nudged into conscious awareness and spoken language surprised us. We observed again and again that people have an uncanny awareness of each other's most subtle emotions, an awareness that was not apparent under ordinary circumstances, but that was acknowledged and described during IPR sessions (p. 222).

However, given that time had elapsed from the examples of Michael's earlier interactional practices until the interviews in an attempt to capture the temporal nature of Michael's coaching identity, the use of video was not considered to be a method of direct 'stimulated recall' of the thoughts and feelings at the time of Michael's initial practice but as a method of being able to see himself more accurately as an observer removed from the situational emotions and stimulate a reflective process (Lyle, 2003). Indeed, Wilcox and Trudel (1998) have cautioned that verbal reports produced through the viewing of past events through video may not represent the conscious or unconscious cognitions which were experienced at the time of the event (see Chapter 2 page 32-34). Despite the lapse in time between the ethnographic interactions and Michael's analysis of his early practices, and subsequent coaching experiences, it is argued here that the video-based approach offered a 'more concrete' basis with which to explore the evolution of Michael's coaching identity than retrospective interviews alone (Lyle, 2002). Importantly this approach was the best way to assist in the creation of a contextually situated narrative ethnographic analysis.

The interviews were conducted at the team hotel of Michael's current team, usually the day before a game in Michael's 'down time'. Interviews were conducted in a private location often in the teams meeting room. Initially, open-ended questions were used to allow Michael to talk freely about his experiences with regard to his coaching, his career path and turning points in his life (Denzin, 1989; Kagan & Kagan, 1991). However, "for narrative researchers, the stories people tell during interviews should not be regarded as a clear route into personal subjective experiences or a transparent window into the interior authentic self" (Smith, 2010, p. 99). Here, Kvale and Brinkmann (2009) use 'the traveller' metaphor to depict the interview

process as a journey with the interviewer wandering through the landscape co-creating knowledge with the participant is a 'truer' representation of the interview process. During the interviews I acted as an 'active listener' in an attempt to assist the participant to tell his life story in his own words (Smith & Sparkes, 2005, 2008b). Following this, specific probes were used to try to understand Michael's thoughts and reflections upon his experiences (e.g., you mention that that experienced changed how you work, why is that? You said that you are careful how you speak to players, what things are you aware of? Why has it changed?; see Appendix 9). To ensure Michael's perceptions and perspectives remained at the heart of the interview process the interviews were reflective in nature. Therefore, Michael was invited to explore a range of issues regarding his interactional practices, coaching knowledge and his temporal sense of coaching identity. Each interview was audio recorded and transcribed verbatim to ensure an accurate and complete record of the data.

6.5 Data Analysis

Following the transcription of the video recorded feedback sessions and the interviews, transcripts were read several times in an attempt to understand the participant's story 'as it had been told' from an empathetic perspective (Potrac & Jones, 2009; Smith & Sparkes, 2002). Through this process narrative segments and categories, were identified (Sparkes, 2000a). Here, Gubrium and Holstein's (1997, 2009, 2011) concept of 'analytical bracketing' was used to provide procedural flexibility to account for analytic interplay within the research process. Gubrium and Holstein (2011) highlight that "analytical bracketing amounts to an orienting procedure for alternatively focusing on the whats then the hows of interpretive

practices (or vice versa) in order to assemble both a contextually scenic and a constitutive picture of everyday language in use” (p. 347). Rather than adhering to strict procedural guidelines, Gubrium and Holstein (2011) suggest that analytical bracketing is best conceptualised as being more like a ‘skilled juggling act’ than a strict analytic process. In addition, my supervisor acted as a ‘critical friend’, encouraging reflection upon the interpretations of the data and exploring alternative meanings within the data (Sparkes & Smith, 2002). During this process analytical memos were used to make tentative links between theoretical concepts regarding the development of knowledge and Michael’s sense of self and professional identity (Sparkes, 2000a; Strauss & Corbin, 1998). Here, when reconstructing Michael’s individual biography, factors that shaped Michael’s life were highlighted as ‘critical incidents’ (Sparkes, 2000).

6.6 Narrative Representation of the Data

Whilst it should be recognised that there are a number of contrasting perspectives in the narrative analysis of ‘self’ and ‘identity’ (e.g., psychosocial, the inter-subjective, the storied resource, the dialogic and the performance perspective), for the purpose of the present study a psycho-social perspective was utilised. Here, Smith and Sparkes (2008a) suggest that identity is both psychological and an effect of the social surrounds and relations. Such a conception acknowledges that “life and stories are constructed through social interaction and that socio-cultural factors colour a person’s sense of self or identities” (Smith & Sparkes, 2008a, p. 9). In addition, psycho-social narrative analysis of self and identities are internalised life stories that develop over time through self-reflection (Smith & Sparkes, 2008a). Furthermore,

Smith and Sparkes (2008a) suggest that a psycho-social narrative acknowledges that “an individual’s ability to create and maintain a coherent, unified and positive life story is said to require cognitive capacity and inclination to draw meaningful connections across one’s past, present and anticipated future” (p. 9). Therefore, psycho-social narrative analysis attempts to examine the ‘inner world’ of the participant as a conscious decision-maker, and a subject who reflectively puts together their story, which can be shared with another person via interviewing (Smith & Sparkes, 2008a). Finally, within such narrative representations this ‘version’ of Michael’s story should not be viewed as ‘the truth’ (Smith & Sparkes, 2009a), as inevitably narrative analysis involves interplay between listening to, co-creating, and representing the final version of the narrative presented here.

Similar to recent narrative inquiry examining the social complexity of coaching (e.g., Denison, 2007; Jones, 2006; Potrac & Jones, 2009), readers are invited to consider the ‘goodness’ (Stearn, 1998) of this study in relation to the nonfoundational lists provided by Sparkes (1995, 1998, 2000b). In particular, readers are encouraged to evaluate this study in relation to the following specific questions. Firstly, has this study enabled you to better understand Michael and his social world by allowing you to experience, however briefly, moments from Michael’s life as an elite soccer coach? Secondly, are the interpretations offered in this paper supported by enough ‘thick description’ (Geertz, 1973)? Lastly, has this paper contributed to enhancing our understanding of some of the complexities surrounding the development of Michael’s coaching knowledge in relation to the delivery of video-based performance analysis?

6.7 Results and Discussion

6.7.1 *Michael's* coaching context

In the following section Michael was encouraged to reflect back upon his time at Albion FC and consider some of the good and bad memories he has from his time as a developing young coach. Initially, Michael discussed how getting the opportunity to work with the U18 team at Albion FC was “a good step up for him”:

First of all, it was an exciting challenge to work at that level, and I didn't really anticipate it coming but when it came I really sort of grabbed it and was excited by it and was looking forward to working day-in-day out on the field. You know rather than waiting for the kids to come in, in the evening, and you work on a small area, and then they go and you don't see them again for a couple of nights. But to work with a group everyday and to try to put your impressions across to them and make them better players that was good. Like any group of players there were challenging individuals in the group. It's an interesting age they go through because I had a lot of them when they were 16 and they were school boys at the time and they are obviously much more impressionable then. And then they start getting a little bit older and they start having distractions off the field, their personalities get a little bit stronger. That was interesting going through that process.

In discussing his main roles and responsibilities within the academy and club structure Michael highlighted that:

My main role was to put the players through a coaching programme, day-to-day. Which would involve trying to improve them first of all individually, getting them to operate in a team format, and then obviously taking the games at the weekend. We played in the U18 league, we played in the FA Youth Cup. I had to liaise closely with the reserve team coach about what players he needed and which players he was going to use for the games. And me the same with the U16 coach underneath. Who were the best schoolboys coming through? And to give them opportunities to play at the next level.

The early emergence of Michael's identity as a young coach was full of 'excitement' and a sense of 'challenge' working with 'difficult characters' and 'challenging individuals'. Michael viewed his role as largely involving 'putting together a training programme and taking the players for games at the weekend'. However, Michael had a clear view that his coaching identity and role was situated within the institutional context at Albion FC (Jones et al., 2002). For example, Michael highlighted how the coaches worked within a hierarchy where he 'liaised closely with the reserve team coach about the players that they would need', and 'the same with the U16 coach underneath'. Similarly to other work in elite youth soccer (e.g. Cushion & Jones, 2006, 2012) academy structures have been highlighted to be a site of considerable hierarchical power relations.

Furthermore, Michael highlighted the contextual challenges that he faced in his role of Head Coach, particularly regarding the 'talent that was available to work with', the balance between 'developing players' and 'winning matches' and 'managing the egos' of the players within the squad. The following extract illustrates these points:

Well if I look back at it now and say who out of that group that I worked with, has made the right progress if you like... Well there's none playing in the first team. There are some players playing in the first team elsewhere. For example, Sam was a good player in that group at that time. And I think he is playing in League One now (League One - third tier in English football). Chris was a decent player and he's been flitting in and out of the squad (at Albion FC) and some loan periods. John Smith was another player in that group; had a bad time with injury but has been on the fringes (at Albion FC). There were some good players but then I think it shows the difficulty and how hard it is to make that step, for a player to come through and get into a Premiership first team. It's really, really, really tough. There were some difficult characters there for sure. I think one of the biggest struggles is they always think they are better than they are. A lot of players think they are better than they are... that's unfair to say because there are others that lack confidence. And there were a lot in that group that thought they were better than they were, and managing their egos was a challenge.

In particular, Michael highlighted the contextual pressures that he felt undertaking the ‘juggling act’ between both developing players and winning football matches, and how this in turn affected his sense of security:

You go in little waves your really trying to improve the players. You know you’re getting stuck into working with them, sitting down and going through some video or staying out for extra practice in the afternoons and doing a little bit of work. And then all of a sudden the results aren’t going so well. You know you want to win games; you’re a coach or a player you want to win football matches. But then if you haven’t had a couple of good results, you start thinking ‘coor I need to try to get a result today’. You know no one likes to lose regularly. You know trying to strike a good balance between giving them that development. But part of that development is to want to win and to try to win every game they are playing.

Importantly, Michael highlighted the delicate balancing act of knowing that he was under pressure to ‘win games’ whilst attempting to maintain a ‘developmental ethos’. This highlights the contextual complexity evident within Michael’s coaching context. Similarly, Cushion and Jones (2006, 2012) highlighted the relationship between winning and how this affected the coach-athlete relationships through evidencing autocratic, gendered and hierarchical interactional practices, where Michael highlighted the creation of identities of ‘decent players’ and ‘good players’. In this regard, Strauss (1997, p. 11) highlights that “others present themselves too; they wear their own brand of mask and they get appraised in turn”. Here, Michael

drew upon his evolving coaching knowledge acquired through a process of socialisation from his past experiences as a coach, to make not only technical assessments about the players but also regarding how the players conformed to the structured coaching regime at Albion FC through the ‘management of ego’s’. Similarly to the analysis presented in Study 2, within institutional settings interactional rules can “constitute a controlling discursive environment for all practical purposes, one that can forcefully promote certain kinds of narratives or even altogether eliminate narrative production” (Gubrium & Holstein, 2008, p. 260). Indeed, Michael further highlighted that this challenge was made more difficult because of a mismatch between Michael’s assessment of the players’ abilities and the players’ view of their own capabilities, and their evolving identities as ‘professional footballers’.

6.7.2 Early coaching experiences at Albion FC

Even though his initial experiences as a young coach were filled with excitement, gaining experience and knowledge were central to Michael’s development as a top-level coach. Indeed, Michael identified that whilst he still uses some of his early methods, he would not consider repeating some of his early coaching practices, particularly with regard to how to interact with players:

I think when I started at Albion FC full-time I was full of enthusiasm, looking back now, it was a great experience and... you know you can do all the qualifications you like but until you get out there, do it and experience it, I

probably thought that I knew more than I did and looking back now some of the things that I did.. you know I would never even consider doing them again and there are some things that I have stuck by and I still do now but over time I think you gather experience from what you do and how you work with players, and then what you learn from others and how you see the game changing through major tournaments and different trends that take place, I think the biggest thing now is having the experience, and having the experience through the different levels. I think that I am a good coach at this level because of what I did at the lower level as well. The experience of working with young players, how they learn, how to speak to people, what practices work and what doesn't work.

Despite Michael's early enthusiasm for his first role within full-time professional youth soccer, he highlighted that 'I probably thought that I knew more than I did' and that 'looking back now some of the things that I did... you know I would never even consider doing them again'. Here, Strauss' (1997) notion of time is particularly important in the creation of a visible 'coaching identity' by which Michael would be comfortable within his self-appraisal, and as an identity that he would like to be recognised by others (Strauss, 1997). Furthermore, Michael highlighted that the creation of this positive self narrative in the development of his professional knowledge happened 'over time' and 'with experience', Michael further explained that 'I am a good coach at this level because of what I did at the lower level as well. The experience of working with young players, how they learn, how to speak to people, what practices work and what doesn't work'. Here, Strauss (1995) highlights that these "Biographical processes refer to responses that significantly

affect and resonate throughout much of the life course. Such processes involve contextualising circumstances, coming to terms with them, reconstituting identity on terms of it, and recasting ones biography by obtaining new directions for life” (p. 5).

6.7.3 Early interactional practices at Albion FC

The following extract highlights an example of Michael’s earlier interactive practices with the players at Albion FC. In particular, the following extract highlights the emotional nature of Michael’s interactions with the players following a poor run of results (losing three games in a row). This extract was taken from the opening sequence of one of Michael’s team post match debriefing session:

Michael: Chaps just up on the board there, I’ve put a sketching up. You’ll see on Wednesday, that’s to-be-confirmed as a rest day. That will be dependent on liaising with the academic staff in that morning session. It will be dependent on how I feel tomorrow goes, whether the right amount of effort and quality is achieved in the two sessions and it might not be for all players anyway. Those that are with me and those that are with the reserves, two different schedules so we’ll let you know about that tomorrow. Right. Video work today. At the end of the game on Saturday, sort of rounded up what’s happened throughout the different games. I said that we let nine goals in. I got it wrong we let in ten. Right, I just went through it again in there. Ten goals we let in, in four games. Two against Town FC, three against United FC, three against Borough FC, two against Saints FC. Summary of the goals quickly;

Albion away: the one where we played the forward straight in and he scored and from the corner at the back post. Town FC: two in-swinging free kicks, not dealt with. The other one knocked down and the geezer volleyed it in. United FC: one set piece, one where we had a goalkick, the geezer goes straight through, we don't clear the ball away and another one where they get a cross in and he scored at the back post. Borough FC: mistake for the first goal, second one, big diagonal over at the back post, another goal. Out of all those goals, and you'll see the second one here and I think they are a little bit fortunate to a certain degree, and then you have the Saints FC goal where they get a decent cross in at the back post, we're going to cut those two out. We've given 8 goals away. 8 goals given away, and the other problem is we're not scoring three and four a game. So if we're going to let three in, you better score 4, but we haven't. When's the last time that we scored 3 goals in a game? Does anyone know when that is? Three goals in a game 3? Three goals or more?

Chris (a player): Vale FC

Michael: Vale FC here ((at home)). Do you want me to tell you what the month was? October! Right, that's nearly 12 months gone. The last time we scored 3 goals. So we haven't got the firepower to be able to defend like that. 12 months ago, we got 5, and that was like wow, and that was the boy Clarky ((a player on trial)) he got three of them and made one of them but listen, ultimately it's about individuals improving at this level, going onto the next level, being responsible and being reliable. Being good technicians, good athletes; that's what it's ultimately about. But collectively, if you're being reliable, if you're making good decisions, if you're putting the work rate in, right? If you're all doing that as individuals, collectively the performances will

show. Collectively, we've got a better chance of winning football matches if the individual parts are doing a good job. It goes without saying; it's not rocket science is it? If we've got people that are constantly making errors, right, same people or different people, it doesn't really matter. If errors are occurring all the time, we have less chance of achieving collectively and less chance of succeeding. Now, every time I go there, I know Dave ((assistant coach)) is the same; I want to win football matches. And I've got to say, on Saturday, it was more than likely my most disappointing moment since I've been here. The way I felt when I left here, the way I was when I went home. Now, I ask you the same question. You don't have to answer this. Just think to yourself, how much did that loss hurt you on Saturday? How much did it hurt you? Did you go home and not bat an eyelid and straightaway you go out with your mates, you go shopping and you've not even thought about it at all since, or did it actually grind at you and get at you? Not necessarily the people that made the mistakes, but as a group. Because I was sick on Saturday, and part of the reason I'm so disappointed, we actually played okay. You'll see some of the footage. We actually played okay. We had far more possession than the other team, we created more chances, particularly in the first half, and as we were going for it a bit more in the second, we opened the back door a little bit more. It's those little mistakes that are just sickening. Next thing I want to ask you is when you go out there and train, do you just go through the motions and go through training and get it or do you actually go out there every day with an aim to want to improve and to see what you're doing is in direct relationship to the game itself? Think about that. Two schools of thought. One, you're just going out there, you're going through the motions, you're doing what we're

asking you to do, no problems, no attitude problems you just get on with it and you come back in. Or do you actually go out there on a daily basis and want to get better and better and realise that by being out there and doing whatever it is, 10-yard passes, running over hurdles, putting crosses in, defending, whatever, do you think that's improving? Do you have that mindset? And do you see what we're doing out there has a relationship between having a game? Because I'm questioning it. The amount of times we have small-sided games... and I think you think I'm just doing it just to keep you active but everything in those small-sided games, we have the most sessions, happens in the game situations. Just in a smaller scale. What you don't get is the longer range stuff. But all the other stuff is there. You've got your shooting, your passing, you're defending, you're heading, your tackling, tracking, recovering, overlaps. Everything is in the game. Now, if you keep making mistakes out there and you've not got that ferocity and that competitive spirit in those games there, I don't know how you think you're going to get it on Saturdays. Now, we can shout all day long. Alright? And we'll keep at it; we'll keep trying to drive you on because that's what coaching is about. Trying to improve, trying to drive you on, getting you more competitive, and getting you more intense. But you've got to have that spirit as well, because you're the ones that are out there doing it on the weekend. And if we're not doing it in training, don't think it's going to happen in the game. It won't. Alright? You make mistakes out there in training, little mistakes, sloppy goals given away, you've got chances not taken, you think it's going to spin around the other way on a Saturday? And all of a sudden goals are flying in, the goals aren't flying in for them. It doesn't work like that. It has to happen in training. We've got to

change. We've got to be better there because we're just too weak at the moment.

When reflecting back upon this early interactional example, Michael appraised his past self in light of his developing coaching identity. Specifically, using his present self Michael was able to critique the development of his coaching knowledge, coaching experience and identity as a young coach.

Michael: Fucking hell, they are getting the riot act here aren't they? It's never easy watching yourself first of all, it's a bit uncomfortable actually. Straight away I'm thinking you can do that too often and hopefully I can't really remember but hopefully that was a one off. It's very general in its content. You know you've got to nail the details down, that's the important thing. I should have got straight into the video boom, boom, boom. And maybe left some general comments at the end. Specific feedback hone right in on what I am talking about, otherwise it's just fucking its nothing is it?

In the following example, Michael watches another example of his early interactional practices (Extract 1 from Study 2; see Chapter 5 pages 193-194). The feedback session follows a game where Michael's team lost 3-0, conceding goals from three set plays.

Michael: Right, in-swinging free kick, we have two on it initially ((points to the two opposition players standing next to the ball on the SMART board™)), one comes off it ((points to the player and his run)), so we don't need two out here, because it's not a shot so you have done the right thing coming off it, but then whoever it is ((points to the player on the SMART board™)), I'm not exactly sure who it is, runs back in and does nothing, look at this, one player here unmarked ((circle the opposition player in the SMART board™ in the middle of the teams goal)), so one for one there ((counting the players on the SMART board™)), one for one there, one for one there, another one ((circles a free player in the teams box on the SMART board™)), one for one there, is that Phil (Player)?

James (Player): No, that's me I come across

Michael: No that's you there isn't it?

James: Yeah

Michael: Right, so we have to say that he's unmarked then?

James: Yeah

Michael: Because he's not marked on the right side, ok is he marked?

James: I'm marking him

Michael: You just said you were marking him? Right both those players are unmarked.

Jack (player): The ref is blocking off the deeper one

Michael: So basically we've got: one, two, three, four players unmarked. Four players unmarked on a set piece ((Michael looks out towards the players)).

From the start ((instruction to the first author to play video clip – players watch the first goal conceded)). Now what they do here, just pause it there, they swing the ball to the back post and they’ve already got two against one ((points to the back post area)). Players sucked right under it can’t get their feet sorted out to head it away, our central players get drawn to that ball ((coach points toward the back post)) and they leave the other two at the back post ((the opposite post)), so we have a two against one here, and we end up with, well we end up with all these three are not marked because all the players get drawn to the ball and don’t think anything about marking them. Just run it again ((the first author replays video clip)). Just run it back just a second, just really slow ((clip is rewind)). And stop there ((instruction to the first author)). Now chaps we got too many players that aren’t getting in amongst them and getting tight enough, look at this here ((counts the players on the SMART board™)) one, two, three players doing nothing, nothing at all, an overload here ((points to the back post)), players that aren’t getting marked... I mean here it seems like we are tight enough but we’ve got two against one here and then two against one there, in the two most crucial areas of the goal.

Following viewing the example Michael commented that:

It’s not good that’s for sure. First of all I’ve said there is someone there and I don’t know who that is. I mean I’ve got to be saying who that is simple. And it’s got a bit of ... I’ve got a bit of a tone to me, it’s not particularly... I don’t

know what the word is to use... Not education or informative it's almost a bit sarcie (sarcastic)... You know I don't want to just slate myself. You know I am speaking about details and information. But I've got a bit of a tone about me that not particularly sort of pleasant. Looks like I've got the hump haven't I, I can tell I've got the hump, ((on the video "Right look listen, we got one, two...")) yeah go on mate ((laughs at himself counting players on the interactive Smartboard™)).

Later Michael commented that:

I can't see the details of the situation so I don't know if my technical input is right or wrong. At one point I'm giving some good technical input, well it seems like I am, quiet direct. There are a couple of ways you can do it, you can get into that situation in the video room. This is it, boom, boom, boom, do this do that right off you go. Obviously, I get into some dialogue there with the players, and if you want that to happen constructively, you've got to create the right environment for it, and that probably isn't the right environment. It's starting to border on the line of 'oh I'm doing that, and yeah but you're...' it's getting a bit like that and you don't want it to be like that. Particularly with young players, you know, it should be more along the line of 'what you thinking there?', 'you've run outside with your man or you've let him go to pick him up why are you doing that? Isn't that better?' You know there's a different way you can do that... I would say what you've shown me there is

vital for young coaches, to be videoed coaching to be videoed feeding back so you can reflect on how you are, yeah really good.

As a result of Michael's negative appraisal of the performance of individual players and the team collectively, autocratic and hierarchical language was used to control the unfolding interactions within the video feedback sessions. In interpreting such interactions and the consequences of these interactions for the production of narrativity, Gubrium and Holstein (2008) have highlighted that "institutional conventions constrain, promote, and otherwise shape narratives, but they alone do not determine how stories are formulated or what they are about. Nor does interactional control proceed in an institutional vacuum. Rather, it's the interplay between the artful exertions of interactional control and the organised narrative resources and restraints that ultimately shapes narrative practice" (pp. 259-260).

Importantly, when discussing the relationship between identity and control over interactions, Strauss (1997) highlighted that "certain things about a man's posture, intonation, speech, pace and modes of interaction unwittingly force others to respond in ways appropriate to his – at least seemingly - claimed status" (pp. 86-87). In his analysis of the past self, Michael highlighted how he had 'a bit of a tone' about himself that was not particularly pleasant. In watching his early interactional practices, Michael highlighted how the experience was 'uncomfortable' because of the discrepancy evident with Michael's evolving positive self narrative and an appraisal of his past self. Michael's temporal analysis of his coaching identity can be understood to comprise of the past, present and future all within one moment in time (Mead, 1934). Furthermore, Michael discussed that 'over time I think you gather

experience from what you do and how you work with players, and then what you learn from others' (cf. Cushion et al., 2003), and that 'I am sure now from what I have done at Rovers FC I would be better than that'. From a theoretical view point, Strauss' (1997, pp. 34-35) conception that "any man can be both [subject & object], simultaneously; having acted, he may make his act an object of scrutiny" is particular useful to make sense of such appraisals. Indeed, this closely relates to Michael's idealistic construction of an identity of a 'good coach', and how over time and with experience Michael's appraisal of himself changed towards the creation of a positive self narrative of professional knowledge and coaching identity.

The second extract is taken from the same debriefing session but consists of Michael's closing remarks to the players:

Michael: Now, just one thing about this morning as well and it kind of affects what happened on the Saturday as well and it happened... it's in and around this all the time. When you come into work here and you come here and training on the pitch here and you come out on a Saturday, make sure you come with plenty of passion and enthusiasm for what you're doing. And you tell me that there are things better than this that you could be doing? Someone of your age? And the amount that I've... you know, it's not just me, it's Pat (reserve team manager), I heard him saying it to you in the reserve team dressing rooms, the amount I have to drive you on and try to lift you... bring it with you. Bring that enthusiasm. Right? Because enthusiasm is an invaluable thing. It can lift you out of just being average and normal and fill you with strength and power. But come to work with some passion, chaps. Right? On a

Saturday, you go out there and you put that shirt on and you go and play 90 minutes of football on a great surface like that with top kit, everything done, come with that. And when you go out and train today. I mean as a player, I said to Sam (fitness coach) afterwards as a player today, I would have loved to have been involved in that session that I did today for you. Know the first little bit of running and a loosener after playing at the weekend and then you do some agility and speed things, great, and enjoyable. Then you come over and you're passing drill, you keep on getting to touch the ball. Then we do some little oppose practices. Then you're into that big practice where you've got everything in it; you've got passing in, you've got crossing, shooting, finishing. I just see deadness in here. Drive yourself on to be the best you can be. I will just leave you with this thought, whether you're going to make it in here or not, you're going to get a top education in football. Right? Everyone agrees with that. Whether it's me working with you or Dave (the assistant coach) or the great expertise of Pat (the reserve team coach) who's played stacks loads of games as an international, or Chris (assistant reserve team manager) who has managed at the very top level, and the other staff here as well. You're going to get a top education. But we're only as good, alright, as the students that come to us. Alright? You've got to come with that energy and that enthusiasm. And you've come with talent. But bring that energy, bring that passion and then you've got a chance, when the two come together, making you the best you can be. Right? The best you can be. Alright? Good stuff.

The ethnographic examples of Michael's early interactional practices, however, revealed the tensions of Michael's role. On one hand Michael was an enthusiastic coach who wanted to develop the players and Albion FC and do well, whilst Michael struggled against the team going through a particularly poor run of form losing a number of matches in a row. Indeed, Michael clearly informed the players of both his own and the assistant coaches' desire to 'win games', and how he experienced emotions such as 'disappointment', 'hurt', and feeling 'sick' when the team performed below his expectations. In an attempt to readdress this situation Michael delivered a monological speech to the players which highlighted the 'little mistakes' that players continued to make and the 'sloppy goals given away', whilst openly questioning the players' commitment to Michael's technical coaching programme. Michael further stated that 'I think you think I'm doing it just to keep you active', while attempting to highlight the importance of 'ferocity' and a 'competitive spirit' to 'drive the players on to be the best that they can be'. Within his interactions, Michael explained that his appraisal of the team was that they were too 'weak' at the moment and not able to fulfil the performance expectations and idealistic team identity that Michael had created (Strauss, 1997). In an attempt to redress some of these issues, Michael attempted to create a new idealistic identity for a youth player at Albion FC, one that is 'responsible', 'reliable', 'a good technician', a 'good athlete', who makes 'good decisions' and 'puts the work rate in' (cf. Cushion & Jones, 2006). The desired qualities that Michael strived to see when apprising the players, were fragmented by 'people constantly making errors' and players not caring enough about performing and doing well and 'going through the motions'.

6.7.4 Change in coaching identity

The following extract from the interviews, demonstrates how Michael's sense of self has developed over time with experience and critical self reflection, particularly in relation of how to speak to players. Indeed, Michael provides a recent example that acted as a 'critical incident' (Gilbert & Trudel, 2001) in his coaching practices which reinforced the importance of considering how he interacts with his players:

I have calmed down a little bit. The way I used to maybe speak to some players. I suppose I am slightly less aggressive and hot headed, and think more about what I am going to say, and how I say it. Something happened recently actually, that sort of rang an alarm bell in my head, where a player that I coached, had left and then returned, and he spoke to me about some situations, that we had been in, with me as the coach of the team and him as the player, and I couldn't remember them but he remembered them like it was the freshest thing. And it made me think what you say to players and people, at the time, because you say so many things you don't know how importantly they view it but for that one person its one of the most important things that has ever been said to him. And although we had a little bit of a laugh over it, it did make me think coor you really do have to think about what you say to people because it can be something that they remember for the rest of their life.

In recognising the need to change his early interactional practices Michael highlighted a recent critical incident that 'rang an alarm bell' in his head, where

Michael was the coach of a team and a player recalled an event that Michael could not remember. Michael commented that you have to be careful what you say to people because ‘for that one person it’s one of the most important things that has ever been said to him’ and could be ‘something that they remember for the rest of their life’. Indeed, Michael highlighted how he has ‘calmed down a little bit’ particularly regarding ‘the way I used to speak to some players’. Michael highlighted that this change in his professional knowledge and coaching identity stemmed from being ‘slightly less aggressive and hot headed’ and ‘thinking more about what I am going to say, and how I say it’. This transformation of Michael’s professional coaching knowledge and coaching identity evidences the complexity and fluid character of interaction and its relationship with identity formation (Strauss, 1997). Similarly, within the coaching literature Cushion (2011) highlights that coaches’ are ‘always becoming’, where “a person actively constructs and revises a story of self that provides a basis for self-identity” (p. 175).

When reflecting upon how his practices have changed when feeding information back to players within video-feedback sessions Michael highlighted that:

Am I different now? I haven’t done a video feedback session for a while now, it would be about a year ago because the 1st team manager leads that work. But I am sure now from what I have done with Rovers FC I would be better than that. I think looking at it now, when I used to do video I used to go through it and say ‘that’s good and that could be better’ but there’s so much stuff going on and now I know more about what I’m looking for when I look at the video.

So, if I was the coach of the team, this is how I want the team to play, this is what I go and work on in training, this is what I deliver in team talks to achieve that. And then when you look at the video, you straight away know what you're looking for. Now if you want your fullbacks overlapping and your wingers coming inside you work on that in training, you speak about it in team talks, and you look at it in the video.' I'm looking for opportunities for you coming inside and you going, the timing of it, the quality of the passing, the communication of it. So when you go and look at the video, you're straight away honing in on things, and your getting rid of a lot of the clutter that can be on there because you could feedback for hours on video. 'You've got to be there, and you've got to be there' and it's just a minefield. I think it should be used to support the key tactical things that you're working on, and then a balance of positives and negatives or areas that need development. But not to hide what is happening, so from your expert knowledge of observation from the statistical data that can be provided, you've got to show the true picture. Cos you can get beat three nil but cut the video to make you look brilliant. You've got to be on the money with it but I think now I'm much more honing in on 'this, this and this' and using it as part of what we do every day, that's how I would use it now.

In the previous example, Michael highlights the development of his Coaching and Delivery Philosophy regarding the use of video-based performance analysis within the coaching process (see Chapter 4 pages 150-159). In particular, how Michael's practices have evolved to move away from the selection of 'good and bad clips' towards a plan of work that reinforces a particular pattern of play through

positive performance modelling (see Chapter 4 pages 159-165). Indeed within Study 1, David highlighted that “we would show them the tactical patterns that the other team tried to use to exploit space, or create space” (see Chapter 4 page 160-167). Moreover, Michael highlights the importance of an integrated approach between the work conducted in training, the information delivered within team talks, and the video that supports both of these elements (see Chapter 4 page 163). Moreover, Michael further highlights the importance of considering how the ‘video is cut’ to ensure that the players see an accurate representation of ‘what really happened’ (see Chapter 4 page 160-163), whilst being mindful of the recipients qualities and not presenting ‘too much’ feedback to the athletes (see Chapter 4 pages 157-158).

Michael further highlighted how his interactional practices had changed over the years and that he considered it to be important ‘speak to others how you would like to be spoken to yourself’, however Michael also highlighted that ‘if someone’s got to be spoken strongly to then they need it’. In clarifying his point, Michael further explained that ‘working with senior players is different’ [than working with academy players], also that:

It’s about developing relationships, you want people to respect you and it should be two-ways and I think if someone’s constantly shouting at you and aggressive it’s not a good way to improve the links, the communication, the links that move both ways not just one way. I’ve changed overtime really. I’m constantly looking to improve myself, asking questions of other coaches, of players, reading, trying to keep up to date about the latest innovation and being very open minded. I just think over time you gather those experiences to make

you better. You still make mistakes but I think it's recognising them. If you are not seeing them that's the problem you've got to recognise them and make the necessary adjustments. And also recognising what's good and what works well and not discarding that, just for the sake of it you know because something's a bit more fashionable.

The final section of Michael's narrative highlights the importance of the 'two-way nature of respect' within the coach-athlete relationship (cf. Nelson et al., 2011; see Chapter 2 pages 64-67). Moreover, Michael highlighted how over time, through becoming reflective, asking questions of other coaches and players and engaging in informal learning such as reading, he was able to change his coaching identity towards a positive self narrative in the development of his professional knowledge (Bamberg, 2010; Cushion, 2011; Phoenix & Sparkes, 2009; Smith & Sparkes, 2008a; Strauss, 1959, 1997).

6.8. Towards an understanding of identity construction, re-construction and transformation through interactions in performance analysis feedback sessions

Interpreted through the work of Strauss (1997) "identity is connected with the fateful appraisals made of oneself-by oneself and others" (p. 11). Here, the site of video-based feedback sessions can be seen as a rich contextual environment to observe the appraisal and creation of identities of others, and temporal reflections upon the consequences of interactional practices of the self. Indeed, a number of examples have been highlighted whereby the participant coach presented evaluations

of ‘people constantly making errors’ and players ‘going through the motions’. This was contrasted with an idealistic player identity which consisted of being ‘responsible’, ‘reliable’, ‘a good technician’, a ‘good athlete’, who makes ‘good decisions’ and ‘puts the work rate in’. Moreover, video-based feedback sessions were viewed as a site with a great deal of potential to reinforce key characteristics of a collective team identity. Michael explained this by highlighting how he now uses video-based feedback to reinforce ‘how I want the team to play, this is what I go and work on in training, this is what I deliver in team talks to achieve that. And then when you look at the video, you straight away know what you’re looking for’. As such narrative environments affirm “certain established stories and ways of narrating experience; they are going concerns that narratively construct, reproduce, and privilege particular accounts for institutional purposes” (Gubrium & Holstein, 2008, p. 253).

In recognising the limitations of a coach led interactional approach where the coach is the holder of expert power (see Chapter 5 pages 180-183, 195-97, & 200-204) or ‘the right knowledge’ (cf. Cushion & Jones, 2006, 2012), Michael highlighted that ‘I get into some dialogue with the players, and if you want that to happen constructively, you’ve got to create the right environment for it, and that probably isn’t the right environment’ (see Study 1 Chapter 4 pages 150-159) . Here, Strauss (1997) highlights the importance of considering the interactional practices utilised (including posture, intonation, speech, pace and modes of interaction), and how this may have restrictive consequences upon others within the interaction. Indeed, similarly to the CA analysis presented within Study 2, the use of monological speech and strongly controlling the discourse ‘in action’, provided very little opportunities for the athletes to engage in meaningful dialogue with the coach. Here, Michael

highlighted that such interactions turn into ‘oh I’m doing that, and yeah but you’re doing this’, which is not conducive to an educational environment. Furthermore, similarly to the recent finding of Nelson et al. (2011), the importance of recognising the ‘two-way’ nature of respect within situated interaction within video-feedback sessions was highlighted. Indeed, in recognising the contextual factors associated with the delivery of video-based feedback, the grounded theory presented within Study 1 offers the opportunity for coaches to consider their practices reflexively (see Study 1 Chapter 4 pages 150-159). Consequently, when commenting upon the value of the interactional analysis presented within Study 3, Michael highlighted that ‘I would say what you’ve shown me there is vital for young coaches, to be videoed coaching and to be videoed feeding back so you can reflect on how you are’. In reconsidering his earlier interactional practices, Michael highlighted that a more fruitful way of structuring the interactions within the video-based feedback sessions would be to use dialogical interactional practices such as ‘what you thinking there?’, ‘you’ve run outside with your man or you’ve let him go to pick him up why are you doing that? Isn’t that better?’ Indeed, using such an approach would create an environment which is less coach led and thus change the nature of coach-athlete interactions (Cushion & Jones, 2006; Jowett & Cockerill, 2003; McArdle et al., 2010; Nelson et al., 2011; Potrac et al., 2002; Purdy et al., 2008; see Chapter 2 page 64-68; 77-81).

6.9 Conclusion

In answering Research Question 3; How might a coach develop their professional knowledge regarding the use of video-based performance analysis, and how and why might these interactional practices change over time in the development

of a coaching identity? This study has demonstrated the temporal nature of professional knowledge and identity construction in situated interactions within video feedback sessions. To achieve this, a narrative ethnographic approach was utilised which involved reviewing past examples of Michael's coaching practice (through video recorded ethnographic observations), in conjunction with interviewing. In building upon earlier work from Study 1 and 2 which examined some of the 'whats' and 'hows' regarding the delivery of video based performance analysis in elite youth soccer, this study sought to account for some of the why's behind Michael's interactional practices. Additionally, throughout Study3, the grounded theory presented within Study 1 was demonstrated to hold a great deal of potential to explain the delivery of video-based performance analysis in similar contexts, whilst Michael was able to explain and reflect upon some of his earlier interactional practices which were evident within Study 2.

In building upon Study 1 and Study 2, the present study has highlighted a number of features of the development and transformation of identity of an elite level coach, through the analysis of interactional practices and interpretive interviews. Specifically, the coach appraised the both the team and individual players against an idealistic identity of 'good players' and 'collective team performances'. Interestingly, as well as being contextually rich as a site of individual and team appraisals within a highly institutionalised performance context, the performance analysis feedback sessions were also demonstrated to hold considerable importance for the development of a positive self narrative in the development of professional knowledge to become a 'good coach'. Here, a reflective examination of authoritarian interactional practices and the consequences of those practices were seen as 'vital' for coaches to 'reflect upon how they are' to change the nature of the coach-athlete relationship for the better

(cf. Cushion & Jones, 2006, 2012). Indeed, Michael stressed the importance of a ‘two-way respect’ between the coach and athletes to improve the quality of communication to create ‘the right kind of environment’ to encourage athlete learning (cf. Nelson et al., 2011). Central to the transformation of Michael’s evolving coaching identity was the influence of both ‘time’ and ‘experience’. Importantly, Strauss (1995, p. 5) highlights that “personal histories are biographies: that is, personal identities viewed analytically over time. So when we think of the many possible connections of biographies to histories, we are talking about the temporal aspects of personal identities and the flow and repeated reconstruction of historical events”. This analysis appears to mirror much of Michael’s experiences in developing a new positive self narrative.

This analysis presented here, was achieved through a narrative ethnographic approach which “orients towards the situated character of accounts and turns to the interaction and institutional order to better understand the relationship between narrative, experience, and meaning” (p. 261). However, there are a number of methodological considerations which must accompany such an approach. For example, providing enough ‘thick description’ (Geertz, 1973) balanced against ‘taming’ both narrative and ethnographic excess in the representation of situated interactions against the range of narrative possibilities remains challenging (Gubrium & Holstein, 1999). This issue is chiefly concerned with narrative control and the direction of the story, which is fundamentally collaborative (Gubrium & Holstein, 1998, 2009). Moreover, narrative analysis involves much ‘border work’, between the tension of ‘speaking for the participants’ and ‘telling the stories of’ the participant (Gubrium & Holstein, 1999). Here, considerations of who’s ‘voice’ is present within the text, whilst “a recognition of the need to curb ethnography’s own representational

excesses by letting indigenous voices have their own say” (Gubrium & Holstein, 1999, p. 569) should be considered. Another source of ‘border work’ involves the “qualitative researchers’ own increasing analytic self-consciousness”, which is not easily separated from the participants’ own concerns (Gubrium & Holstein, 1999, p. 563). This in turn, has consequences for representational strategies in ‘writing culture’, rather than being able to present the culture as it is without analysis, interpretation and privileging of some interactions and utterances over others (Clifford & Marcus, 1986). Thus, creating a storied representation in rather than of the field (Gubrium & Holstein, 1999). Whilst such borders remain challenging and some will undoubtedly ‘sharpen’ the procedural borders between narrative analysis and ethnography (Gubrium & Holstein, 1999), “this problematic border will be one of the chief procedural issues for ethnography in the new millennium” (Gubrium & Holstein, 1999, p. 564).

Furthermore, when undertaking interviews, particularly with those where a relationship has built up over time during the ethnographic process, there is a need to recognise ‘boundary crossing’. Here, Smith et al. (2009) have highlighted the ‘peril’s’ of recognising “how close is too close?” and ‘how far is too far’ from participants within the research process (p. 342). In consideration of the concept of border crossing the ‘uncomfortableness’ felt by Michael during the viewing of his past interactional practices, represented a challenge in that whilst the purposes of the present study relied upon Michael’s explanation of some of the *why*’s behind his early interactional practices, and a distance between ‘the researcher and the researched’, the closeness that I had built up with Michael over this period felt, not equally because I could not claim this, but certainly uncomfortable for me as the researcher. I suspected that upon reflection and further analysis that Michael would

not view such interactional practices favourably, and thus the re-view of his early practices held the potential for ‘self confrontation’ (Dowrick, 1991).

Finally, Gubrium and Holstein (2008, p., 256) have highlighted that “people seldom “burst out” in stories. It takes work... A narrative space must be established in the give-and-take of social interactions”. Here, then the creation of Michael’s narrative must be considered to be co-created between both Michael and myself and should not be interpreted as a singularly factual analysis, or a finalisation of Michael’s self narrative in the development of his professional knowledge (Franks, 1995).

CHAPTER SEVEN: THESIS CONCLUSION

Towards an understanding of the use of video-based performance analysis in elite youth soccer and beyond

7.1 Introduction

Given a number of key considerations; firstly, the prevalence of video-based feedback within elite soccer (James, 2006); secondly, my practice dilemmas and theoretical sensitivity within this field (Strauss & Corbin, 1998); and thirdly, recent findings which have demonstrated elite youth soccer to be a contextually rich naturalistic context to explore (Cushion & Jones, 2006, 2012), this thesis focused specifically upon the use of video-based feedback within elite soccer, and sought to explore some of the realities of the use of video-based performance analysis within the coaching process. Through a critical review of the performance analysis literature, video-based feedback literature and sports coaching literature (Chapter 2), the disjointed nature of the performance analysis literature was highlighted. Moreover, the case was made to reposition the use of performance analysis within the coaching process more firmly within the sports coaching literature. Following this work, a number of ‘blank spaces’ within the literature were highlighted, and encapsulated within a ‘Research Problem’ (see Chapter 1 pages 5-6). Next, a set of specific Research Questions were outlined (see Chapter 1 page 6). In answering Research Question 1; what can be learned about the pedagogical rationale behind the use of video-based performance analysis within the coaching process, and can an empirically grounded theory of practice be constructed to act as a reflective tool for practitioners? Specifically, what do coaches do and why do coaches do this? A grounded theory methodology was presented to provide empirical evidence of the realities of the

delivery of video based performance analysis in elite youth soccer (Chapter 4). This work provided a theoretical framework, grounded in empirical data contextualised within the existing sports coaching literature, to further explore the use of video-based feedback in elite youth soccer. In answering Research Question 2; what can be learnt about the delivery of video-based performance analysis within a naturalistic setting working with elite athletes? Specifically, how might a coach use video-based performance analysis feedback within the coaching process to achieve interactional goals? An in-depth analysis of the use of video-based feedback ‘in situ’ was conducted (Chapter 5). Using a conversation analysis procedure combined with a social power analysis (Raven, 1992, 1993, 2001), the data demonstrated that the participant coach exercised control over the sequential organisation of the sessions, via asymmetrical turn-taking allocations, an unequal opportunity to talk, control over the topic of discussion within the interactions and the use of questioning to select speakers to take turns to talk. Finally, in answering Research Question 3; how might a coach develop their professional knowledge regarding the use of video-based performance analysis, and how and why might these interactional practices change over time in the development of a coaching identity? A narrative ethnographic approach (Gubrium & Holstein, 2008) was utilised to explore both the participant coach’s contextual interactions, and further reflections upon his early practice experiences (Chapter 6). The analysis of these early interactional practices of the participant coach revealed the appraisal of both individual players and the team against an idealistic identity of ‘good players’ and ‘collective team performances’ respectively. Furthermore, through the use of interviews and observations of past interactional practices, the participant coach illustrated a critical reflection upon early practices aligned with a change in coaching identity over time. Therefore, as well as

being contextually rich as a site of individual and team appraisals within a highly institutionalised performance context, the performance analysis feedback sessions were also demonstrated to hold considerable importance for the development of a positive self narrative in the development of professional knowledge to become a ‘good coach’(see Chapter 6 pages 235-236, 244-245, 255-256). Here, a reflective examination of authoritarian interactional practices and the consequences of those practices were seen as ‘vital’ for coaches to ‘reflect upon how they are’ to change the nature of the coach-athlete relationship for the better (cf. Cushion & Jones, 2006).

Following the work undertaken within this thesis, the use of video-based feedback within the coaching process has impacted upon the literature in a number of ways. Firstly, the work undertaken in Chapter 4 represents the first empirically-based examination of how and why coaches use video-based performance analysis within their coaching practice. Indeed, in moving away from the simplistic representations of model for the use of performance analysis within the coaching process (i.e., Franks et al., 1983; Franks & Hughes, 1997; Robertson, 1999; Hughes, 2008 – see Chapter 2 pages 88-92), the work within Chapter 4 represents a ‘turn back’ to empirically based sports coaching research, in acknowledging that sports coaching is a dynamic, complex, and social act (Cushion & Jones, 2006; Jones, 2000; Jones et al., 2003; Potrac & Jones, 2009; see Chapter 2 pages 70-81).

Secondly, in drawing upon a conversation analysis approach, the study represents not only an empirical advancement in our understanding of the realities of the delivery of video-based feedback within the coaching process, but also furthers the methodological repertoire within the sports coaching literature. That is, research represents the first conversation analysis study within the sports coaching literature. Therefore, this work highlights some of the hows both evident within Chapter 4 and

the work of McArdle et al. (2010), who similarly highlighted how power differentiations evident within coach-athlete relationships can limit the efficacy of post performance debriefing. Indeed, given the importance of the interactions between the coach and athlete, it is likely that the field will expand, and perhaps build upon this usefully nuanced methodological approach.

Thirdly, in drawing upon narrative ethnography (Gubrium & Holstein, 2008) as an, as yet, unused methodology of better understanding sports coaching, Chapter 6 similarly expands sports coaching's methodological range. In building upon previous work using an ethnographic approach to exploring the complex realities of sports coaching (Cushion & Jones, 2006, 2012; Purdy et al., 2008; see Chapter 2 pages 77-81), an analysis of storytelling through ethnographic observations and interviewing was presented utilising a theoretical framework of identity (Strauss, 1997), to build upon a consideration of not only 'what a coach knows' but also 'who they are as a coach and as a person' and how this may change over time. Indeed, in the process of producing this thesis this additional view of coaching appeared to be conspicuous by its absence within the coaching literature at present and in need of further exploration. That is, the person of the coach appears to have been overlooked in favour of exploring instrumental research agendas (c.f. Jones, 2006, 2009; Jones et al., 2003; Jones, Glinzmeyer, & McKenzie, 2005; see Chapter 2 pages 70-81). Moreover, the explicit examination of narrativity and storytelling may hold a great deal of potential for future work within coach education, given its ability to represent the temporal hows and whys of identity construction. Here, stories allow us tell and show about ourselves and others, and re-tell as the narrative changes over time.

This research represents a shift in perception that performance analysis and performance analysis research should operate within a distinct and separate research

paradigm from the sports coaching literature; entrenched within the (post)positivistic metaphysical paradigm, chiefly concerned with the ‘validity’ and ‘reliability’ of sports performance data. Whilst some may argue that the accuracy and reliability of sports performance data is paramount to applied practice, Franks (2002) reminds us, “experimental studies used to develop practice guidelines may not be grounded in the realities of ‘real world’ coaching” (p. 4). Therefore, there is a need to draw upon naturalistic approaches to research inquiry to better understand, rather than just acknowledge (Jones, 2012), the social and complex nature of coaching practice.

7.2 Implications for coach education

Whilst this thesis is more in-line with what Jones and Wallace (2005) describe as a ‘knowledge-for-understanding’ project, aimed at providing a more secure foundation for future coach education programmes rather than a ‘knowledge-for-action’ project aimed at instigating immediate change in practice (Jones & Wallace, 2005), that is not to say that there are no implications of the present thesis for coaching practitioners. Indeed, the thesis highlights the need for coaching practitioners to give serious thought to, and critically reflect upon, what they use video feedback for, how they use video feedback, and why they use video feedback within their coaching practice. Specifically, the grounded theory highlights the need to consider Contextual Factors surrounding interactions, such as the Social Environment, the coach’s Coaching and Delivery Philosophy and the *Recipient’s* Qualities, and both the Delivery Approach selected to achieve the Targeted Outcomes required. Such factors have been highlighted to be important by experienced elite soccer coaches to maximise the pedagogical impact of video-based performance

analysis feedback (Chapter 4).

Indeed, following the publication of this work within the 'Journal of Applied Sports Psychology', arguably this work has already been positioned and is, in some way, having an impact upon the field. This can be evidenced by the inclusion of this work within the English Football Association's UEFA Level 4 'Performance Analysis Module'. Here, the grounded theory has been used as a 'reflective tool' for coaches working towards the highest soccer coaching qualification within England and Wales to consider key questions regarding the design of video-based feedback sessions within their coaching practice. Moreover, other publications within high quality peer reviewed journals have started to build upon this work, exploring some of the intricacies of the use of video-based performance analysis within the grounded theory. For example, in an exploration of Coaching and Delivery Philosophy and Recipient Qualities, the work of Nelson et al. (2011) explored an athlete's perceptions of the use of video-based feedback within elite ice hockey. Within this work, respect for the coach was found to be highly influential in the creation of an effective learning environment (Nelson et al., 2011). In this way, the grounded theory may be viewed as a 'reflective tool' to generate dialogue, stimulate imaginative interpretation and further understanding, rather than be used in a mechanistic manner.

Additionally, coaches should pay particular attention to the environment that they create through their interactional practices when using video feedback (Chapter 5). That is, if coaches want athletes to engage in the sessions in a constructive manner, the coach must offer the athletes the opportunity to interact in an open and honest manner, through equitable dialogue (Chapters 5 & 6). For example, influence attempts which draw upon soft power tactics (i.e., expert, referent & informational power) to influence athletes would be highly desirable to avoid the negative consequences

associated with hard power tactics (i.e., coercion, reward & legitimacy of position). Indeed, Raven (2001) highlights that “coercive power may be effective in the short term and might bring rapid change” but “the target may harbour hostile feelings towards the influencing agent as a result” (p. 220). Similarly, reward power can reduce the targets perception of their freedom to comply, and has the potential to be viewed negatively as a bribe for good favour (Raven, 2001). Here, it is important that the coach not only critically reflects upon how they are getting athletes to do what they otherwise would not have done (i.e., the use of social power), but also the tone and sequencing of their interactional practices (Chapter 6). Furthermore, the present thesis has highlighted the potential of video-based performance analysis feedback sessions to be a site of both coach and athlete identity creation, and over time transformation (Chapter 6). Indeed, how coaches and athletes view themselves, and how they are in turn viewed by others within video-based feedback sessions (Strauss, 1997), is a central feature of using video to replay past actions and discuss and judge the quality of actions within group settings (Chapters 5 & 6). Indeed, Chapter 6 highlights that not only can video be used to critique athletic performances; video also offers the opportunity for coaches to consider the impact of their own interactional practices, and over time, write new positive self narrative in the development of their professional knowledge (Chapter 6).

7.3 Reflexivity: The researcher and the researched

Through the process of analysis within the production of the present thesis, my thinking and understanding of the use of video-based performance analysis feedback within the coaching process has developed. As an active participant observer within the data collection phase of the thesis, I was also able to look back upon those

observations and practices using video recordings which has enabled me to develop a greater sense of my own socialisation and social position. With experience and theoretical sensitivity come values, attitudes, beliefs and an ideology of practice. I have come to recognise through the use of social theory a new way of understanding what coaches do, how coaches do things, and why coaches do things as they do. In parallel with Michael's critical reflections upon his early practice experiences, which at the time represented the 'norm' for me, I have started to better recognise the cultural discourse which sound and impinge upon elite youth soccer. Specifically, how winning is highly valued juxtaposed to athlete development (cf. Cushion & Jones, 2006, 2012), how athletes are requested to give their input during feedback sessions juxtaposed to a situation where players are not given a legitimate voice (cf. Cushion & Jones, 2006, 2012), and the dominance of an authoritarian interactive coaching style serves to create and re-create the field of coaching and the power structure evident within institutional contexts (cf. Cushion & Jones, 2006, 2012). This work has not only demonstrated the existence of such discourses but also the potential to reflect back, question and change this situation in the future through the use of complementary methodological approaches and social theory grounded within the realities of everyday practice (Jones, 2012).

7.4 Limitations

One of the limitations of this thesis is perhaps the boundaries and restrictions that I placed upon understanding the use of video-based feedback within the coaching process. On reflection I could have looked for evidence of the messages from the video room permeating onto the training pitch. However, I feel that this issue has only

been brought to light via the work and analysis undertaken within the thesis, and perhaps without this knowledge this issue would not have been felt so acutely. This shortcoming may be addressed in future research projects, now a more secure foundation has been built to explore the use of video-based feedback within the coaching process. Additionally, although it would be easy to suggest that a limitation of this thesis is the case study approach undertaken within this work, I believe this is in fact a strength of this work as it speaks for the specific contexts under examination, therefore, this work remains substantive and of practical use in nature. Indeed, Strauss (1995) highlighted that:

Substance and substantive theory is what most practitioner researchers work at, and what they publish and talk about at conferences and meetings. It is such substantive theory that practitioners, educators and researchers in practitioner fields (education, nursing, business, clinical psychology, evaluation and policy) draw upon when they find sociology useful. There is not much market for more general types of theory, I suspect even among sociologist (p. 23).

Whilst the findings of this thesis do not account for all coach-athlete relationships, in all sports across all contexts, there is something quite specific, unique and ‘special’ about the interactions analysed and reported within the thesis that should not be lost in reduction, abstraction and generalisation. Here, Lincoln et al. (2011) highlight that:

It can be argued that all data are valid because what may not have meaning to one person could be the foundation of all truth to another. Taking this approach we could say that there is no such thing as invalidity of data or method if someone can find it to be an accurate reflection of their interpretation of reality (pp. 114-115).

Here, I would agree with Jones' (2012) sentiment that we should not necessarily strive for "some grand theory, gold standard or (another) generic 'model' of coaching" (p. 2), however, there is a need to further explore other sports contexts to better understand the inevitable myriad of pedagogical practices used when feeding video-based performance back to athletes. More work needs to be undertaken both within and outside of professional soccer to explore how unique the findings of this thesis are, and how wide spread some of the discourses are that have permeated this project. Perhaps the most exciting work may come from other fields of sports coaching with alternative ideologies, cultures and practices. Here, the use of video-based performance analysis within highly technical individual sports (i.e., swimming & athletics), which encapsulate different coach-athlete relationships, may provide a valuable comparison of pedagogical practice and associated discourses.

7.5 Future directions

A number of authors (e.g., Cushion, 2007a, 2007b; Lyle, 2002; Jones & Wallace, 2005) have previously highlighted the lack of a sound conceptual and theoretical underpinning of sports coaching. The position highlighted within the

present thesis values contextualised naturalistic empirical evidence of practice, and the generation of substantive theory. Therefore, building upon this work in the future, researchers wishing to understand broader interactional practices of coaches should look to move beyond the current tendency to treat coaching as a series of unconnected episodes, which can be dissected and its parts aggregated (cf. Jones, 2002; Potrac et al, 2000). Methodologically, such an approach remains challenging, and will no doubt require the utilisation of sensitive methodologies, to illuminate a ‘truer’ picture of the realities of coaching practice and the subsequent effects of such practices upon the athlete (Jones, 2009; Jones et al., 2010). Specifically, within Chapter 4 a grounded theory of practice is offered which includes a number of interconnected elements, all of which may be examined within other coaching contexts. Future research wishing to build upon the grounded theory could undertake a number of approaches for example:

1. Work could be undertaken to analyse elements of the grounded theory, in detail, in other coaching contexts.
2. The theory could be used to better understand the similarities and differences in the delivery of video-based performance analysis across different coaching contexts.
3. The grounded theory could be used as a starting point to create a more general theory of the delivery of video based performance analysis across sporting and other educational contexts.

In developing some of the work presented in Chapter 5 regarding the analysis of the ‘in situ’ interactions within video feedback sessions, future work could consider:

1. Comparing the interaction practices evident within Chapter 5 to other coaching contexts.
2. Exploring the impact of different interactional practices within sports coaching.
3. Exploring coaches’ awareness and sensitivity to their interactional practices.

In building upon the work presented within Chapter 6 future research could consider:

1. Further examining the potential of narrative analysis in the development of a positive self narrative in coach education.
2. The use of narrative research as a resource to explore conflicts within self narratives to create a more unified and cohesive narrative of the self.
3. To further explore the co-construction and re-telling of narratives within research projects, particularly where multiple authors and voices are both heard and silent.

More generally, future studies wishing to impact upon coach education should consider the value of undertaking empirical research which deconstructs the dominant discourses across a range of sports coaching contexts, consider what they are, how they are produced, why they are reproduced, and who's purpose they serve (i.e., the coach, the athlete, & the institutional context). Through such an approach coaches may become better aware of cultural pressures, their own situated actions and the consequences of those actions upon others (Heritage & Clayman, 2010).

However, providing more data of examples of phenomena related to sports coaching with the associated customary 'theoretical discussion of the data', does little more to increase our understanding of sports coaching beyond the current "disjointed discursive bag of related notions" (Jones, 2012, p. 2) which currently reflect the field. Indeed, it has been over a decade now since early publications relating to understanding sports coaching as a social endeavour, and this integration of social theory into sports coaching. Therefore, the time is fast approaching to start to ask the tough, difficult questions within the field, such as: 'where has this got us?' and more importantly 'where is this taking us in the future?' Here, Cushion (2007b) highlights that "coaching in the future must be informed by a research programme embedded in practice that must be theoretically and empirically sophisticated" (p. 431). Whilst theory building is one potential solution to "establishing academic maturity" (Jones, 2012, p.2), and may provide new substantive insights and understandings of sports coaching. The lack of a coherent theoretical perspective which has guided research programmes within related fields in the social science literature such as symbolic interactionism (Blumer, 1969), interpretive interactionism (Denzin, 1989, 1992, 2009), or more constructionist based 'social interactionism', does little to add conceptual clarity to research approaches within sports coaching. Here, the alignment

of a position which highlights research interests, research methods, and methodological considerations, and issues relating to ontology and epistemology may more directly address Jones' (2012) critique of the field. To achieve this aim coaching scholars must give deep consideration to the act of sports coaching and how best to go about understanding this widely acknowledged complex role within society. In doing so, sports coaching researchers have the opportunity to achieve the much coveted broader impact upon the main stream social sciences literature.

7.6 Postscript

The following section aims to further clarify and expand on the thesis following the viva defence. Here, two addition sections have been added for further clarity: (1) the difference between constructivist and constructionist narrative practices, and (2) additional consideration for the development of the grounded theory.

7.6.1 Narrative reality: Constructivist and constructionist world views

It is important to recognise some of the subtle but important differences between constructivist and constructionist narrative inquiry. Whilst there are similarities between the two orientations to narrative research (i.e., an interest in the storied nature of human conduct, that self and identities are constituted via narrative, that people understand themselves through storytelling, stories are shaped by context, stories may change over time, people have a degree of agency over the stories that they tell, people draw upon narrative resources to tell stories etc.; cf. Sparkes &

Smith, 2008c), a number of important distinctions exist. Narrative constructivism suggests that “narratives and people’s life stories are psycho-social or intersubjectively created” (Sparkes & Smith, 2008c, p, 297), where narratives take the form of an inner story (McAdams, 1993). What goes on inside people heads when engaging in social interaction is a central concern, and stories reflect the inner workings of the person’s life, sense of self and identity through a ‘cognitive script’ (Sparkes & Smith, 2008c). Therefore, narratives are not framed as social action but as a way to access peoples’ inner reality (Sparkes & Smith, 2008c). This position has been suggested to relate to (neo)realism, in that, a reality exists which can be ‘got at’ (Crossley, 2000). Alternatively, drawing upon the work of Gergen (1999), Sparkes and Smith (2008) highlight that “the primary emphasis of narrative constructionism is not on cognitive scripts or in the inner realm of individuals but on narratives as a vehicle through which our world, lives, and self are articulated and the way in which such narratives function within social relationships” (p. 298). Sparkes and Smith further highlight that:

In contrast to social constructivist scholarship, which generally privileges the interiority and active engagement of the individual person in constructing self and identity, scholars placed under the umbrella of social constructionism give greater attention to relatedness and the social aspects of narrative in the self- and identity construction process (p. 300).

Here, “narratives are viewed as a form of social action and a relational, sociocultural phenomenon” (Sparkes & Smith, 2008c, p. 299). This approach to

understanding narrative reality, therefore, is aligned with relativism (Smith & Hodkinson, 2005). That is, narratives never simply ‘tap into’ or mirror an inner reality but “help to construct, within relationships, the very reality itself” (Sparkes & Smith, 2008c, p. 299). Narratives, then, are “on-going social practices that people perform and do in relation to others as opposed to something they have” (Sparkes & Smith, 2008c, p. 299, original emphasis). Moreover, “experiences such as emotions or memories are not merely psychological states but also are narratively performed social enactments” (Sparkes & Smith, 2008c, p. 299). As such, narratives are considered a form of social action, rather than a transparent window to reality (Atkinson et al., 2003). Finally, given the lack of critical consideration to the use of narrative analysis within the sports coaching literature, the differences between constructivist and constructionist narrative inquiry requires further thought and reflection in the field.

7.6.2 Further developing the grounded theory

Grounded theory offers a starting point; a way to build an understanding of social reality from empirical data but not necessarily the end destination of the research process. Within the present thesis grounded theory was used to build a framework for future investigation into the phenomena of video-based feedback in the coaching process. A key tenet was to stress the substantive nature of this work, that the data and the subsequent analysis through the techniques and procedures of grounded theory offered a way to organise the relationships between data. However, many scholars have commented on the potential of the grounded theory to become more general, less substantive and potentially more abstracted. The aim of such work

would be to create a theory that would stretch beyond the boundaries of the contexts under investigation here. Indeed, some scholars have suggested that the grounded theory maybe adapted and presented as a theory of coaching or the coaching process more generally. This is understandable, as many academics have lamented that lack of a conceptual and theoretical basis upon which to further the field of sports coaching. Moreover, some academics have toyed with some of the concepts within the grounded theory taken the grounded theory on to other social activities. For example, how contextual factors, philosophy, interaction and social actors shape facets of other social situations such as teaching (i.e. teacher-pupil interactions). Whilst that was not the initial aim of this project, I am pleased that people have started to think with and move beyond some of the original ideas presented within this thesis. That the grounded theory is useful and used is of principle significance. Indeed, I have already had the pleasure of seeing how the grounded theory has been used to frame further studies within the field of video-based performance analysis in youth soccer as part of a Master by Research degree (Booroff, 2013), and I will eagerly await future work examining the use of the grounded theory presented within this thesis.

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Appendix 1

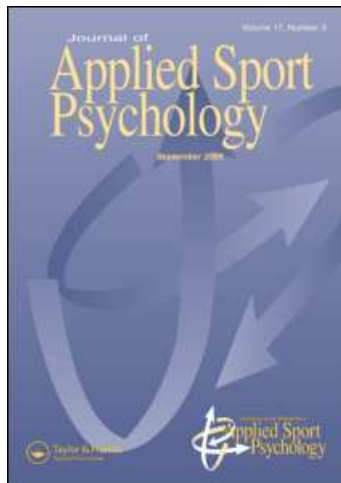
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Journal of Applied Sport Psychology

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713768823>

The Delivery of Video-Based Performance Analysis by England Youth Soccer Coaches: Towards a Grounded Theory

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Online publication date: 28 January 2011

To cite this Article Groom, Ryan , Cushion, Christopher and Nelson, Lee(2011) 'The Delivery of Video-Based Performance Analysis by England Youth Soccer Coaches: Towards a Grounded Theory', Journal of Applied Sport Psychology, 23: 1, 16 — 32

To link to this Article: DOI: 10.1080/10413200.2010.511422

URL: <http://dx.doi.org/10.1080/10413200.2010.511422>

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The Delivery of Video-Based Performance Analysis by England Youth Soccer Coaches: Towards a Grounded Theory

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The purpose of this study was to build a theoretical framework to understand the delivery of video-based performance analysis by youth soccer coaches in England. Data were collected from interviews with 14 English youth soccer coaches, who had used video-based performance analysis for more than 3 years in their coaching practice. Using a grounded theory methodology (Strauss & Corbin, 1998), data were analyzed and conceptual links between concepts were theorized. Categories regarding contextual factors, delivery approach and targeted outcome were highlighted. Results are compared against existing coaching literature to provide a more realistic representation of the phenomena for the education of coaches.

The analysis of athletic performance has been located within recent coaching discourse (Lyle, 2002; Stratton, Reilly, Williams, & Richardson, 2004). The term discourse is used in this case to differentiate between evidence-based research (of which there is little) and to identify scholarly writing combining “ways of thinking” and “believing” about coaching (of which there is a great deal). Within this coaching discourse, Lyle (2002) identified performance analysis as one of the key building blocks of the coaching process; where the ability of a coach to assess performance, diagnose problems, and give corrective technical information to athletes is central to effective coaching. Furthermore, the development of video and computer technology means that coaches have a greater number of options available to provide feedback to athletes (Ives, Straub, & Shelley, 2002; Stratton et al., 2004). In sports such as soccer, video-based performance analysis is so prevalent that most, if not all, professional teams engage in this form of analysis (James, 2006). However, we know little of what elite soccer coaches do in their practice (Cushion & Smith, 2006). Video-based performance analysis is seen as an important tool, as it can be used to provide feedback to athletes to modify behavior

Received 26 March 2010; accepted 22 July 2010.

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and improve understanding (Court, 2004; Groom & Cushion, 2004). Therefore, there appears a perceived practical efficacy and value to the use of video-based performance analysis by coaches. However, the delivery of this information is often largely unstructured, based around critical incidents in performance, and therefore predominately reactive in nature. To this end, Stratton et al. (2004) have suggested that “it is not yet clear how best to integrate this technology into coaching practice” (p. 132). That is an empirically based framework for those engaged in the delivery of video-based performance analysis has not been achieved. In light of this, Bartlett (2001) has suggested that such pedagogical guides to coaching practice remain unclear and under-researched.

While considerable academic writing considers the *what* of performance analysis, regarding system design and reliability (e.g., Hughes & Franks, 2004), the *how* or use of this information in coaching practice remains under-developed. Given the applied importance of the topic to coaches, it is surprising that such little attention has been paid to the pedagogical issues underpinning practice. Like coaching more generally, performance analysis is assumed to be a known, linear, and unproblematic sequence (Cushion, Armour, & Jones, 2006). This is reflected in the literature by the *how* or use of performance analysis depicted via simplistic flow charts and schemas; often illustrated with an unproblematic shift from performance, observation, planning, training and practice (e.g., Carling, Williams, & Reilly, 2005; Hughes & Franks, 2004). Moreover, these simplistic models and schemas are models for a process (i.e., idealistic representations) rather than models of a process (i.e., generated via empirical research; Cushion, et al., 2006; Lyle, 2002).

In line with such criticism, Voight (2007) has highlighted the value and need for more evidence-based theories that can guide coaching practitioners. One such example of using empirical data to build theory is the work of Côté, Salmela, Trudel, Baria, and Russell (1995), who presented a mental model of coaching knowledge. This approach has been praised as a valuable example, and because it was derived from empirical data has great potential for explaining coaching practice (Lyle, 2002). This developing area of research has offered an important insight into elite coaching practice and demonstrates that the coaches themselves are a rich source of information worthy of academic study (e.g., Côté, et al., 1995; Jones, Armour, & Potrac, 2003; Potrac, Jones & Armour, 2002).

In this regard, Franks (2002) has called for more evidence-based practice research to inform coaching practice. Similar examples of evidence-based practice approaches may be found in the applied sports psychology literature, where typically elite athletes' perceptions and experiences have been assessed using a qualitative interview methodology (e.g., Andersen, Miles, Robinson, Mahoney, 2004; Gould, Dieffenbach, & Moffett, 2002). Such research is essential to develop professional knowledge and practice. Importantly for sport psychology practitioners, Ives et al. (2002) have suggested that “video may help bridge the gap between the services offered by a sport psychologist and the skills and training that coaches offer” (p. 243). Moreover, given the prevalence of the use of video-based feedback in top-level soccer, it is likely that sport psychologists may be called upon for advice regarding the delivery of video-based performance analysis sessions. Therefore, the purpose of this study was to build a theoretical framework to understand the delivery of video-based performance analysis by English youth soccer coaches, building towards a grounded theory of applied practice.

METHOD

Participants

Participants were 14 English youth soccer coaches (M age = 46.6 years, SD = 7.3; 11 male and 3 female). Participants are numbered C1 to C14 throughout. Four participants

coached female England national teams and 10 participants coached male England national teams. At the time of interview the sample was representative of the population of England national team youth soccer coaches (i.e., 14 of the 17 England national youth soccer coaches were interviewed). Participants were selected using purposive theoretical sampling to ensure that data gathering was driven by concepts derived from the evolving theory and making comparisons to ensure that the concepts and theory generated fit the phenomena (Strauss & Corbin, 1998). No new concepts, subcategories and categories were unearthed after Interview 12. Therefore, the data collection was ended at this point of theoretical saturation (Strauss & Corbin, 1998). Initial access to the participants was gained by the first author who had worked as performance analyst with each of the coaches. This also allowed for a greater “sensitivity of the research team to the theoretical relevance of the emerging concepts” (Strauss & Corbin, 1998, p. 205). In addition, a greater degree of access in the interviews was achieved because of a previous rapport (Athens, 1984). That is, the participant coaches were willing to talk about their experiences openly and honestly to assist in the development of knowledge regarding the phenomena. Although prior knowledge of the participant coaches may be considered a potential point of bias, access to elite populations are often dependent on the researcher undertaking a secondary support role or via an institutional evaluation program (e.g., Gould, Dieffenbach, & Moffett, 2002; Greenleaf, Gould & Dieffenbach, 2001).

An expert-systems ideographic approach similar to that of Côté et al. (1995) underpinned the present study (the expertise paradigm). In this respect, the elite nature of the coaches interviewed ensured information-rich cases that would yield insightful data relevant to understanding the phenomena under investigation (Creswell, 2009), which would be useful in the education of coaching practitioners (Voight, 2007). Importantly, all participants had a minimum of three years’ practical experience of using video-based analysis in their coaching practice. The sample also exceeded the 10 years general coaching experience criteria adopted by Côté et al. (1995) in their examination of expert coaches. Participants had a mean of 22 years ($SD = 10$) coaching experience, and 13.6 years ($SD = 7.5$) of full-time professional coaching experience. All participants held the top Union of European Football Associations (UEFA) Advanced License, and a further 8 participants additionally held the UEFA Professional License (award for coaches to work in the senior professional game in Europe). Following institutional ethics approval, participants were given information relating to the nature of the research and completed a written consent form.

Design and Procedure

The methodology selected was grounded theory (Strauss & Corbin, 1998), whereby the researcher begins with an area of study and develops theory from the data. This approach was selected because grounded theories can offer insight, enhance understanding, and provide a meaningful guide to action (Strauss & Corbin, 1998). Table 1, illustrates a number of key definitions, which are discussed in the Methods section. For a more detailed overview of the grounded theory methodology employed in the present study, readers are directed to the techniques and procedures suggested by Strauss and Corbin (1998).

Data collection was conducted over a 12-month period using a combination of open-ended and semi-structured interviews, based on developing concepts of the theory to examine the coaches’ experiences and perceptions of using video-based performance analysis in their coaching practice, as suggested by Strauss and Corbin (1998). That is, the grounded theory presented was derived from interplay between induction and deduction (Strauss & Corbin, 1998). An interview guide was developed, as suggested by Strauss and Corbin (1998), from preliminary field work from the first and second authors (Groom & Cushion, 2004). The initial

Table 1
Grounded Theory Key Definitions (Strauss & Corbin, 1998)

Term	Definition
Axial Coding	The process of relating categories to their subcategories.
Categories	Concepts that stand for a phenomena.
Coding	The analytical process through which data are fractured, conceptualized, and integrated to form theory.
Concepts	The building blocks of a theory.
Diagram	Visual device that depicts the relationship among concepts.
Memos	Written records of analysis that may vary in type and form.
Open Coding	The analytic process through which concepts are identified and their properties and dimensions discovered in the data.
Process	Sequences of evolving action/interaction, changes that can be traced to changes in structural conditions.
Selective Coding	The process of integrating and refining the theory.
Subcategories	Concepts that pertain to a category, giving it further clarification and specification.
Theory	A set of well-developed concepts related through statements of relationship, which together constitute an integrated framework that can be used to explain or predict phenomena.

phase of the interview involved describing the nature of the research and exploring the coaches' background and demographics (e.g., age, role, qualifications, previous coaching positions, and time in their current post). At the start of each interview, open questions were asked to generate initial lines of enquiry (e.g., "How do you use video analysis in your practice? What kind of things do you like to show the players?"). Following this, questions were derived from previous field work (Groom & Cushion, 2004) and emerging themes in the data (e.g., "How would you use the analysis with an individual player? Why do you use the analysis with the players like that?"). Again, how and why questions were used as a probe, along with a request for specific examples from the coach's practice to illustrate the points made (e.g., "Can you think of any examples in your practice where using the analysis has been successful? Can you think of any examples in your practice where using the analysis has been unsuccessful"). As issues arose in the interview situation, these were explored until the participant did not have any more to say and repeated previously divulged data.

With regard to the quality of the data collected, all interviews were conducted by the principal author, who had received formal doctoral research methods training. The research process was supervised by the second author who was an experienced qualitative researcher. The interviews were conducted in a quiet private location at the participant's place of work, all interviews were audio recorded and transcribed verbatim, ranging in duration from 30 to 70 min. Additionally, the first and second authors listened to the recordings of all interviews and the second author provided feedback regarding interview technique to control for potential interviewer bias.

Data Analysis

Data were analyzed manually using a six-stage process: (a) As each interview was conducted it was immediately transcribed verbatim. Each transcript was given back to coaches to ensure that the transcribed data was a true representation and articulation of their ideas and experiences and that the coaches felt that they had the opportunity to "tell their story." (b) Via open coding, concepts were identified and their properties and dimensions discovered. Data were

broken down into significant pieces of information and initially analyzed independently by the first and third authors, to control for potential bias. For example, raw data extracts which related to social environment were highlighted within the transcripts, labeled, and organized into related features of the concept, if they shared common characteristics and key words (i.e., role, interaction and power). If the concepts could not be grouped, as it represented a fundamentally different concept, a new concept was created. (c) Via axial coding, the data were reassembled into categories and their related subcategories, and concepts were redefined to form more precise explanations of the phenomenon (collectively by the first and third authors). This coding process was used to identify linkages between categories, dimensions, conditions, actions/interactions, and consequences associated with the phenomenon (Strauss & Corbin, 1998). The axial coding process involved asking conceptual questions of the data and its relationship to other data. For example, relating a category to its subcategory through statements denoting how they relate to each other (Strauss & Corbin, 1998). (d) Via selective coding, three categories (contextual factors, delivery approach, and targeted outcome) were highlighted as providing analytic power. At this point the memos regarding the links between concepts, subcategories and categories provided a framework to depict the coaches' experiences regarding the delivery of video-based performance analysis. This was used to integrate and refine categories to form a larger theoretical scheme (collectively by the research team). No disagreements were present in the conversations of the analysis of the concepts, subcategories and categories. (e) A literature review was delayed until the scheme of concepts, subcategories, and categories had been developed (Holt & Dunn, 2004; Strauss & Corbin, 1998). Once the data had been analyzed the literature review was conducted to contextualize the findings within the existing coaching literature. (f) A member-checking technique was used, which involved two of the participants being re-contacted at various points throughout the study to seek their views on categories from the data analysis in a process similar to Holt and Dunn (2004). Specifically, the coaches were asked in face-to-face meetings to run through real-world examples of how interpretations from the data fit into their coaching practice. The data collection and analysis of data ended once no new categories emerged from the data, that is, theoretical saturation was reached (Strauss & Corbin, 1998). At this point, both coaches reported that they could not think of any scenarios in which the grounded theory could not be used to understand their applied practice.¹ Finally, although difficult to depict otherwise, in a clear and transparent manner, the theory-building process was not linear, and relied upon the constant comparison and analysis of data and continued theoretical sampling based on emerging themes (i.e., an iterative process).

RESULTS AND DISCUSSION

Results of the grounded theory are presented with an emphasis on richly contextualized verbatim text, demonstrating not only concepts but relationships between concepts. In addition the findings from the review of literature are incorporated into the results and discussion. The results revealed three categories: contextual factors (Figure 1), delivery approach (Figure 2), and targeted outcome (Figure 3). Each of these categories are described and explained using subcategories and associated concepts. Figure 4, depicts an integration of all emergent concepts into a grounded theory.

Contextual Factors

The contextual factors framed the delivery of video-based analysis. Specifically, the contextual factors consisted of six subcategories: social environment, coaching and delivery

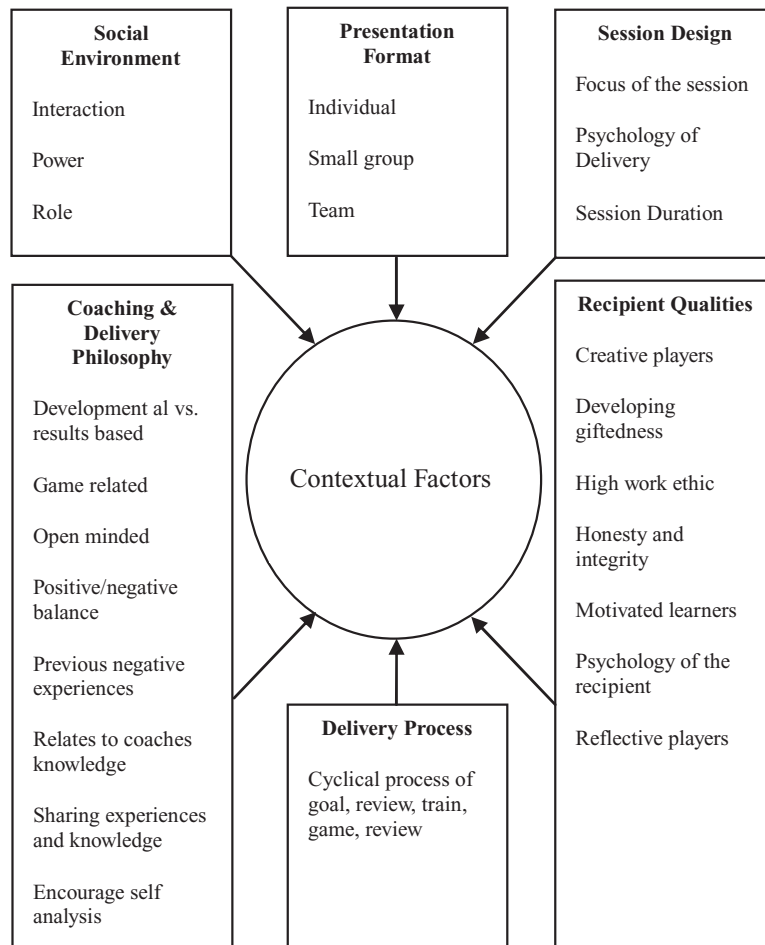


Figure 1. Overview of concepts, subcategories, and categories pertaining to contextual factors, which framed the use of video-based performance analysis by England youth soccer coaches.

philosophy, recipient qualities, presentation format, session design, and delivery process. Factors relating to role, power and interaction were evident within the social environment of the delivery of video-based feedback. This can be seen depicted in Figure 4, as the context within which the performance analysis was applied. The following excerpt highlights an example of interaction:

I use the footage as the way in, the tool in, to technical, emotional social and physical work. I'd say, 'look, this is why we're doing this, this week, this is why we're doing this, next week,' and so on and over a program of time. I also use it as a forum for communication with the player because there are very few occasions to interact in a meaningful way with the player with the game in front of them (C12).

Also the historical use of video-based feedback to reinforce coercive or punishment power was highlighted:

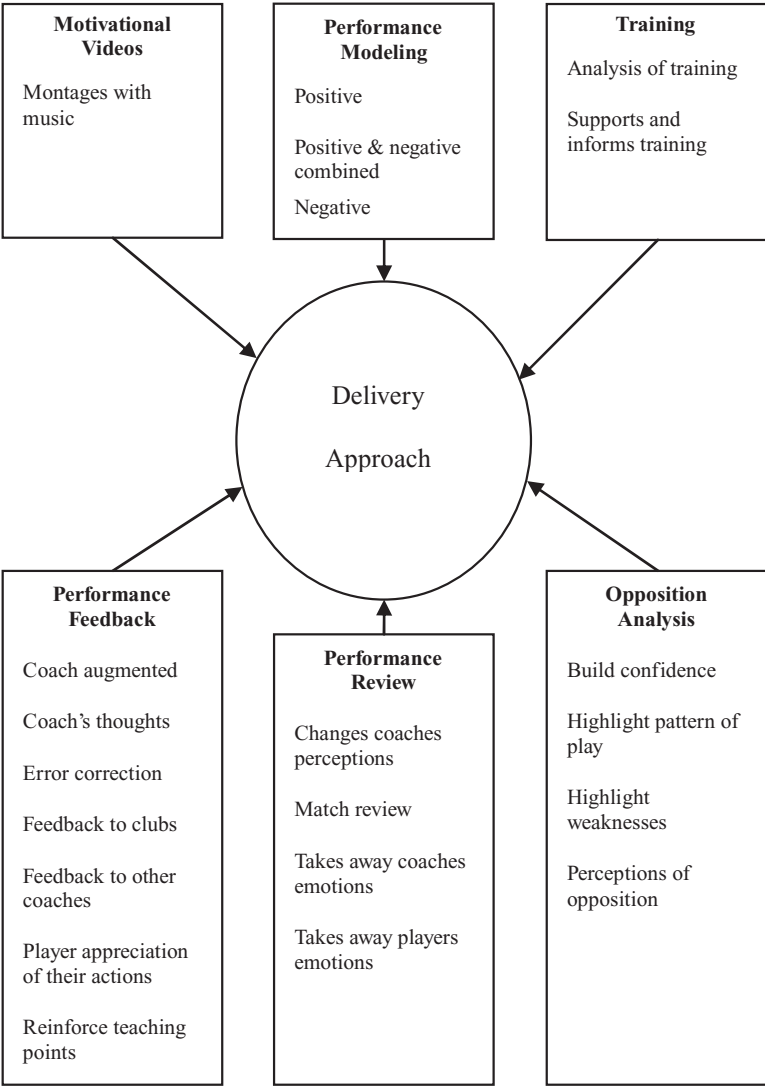


Figure 2. Overview of concepts, subcategories, and categories pertaining to the delivery approach of video-based performance analysis used by England youth soccer coaches.

I was at United [pseudonym] with people like Player A, and Player B, and Player C. If we got beat on a Saturday they'd be saying to me, 'bloody hell Coach A and Coach B will have us in there for an hour and a half with the bloody video on', and we did in the old days. In the old days it would be more as a punishment rather than doing something constructive (C11).

Implicitly within the social environment roles such as coach and player are also acted out. This is supported by the research which demonstrated that within professional and international soccer, such organizations often impose strict institutional demands where players learn to conform to the coaches requests and obey orders (Cushion & Jones, 2006; Holt & Dunn,

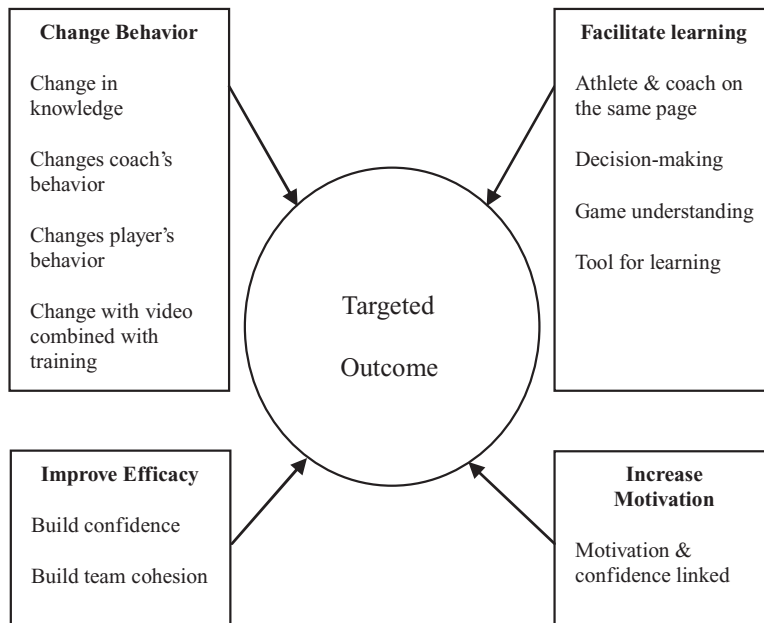


Figure 3. Overview of concepts, subcategories, and categories pertaining to the targeted outcome of video-based performance analysis by England youth soccer coaches.

2004). Indeed, Cassidy, Jones and Potrac (2009) have suggested that coaches need to be mindful of the power-dominated nature of the coach-athlete relationship, if coaches are to be successful in obtaining the trust, respect and confidence of the athletes and ultimately develop a positive learning environment. C9 highlighted the importance of the players understanding their role: "they went through each other's individual clips together because it's the same role, same system. They need to have a common understanding together."

Coaching and delivery philosophy was identified as being an important representation of what the coach was trying to achieve and how he or she would go about achieving the goal. It is important to note that the coaching and delivery philosophy was often shaped by how the coach viewed his or her role, as being about winning games or developing players. As C12 pointed out, "it depends if you are developmental or purely winning-orientated in regard to how you go about the delivery." The coaches often strived to keep the video-based performance analysis game-related, as C8 suggested "everything I do is related to the game." Also, C1 considered that "it's important to have an open mind" within your philosophy. The coaches also highlighted that a great deal of care needed to be given to the construction of the video. C3 highlighted the need to "be aware of the positive and negative clips, and always end with positive images." The following excerpt highlights how important previous negative experiences of receiving video-based performance analysis have been in shaping the philosophy. In this example, C8 highlights how they had previously experienced the delivery of video-based performance analysis as an English top flight player:

When I was a player all I was ever shown was how crap I was, and I know how I felt afterwards, and I know how I felt coming to the game on Saturday . . . So I'm very careful of what I want the players to see, and I'll always leave them on a high. I am really very cautious. I didn't enjoy

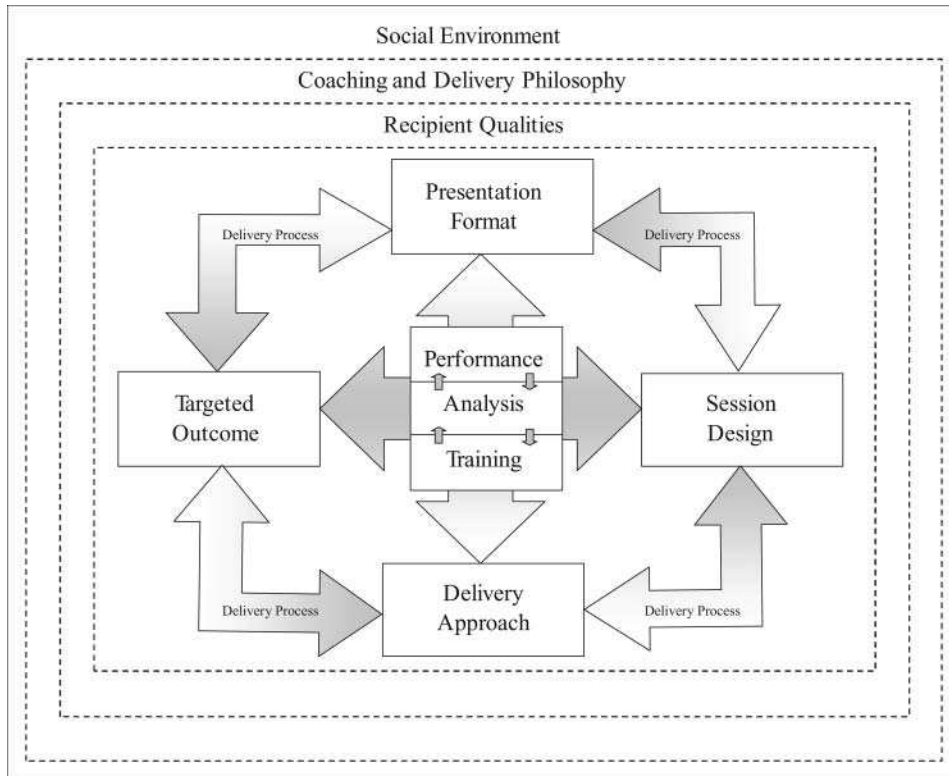


Figure 4. A grounded theory of the delivery of video-based performance analysis by England youth soccer coaches.

it myself. I didn't enjoy being singled out in front of 18 people, because you can see I've made a mistake, it's obvious I've made a mistake, and the coaches turned it into, 'that's your fault'. What I wanted him to do was help me correct the mistake; 'what did I do wrong?' (C8).

Therefore, previous negative experiences of receiving video-based performance analysis as an athlete evoked negative emotions for this participant coach. These negative emotions were especially strong when the feedback was received in front of a peer audience. Importantly, the potential negative impact upon the athlete of the misuse of the video-based performance analysis is highlighted. Therefore, the potential effects of the medium of video to negatively impact the athlete and the athlete's learning should be considered. Although still in its infancy, the theorizing regarding the mechanism by which video impacts human cognition has been described by Dowrick (1991) as "self-confrontational" in nature. That is, that viewing past behaviors can disrupt the natural evolutionary benefits associated with the degradation of memory (positive glow), which usually serves to soften the negative impact of past events (Dowrick, 1991). Again, the power-dominated nature of the coach-athlete relationship mirrors the finding of Cushion and Jones (2006) in professional youth soccer. Moreover, Cassidy et al. suggest that coaches should give careful consideration and reflection to the way in which they present themselves and interact with athletes in their desire to hold sway and influence. In

doing so, Cassidy et al. suggests that a more equitable power-sharing relationship between the coach and athlete is more conducive to a successful positive learning environment.

For the participant coaches, coaching and delivery philosophy was highlighted to be constructed over time and with an accumulation of experience. As C1 suggests “it develops as you become more knowledgeable.” Also a desire to share this accumulation of coaching knowledge was evident. C9 identified the importance of “sharing my knowledge and experience with the players.” Furthermore, C1 suggested that it was necessary to “encourage players to ‘take responsibility’ and use self-analysis through the video.” In this regard C3 highlighted the use of an athlete-centered coaching and delivery philosophy: “I’ve kind of tried to change my philosophy to make it more player-centered, and allow them, if you like, to learn through their mistakes and take ownership of the process.”

The delivery process was conceptualized as the pedagogical reasoning of the coaches in the planning and implementation of the video-based performance analysis. The coaches often noted that the recipient’s qualities were just as important. The coaches suggested that effective delivery must have an understanding of the players you are working with. C6 highlighted that “you want them to be creative.” Although C2 highlighted that “they have to be gifted.” Furthermore, C6 demanded that the players have “a good work ethic, with honesty and integrity in their training, and be willing to learn.” Interestingly, similar findings were presented by Holt and Dunn (2004) regarding the psychological competencies associated with soccer success during adolescence. Moreover, in the present study understanding the psychology of the recipient was identified as being important:

It depends very much on the human being you’re dealing with, some don’t respond, whatever presentation format you use. Whether it’s your video analysis presentation of training or the match. Keep it short. Player A would sit there for four hours, no problem at all. Again, Player B was a student of the game. Player C, no, I had to keep Player C’s down to a minute, a minute and a half (C14).

Therefore, this study demonstrates the complex relationship between player, coach and context, mirroring findings from previous studies with elite soccer coaches (Cushion & Jones, 2006; Jones, Armour & Potrac, 2003; Potrac, et al., 2002). In that, the delivery of performance analysis will be dependent on coaching philosophy, knowing the athletes as individuals, knowing what they like doing and what they do not, while creating an environment where athletes can be open about not understanding issues without the fear of being judged. Also within the contextual factors, the coaches identified the importance of having reflective players. As C4 pointed out “you want them to take it away and reflect on it later.” Finally, the following example demonstrates the interconnected nature of the delivery process, as illustrated in Figure 4:

It [performance analysis] creates a critical awareness of what they actually do and don’t do, that therefore triggers a responsibility. So if I know what I’m doing well or I’m not doing well I have a responsibility to be better. So, effective use of the video with a player would trigger a commitment process to improvement. So therefore then, it’s linked to training and then you’re into your cycle again of goal, review, train, game, review, train . . . That commitment to that process will help the individuals themselves take ownership of that process. It’s in a non-critical framework, so it’s not just reviewing when we lose, it’s not reviewing just when they play badly, it’s a continual review process (C12).

The presentation format consisted of a number of alternatives from which the coaches could present the video-based performance analysis to the players. These consisted of individual sessions, small group sessions, and team sessions. For example, C10 suggested “personally, I tend to sit down with the player, have a one-to-one conversation really, and find out his thoughts on the game, give him my feedback and what I feel his performance was, and then go through the analysis with him.” While in a small group session C9 highlights that “what we do is get them to assess their own performances . . . We give them our opinion of the game and just set them tasks, split them up into groups, it might be defenders—list our defensive strengths and weaknesses” (C9). Finally in a team presentation format C7 highlights that “I see it [video based performance analysis] more as a preparation tool for the team play.”

Session design relates to the way in which the coaches planned and implemented the video-based performance analysis. Specifically, this related to the focus of the session (i.e., what the session was about), and the coaches’ aims regarding the psychology of how they would deliver this information. As C11 acknowledged “the psychology of what you are doing is all interlinked.” Particular attention was paid by C8 who was conscious of not over-loading the players with too much information, “it would be 15 min, 20 min top whack.” The following example from the interviews further demonstrates the relationship between having a focus to the session and how that relates to the recipient’s qualities of concentration and attention: “When you’re dealing with first-team players like at Albion [pseudonym] you have to edit it [the video] to keep their attention span focused on what they’re doing” (C2). The complex social environment and interactions between the psychology of delivery, the recipient’s qualities, the session design, and presentation format, was alluded to by the coaches:

There was one specific player at United that I was always having a little bit of a run in with him about his work ethic. Coach A said to me, ‘take him away do a one-on-one with him on the video’, and that player responded very, very well one-on-one, and he didn’t respond well to the group atmosphere. . . . It’s about dealing one-on-one with individual personalities and also the psychology of it, when to give them the good stuff, and when to give them the not-so-good stuff (C11).

Therefore, findings of the present study build upon previous pedagogically based coaching research. For example, Potrac et al. (2002), using a case study approach, reported that an elite soccer coach was conscious of coaching points and ensuring that they directly related to physical practice that could hold the players’ concentration. Similarly, Jones et al. (2003) highlighted the danger of giving the player “too much” information and the associated negative effects of such coaching practice upon the athlete’s capacities.

Delivery Approach

Within delivery approach six subcategories were highlighted: motivational videos, opposition analysis, performance feedback, performance modeling, performance review, and training. In regard to the use of motivational videos designed by using montages of good play edited with emotive music, C5 highlighted that “when I speak to the players, most of them like the motivational tapes, they choose the music and it’s them in action.”

The participant coaches also used the video-based performance analysis to analyze the upcoming opponents. C1 highlights that “we would show them the tactical patterns that the other team tried to use to exploit space, or create space.” Furthermore, C2 used “edited versions of other teams weaknesses” to show the players before they played against the team. Interestingly, the coaches highlighted that they were considerate of the way in which they present the opposition to their own players. The coaches were particularly concerned with

giving a false impression of the team through the editing of “good” and “bad” examples of play. The coaches were mindful of creating the impression that the opposition teams were better than they were by showing a large number of good passages of play or worse than they were by showing only the opposition’s weaknesses. C9 suggests that in the player’s mind “perception of the opposition, that is the key thing.” However, C2 noted that “it gives them [the players] a boost to see there’s a weakness in the opposition.”

The coaches also highlighted the use of video-based performance analysis to provide performance feedback. Often the coaches would talk over the video-based performance analysis sessions and provide augmented feedback to the players. C1 highlighted how they had used video editing technology to “add commentary after the game on the players’ DVD,” providing specific individualized feedback. C9 pointed out that “I use it [video-based performance analysis] more so the players gain an appreciation of what they are actually doing, which is often not what they think they’re doing.” Therefore, in this example video was used as a tool for self-reflection.

Furthermore, C10 highlighted how they had found that video-based performance analysis often “reinforces your thoughts on performance.” C3 further noted that the video was useful to “highlight the errors that players are making.” Additionally, C10 highlights the use of video-based performance analysis to “feedback information to the club team, which the player had come from.” Similarly, C12 highlighted how they had used video-based performance analysis to “feed information back to other coaches.” Finally, C13 highlighted how they had used the video to “reinforce teaching points with the players.”

The coaches also highlighted the use of video in providing a visual model of performance to the players. With regard to the positive modeling of good performance, C7 points out that “I try to show them positive images.” While C11 highlights the use of negative modeling by showing the players’ examples of bad performance and suggesting “look, [at the video images] that’s why we need to do the work.” Additionally, C2 highlights the way in which both positive and negative modeling can be combined, “I show one situation of an unsuccessful performance, and then six or seven of them doing great.” In the interviews the coaches often noted that they were cautious of showing too many negative examples. As C4 highlights “I tend to shy away from showing them their mistakes. I’d rather get clips of when they were doing it well and emphasize this is the way to do it properly.” Therefore, video-based performance analysis was used to improve a number of social psychological aspects of athletes’ development. The video was specifically used to create a form of social learning (Bandura, 1997) to model target behaviors via mastery experiences (positive self-modeling), vicarious modeling (expert modeling), and verbal persuasion (coach feedback).

The coaches also noted the importance of trust in a coach-athlete relationship. The following demonstrates this point:

If you’re lucky you can get the trust with the players and a good relationship with the players, they can actually say, ‘gaffer, they’re getting in down the left every time’, and you can say, ‘well no, he’s not doing his job in front of him, so that’s why’, and they [the player in question] pull you to task. ‘Let’s watch the video then.’ Then the video gets watched, generally they’re wrong. I don’t mean that from an autocratic point of view, I just mean they’re not as experienced in analyzing the game as we [coaches] are, but there are times when they’re right and you have to then take it on board (C2).

C4 further noted that “learning something new takes quite a lot of support and trust from the coach, and understanding of what’s happening when people have something new to take

on-board.” Such findings are mirrored more broadly within evaluative coach-athlete relationship research (e.g., Greenleaf et al., 2001).

Within the delivery approach, a subcategory of training was identified as an important factor. C6 suggested that “we video training, and I go back and edit it to show to the players,” thus demonstrating that the analysis of performance is not restricted to competitive performance alone but can be extended to training situations. Moreover, C1 highlights the use of the video-based performance analysis to inform training sessions:

I think it's good to analyze goals you've conceded. I think that as part of doing that you must then work on what you need to do to prevent that happening again. On the pitch, and in the classroom if you want to, through discussions and on the tactics boards, and have images ready if you're going to do that, that show it being done correctly to support the work you do on the pitch (C1).

C2 demonstrates that an important element for the coaches was the relationship between the video analysis work and the practical “on pitch” training sessions “we bring them into the video room, they might watch something that we're going to work on and then they've got a visual already and then we go straight into training.”

Finally, performance review was identified as a subcategory within delivery approach, which would often consist of viewing a video of the entire game. This match review was highlighted as being important by C12 who preferred to give specific individual feedback to the players “only after having seen the video of the game.” Interestingly, C4 highlighted the use of the video for coaches in “analyzing the game when the emotions have gone.” Also, C1 highlighted a similar benefit for the players when they are able to “see themselves removed from the emotions.” Therefore, the delayed reviewing of the video appears to have a psychologically useful effect upon both coach and player.

Targeted Outcome

Within targeted outcome, four subcategories were identified: change behavior, facilitate learning, improve efficacy, and increase motivation. These may be defined as the “end goal” of the coaches' interventions. Within the subcategory change behavior, the coaches highlighted the concept that the video-based performance feedback would cause a change in knowledge. C6 suggest that “it could expand their understanding” based on watching the feedback. The coaches also highlighted that changes in behavior may not always occur in isolation, particularly with technical behavior changes. C14 further highlights that “it took 6–9 months to change his ways in combination with the work on the pitch, the video was fantastic for him.” The video was identified as being important to change the behaviors of the player, with C1 pointing out that “I think that it [video-based performance analysis] made a big difference to her game.” In relation to player behavior change, the coaches suggested that the video had been useful for their own continuing professional development to mirror (CPD). C7 highlights this was particularly useful when coaches “get themselves videoed when coaching sessions.” Such findings are in line with the research of Gilbert and Trudel (2001), which highlights the importance of reflective practice in developing coaching practice of youth sports coaches.

The subcategory facilitate learning, highlighted the use of video-based performance analysis to develop a mutual understanding between the coach and player. That is, getting the coach and athlete on the same page. C9 noted the importance of “a clear common understanding so that it's [video-based performance analysis] not misinterpreted.” C1 further highlighted that the video can be useful “to stimulate dialogue between coach and player.” In terms of

decision-making, C7 highlighted an example of the use of video in analyzing “decisions regarding when to pass the ball and when to take players on.” Similarly, this was used to develop game understanding, as C5 points out that “It [video-based performance analysis] reinforces their understanding. There’s nothing clearer than a player looking at his own performance.” Finally, video was highlighted as an important tool for learning, C6 contends that “it [video-based performance analysis] is the most significant of all teaching tools.”

Within the subcategory of improve efficacy, C13 highlighted that, “you can talk about confidence undoubtedly. It [video-based performance analysis] can build players up and help them with confidence, I think, by putting instant pictures in their head” (C13). Furthermore, when working with goalkeepers C10 highlighted that

Sometimes in game situations, goalkeepers get quite down on themselves. They might have played well for 89 min, then the one thing that might not be good is what they remember. But the video evidence really enforces all the good things that they have done. . . So I think by showing good examples of how they have played, seeing themselves performing well, performing the tasks well, is massive in re-building their confidence (C10).

As well as the individual benefits of using the video to increase individual players’ efficacy, the coaches suggest that the video could also be used to build team cohesion. C7 highlights how they had achieved this in the past:

We made a real effort to use the video as much as we could. And the players responded. They appreciated it. I remember one night we just sat up clipping the video and we put some music to it, really crude, but it really seemed to help with the mood and the atmosphere of the players. It was like they’d appreciated what had been done. But at the same time they were watching themselves do good things. So I think, it helps with the team building and team bonding, the sort of feel good factor within the group (C7).

Within the subcategory of increase motivation, the coaches used motivational videos or montages at key points when working with squads. For example, before important matches or at the end of a team meeting to remind the player what he or she had achieved. C1 highlights how the coaches had described confidence and motivation to be linked together, “there’s the use of video from a motivational point of view. You show all the best clips of this, this, this and this, to provide confidence and a motivational aspect leading up to a game” (C1).

Toward a Grounded Theory

The main objective of this study was to build a theoretical framework to understand the delivery of video-based performance analysis by English youth soccer coaches, developing a grounded theory of applied practice. Therefore, results were placed into an organizational framework with the literature review to see how and where the theory fits (Strauss & Corbin, 1998). Figure 4 demonstrates a grounded theory of the interactions and relationships between emergent themes in the interview data. In this regard, the work by Côté et al. (1995) and Lyle’s subsequent critique of the mental model was useful to situate the data within the process of coaching. Within Figure 4, performance, analysis and training are central elements of the phenomena. The delivery process starts from the three central elements within the grounded theory (i.e., performance, analysis and training). The shaded arrows represent the cyclical nature of the delivery process. At a point where the coach decides that a coaching intervention is required, a number of options are available to initialize the process. That is, based upon the analysis of a performance, a training session or a combination of both the coach may decide

to plan the intervention starting with presentation format, session design, delivery approach or targeted outcome. For example, if the coach has identified that a change in behavior is the initial focus, the next decision may be to decide if this is specific to the whole team or an individual in the team. As an example, based on the decision that it is to be delivered to an individual, the session design can be planned (i.e., focus, duration and psychology of delivery). The next decision for the coach to make may be which delivery approach best suits the desired behavior change? For example, the coach may select to deliver a session based around performance modeling, in which the player may view a number of positive and negative examples of his or her performance. Here, the work of Bandura (1997) was particularly useful regarding observational learning in developing the relationships between the recipient's qualities, delivery approach, and targeted outcome. Although this is depicted in a simplistic cyclical fashion, inherent in the delivery of video-based performance analysis are the contextual factors, which frame the delivery (i.e., social environment, coaching and delivery philosophy, recipient qualities and the delivery process). While we use the term contextual factors similar to Côté et al. (1995) to represent personal variables of the coach and athlete, our conceptualization of these factors diagrammatically is more similar to Gilbert and Trudel's (2001) representation of a "role frame." That is, rather than being a process feature of the grounded theory the contextual factors frame the phenomena. In addition, to the personal variables of the coach and athlete we also recognize the social environment. This understanding was developed through the integration of contemporary coaching practice research, which recognizes coaching as a complex social process (e.g., Cushion & Jones, 2006; Jones, Armour & Potrac, 2002; Jones, Armour & Potrac, 2003; Potrac et al., 2002). Therefore, in the delivery of the video-based performance analysis coaches should be aware of such social environmental factors and how they may affect the process (i.e., each other's role and the acting of that role, how the interaction between the coach and player is negotiated, and the use of power regarding the influence attempt by the coach and compliance of the athlete). In addition, the coaching and delivery philosophy displayed by the coach may be seen as an influential factor, which may influence compliance or resistance from the player/s. Additionally, the contribution, or lack of, from the player/s themselves will impact the delivery of video based performance analysis and how the process is negotiated by the coach.

CONCLUSION

This study presents a grounded theoretical framework to understand the delivery of video-based performance analysis by England national team youth soccer coaches. These findings build upon features of a coaching process model suggested by Lyle (2002), adding rich empirical data describing the interlinked processes of the delivery of video-based performance analysis, which can be understood in a cyclical process manner in practice. Moreover, the present study has extended the simplistic and unproblematic nature of previous literature (Carling et al., 2005; Hughes & Franks, 2004) by unearthing some of the complexities of dynamic psychological and social activities inherent within the delivery of video-based performance analysis. Furthermore, via the analysis of empirical data (i.e. personal experiences, emotions, and pedagogical reasoning of the participant coaches), it is argued that this is a more realistic representation and offers greater potential for coach education than previous research (Lyle, 2002; Voight, 2007). It is hoped that this more realistic presentation of the delivery of video-based performance analysis highlights some of the complexity that coaching practitioners should consider. Specifically, as the use of technology increases in sport both practitioners and researchers should be aware that even the most intuitively appealing technology requires

thoughtful and reflective application to understand its effects within human interactions (Ives et al., 2002). Finally, as Strauss and Corbin (1998, p 5) highlight “most researchers are secure enough with the findings, that they regard their theories, even after publication, as qualifiable, modifiable, and open in part to negation.” Our next step is to examine the “in situ” delivery of video-based performance analysis to test the variation in the theory and whether it works to explain other contexts and other participants experiencing similar phenomena (Holt & Dunn, 2004; Strauss & Corbin, 1998).

FOOTNOTE

1. The member-checking technique with the two participant coaches was not audio recorded nor were they subjected to the analytic coding procedures. Instead, these participants reflected on the structure and design of the emerging theory.

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Appendix 2

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Qualitative Research in Sport, Exercise and Health

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/rqrs21>

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Version of record first published: 12 Jul 2012

To cite this article: Ryan Groom, Christopher J. Cushion & Lee J. Nelson (2012): Analysing coach-athlete 'talk in interaction' within the delivery of video-based performance feedback in elite youth soccer, *Qualitative Research in Sport, Exercise and Health*, DOI:10.1080/2159676X.2012.693525

To link to this article: <http://dx.doi.org/10.1080/2159676X.2012.693525>



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EMPIRICAL ARTICLE

Analysing coach–athlete ‘talk in interaction’ within the delivery of video-based performance feedback in elite youth soccer

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(Received 25 March 2011; final version received 5 March 2012)

The purpose of this paper was to explore coach–athlete ‘talk in action’ during performance analysis feedback sessions. Our goal was to examine how interactional tasks are accomplished through the use of talk. Coach–athlete interactions were recorded within six home match video-based feedback sessions, over the course of a 10-month English Premier League Academy season. Interactions within the sessions were recorded and transcribed using a conversation analysis approach. Analysis of the interactions revealed that the coach attempted to exercise control over the sequential organisation of the sessions, via asymmetrical turn-taking allocations, an unequal opportunity to talk, control over the topic of discussion within the interactions and the use of questioning to select speakers to take turns to talk. The findings are principally theorised through the work of Bertram H. Raven in an attempt to explain the social organisation of power within the institutional context. The conclusion emphasises the importance of coaches becoming more aware of the likely impact of such interactional practices upon athlete learning.

Keywords: performance analysis; sports coaching; conversation analysis; sports pedagogy; social power; soccer

Introduction

Increasingly, coaching scholars have illustrated the value of a socio-pedagogical analysis of practice to better understand the ‘messy realities’ of sports coaching (e.g. Potrac *et al.* 2002, Jones *et al.* 2003, Cushion and Jones 2006, Purdy *et al.* 2008). However, within the performance analysis literature, little attention has been paid to how such socio-pedagogical factors impact upon coaching practice (Stratton *et al.* 2004). Alternatively, idealistic and unproblematic representations for the use of performance analysis within the coaching process (i.e. Franks *et al.* 1983, Robertson 1999) have continued to dominate the literature (e.g. Hughes and Franks 1997, 2004, 2008). Recognising this difference would seem important because, ‘the current set of models result in a presentation of the coaching process that is often reduced in complexity and scale, and the essential social-cultural elements of the process are often underplayed’ (Cushion *et al.* 2006, p. 83).

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Indeed, within the performance analysis literature to date, more attention has been paid to performance analysis as a method to record sports performance data in an ‘accurate’ and ‘reliable’ manner (Hughes and Franks 1997, 2004, 2008). Consequently, it has been suggested that this situation has led to a disconnection between the academic study of performance analysis and the realities of the application of performance analysis in practice by coaches in the field (Franks 2002, Groom *et al.* 2011). This is particularly surprising given the increased use of video-based performance analysis technology within elite sporting environments (Carling *et al.* 2005, James 2006), and that performance analysis has been firmly located within the coaching process (e.g. Carling *et al.* 2005, Hughes 2008, Hughes and Franks 2008).

However, recent work taken from the perspective of both the coach and athlete has highlighted some of the complexities inherent within the delivery of video-based performance analysis (Groom *et al.* 2011, Nelson *et al.* in press). For example, effects on athlete learning have been found to relate to different preferences for receiving performance analysis feedback, thus demonstrating the importance of understanding athletes as individuals (Groom *et al.* 2011, Nelson *et al.* in press). In addition, the effectiveness of coach–athlete interactions has been highlighted to be effected by a number of complex interacting social factors such as coaching knowledge, power, respect and the suitability of the learning environment (Groom *et al.* 2011, Nelson *et al.* in press).

Whilst these early investigations (e.g. Groom *et al.* 2011, Nelson *et al.* in press) have provided some rich initial insights about coaches’ video-based practices and an athlete’s perceptions and experiences of receiving video-based coaching, respectively, the data from both studies relied upon retrospective interview data. Consequently, many ‘blank spaces’ remain in relation to our understanding the pedagogical use of video-based performance analysis within sports coaching (Stratton *et al.* 2004, Groom *et al.* 2011, Nelson *et al.* in press). Therefore, additional investigation is required ‘in situ’, if we are to further understand the applied use of video-based performance analysis and the interactions that occur between coach and athlete during these sessions. Indeed, Jones *et al.* (2010) have highlighted the need for the use of innovative and diverse methodologies that capture the nuances, initiation and reaction sequences within coaching’s temporal process, as traditional research methods often miss these important features, on which much of the reality of coaching actually rests.

Therefore, the aim of this paper is to provide a detailed examination of the pedagogical interactions that occurred between an elite-level youth football coach and his players during the team’s video-based performance analysis coaching sessions. In this respect, this paper principally focuses on exploring coach–athlete ‘talking in action’ by drawing upon analytical concepts from conversation analysis (Sack *et al.* 1974, Schegloff 2007, Heritage and Clayman 2010). Indeed, within the social science literature, a large body of work exists which highlights the value of presenting a detailed analysis of talk in action, within such settings as calls to emergency services, doctor–patient interactions and courtroom trials (for a review see Heritage and Clayman 2010). Importantly, using such an approach has enabled researchers to be in more direct touch with the very phenomena under investigation (Peräkylä and Ruusuvuori 2011).

This paper therefore attempts to extend existing understanding in relation to how practitioners use video-based technologies along with verbal communication in

an attempt to coach athletes. The goal here is to examine how interactional tasks are accomplished through the use of talk (Halkowski 1990, Heritage and Clayman 2010). Moreover, in an attempt to further our theoretical understanding of coaching and provide more than a description of 'what happened', a theoretical framework is suggested to 'make sense' of the interactions between the coach and athletes (Jones 2009). Based upon the findings of previous research highlighting the value of a 'social power' analysis of coach behaviour (e.g. Jones *et al.* 2002, 2004, Potrac *et al.* 2002, 2007), the work of Raven (1992, 1993, 2001) is used to interpret the findings of the present study. Raven's work was selected to compliment the analytical concepts of CA, at the micro level of social interaction in coaching.

Theoretical framework

'Social power can be conceived as the resources one person has available so that he or she can influence another person to do what that person would not have done otherwise' (Raven *et al.* 1998, p. 307). French and Raven's (1959) classic social power typology has been characterised as the most frequently utilised model of dyadic power in the social psychological and industrial/organisational literature (Podsakoff and Schriesheim 1985, Raven *et al.* 1998). As such, it has been described as the most comprehensive and insightful theory in social influence research (House 1993), and has been used in a number of social settings such as family relations, education, health and medicine (Koslowsky and Schwarzwald 2001).

However, French and Raven's (1959) original typology has been subject to methodological and substantive concerns regarding the single measurement of each power base (e.g. Podsakoff and Schriesheim 1985). In addition, it is recognised that a number of sources of power are evident in a constellation (e.g. 'expert power' and 'informational power') with higher and lesser degrees of each basis, rather than any one single source of power (Koslowsky and Schwarzwald 2001). As such, the original unidimensional typology of social power was reconceptualised by Raven (1992, 1993, 2001) into a multidimensional power/interaction model of interpersonal influence. For example, *coercion* (e.g. 'threaten some punishment such as loss of pay', Raven 2001, p. 218) was developed to include personal coercion (i.e. threat of disapproval or dislike) and impersonal coercion (i.e. threat of punishment). In addition, *reward* (e.g. 'offer of promotion or salary increase', Raven 2001, p. 218) was developed to include impersonal reward (i.e. 'promise of monetary or non-monetary compensation', Raven 2001, p. 218) and personal reward (i.e. promise to like or approve). *Legitimacy* (e.g. 'emphasises that the supervisor has the right to prescribe such behaviour and the subordinate has an obligation to comply', Raven 2001, p. 218) was developed to include positional (i.e. 'supervisor has the right to influence a subordinate', Raven 2001, p. 220), reciprocity (i.e. 'returning of a favour or good turn', Raven 2001, p. 218), equity (i.e. 'requires that something should be done to compensate hard work or harm', Raven 2001, p. 220) and dependence (i.e. 'obligation to help those who cannot help themselves', Raven 2001, p. 220). While *expert power* (e.g. 'the supervisor knows what is best', Raven 2001, p. 218) and *reference power* (e.g. 'appeal to a sense of mutual identification, or for a desire for such identification', Raven 2001, p. 218), which were originally considered only in a positive form, were developed to include positive (i.e. the influence attempt produces the intended change) and negative (i.e. the influence attempt produces a change in the opposite direction)

dimensions (French and Raven 2001). Finally, *informational power* (e.g. ‘carefully explain to the subordinate why the changed behaviour is ultimately preferable’, Raven 2001, p. 218) was developed to include direct (i.e. direct communication – ‘you need to do this’) and indirect (i.e. suggestive communication – ‘I have heard that this works well in this situation’) dimensions (Raven 2001). Importantly, the target ‘understanding the reason’ differentiates *informational power* from *expert power* (Raven 2004).

Drawing upon Raven’s (1992, 1993, 2001) power/interaction model of interpersonal influence, Koslowsky and Schwarzwald (2001) have suggested that the tactics available to an influencing agent can be said to emanate from either personal (i.e. education, experience and popularity) or positional/organisational factors (i.e. granted to the agent by the institutional role). Additionally, it has been suggested that such power tactics can be further differentiated as ‘hard-soft’, referring to the amount of freedom that the target feels in choosing whether or not to comply. ‘Hard tactics’ (i.e. coercion, reward, legitimacy of position, equity and reciprocity) have been highlighted to be relatively unfriendly, controlling and coercive (Pierro *et al.* 2008). Alternatively, ‘soft tactics’ (i.e. expert, referent and informational power as well as legitimacy of dependence) represent influence with the target feeling freer in their decision to comply with the influencing agent (Pierro *et al.* 2008). ‘Hard’ and ‘soft tactics’ differ in the origin of the resource, with ‘hard tactics’ stemming from organisational resources, whereas ‘soft tactics’ are considered personal (Schwarzwald *et al.* 2006).

From the perspective of the influencing agent, Raven’s (1992, 1993, 2001) framework consists of: (1) The motivation to influence (e.g. a need for power, a need to demonstrate independence, a need to satisfy a role requirement, a need to enhance one’s self-esteem and self-efficacy, a desire to harm or benefit the target and a desire for status in the eyes of a third party); (2) The assessment of available power resources and cost associated with evoking each resource (e.g. coercion, reward, legitimacy, expert, reference and informational); (3) Preparing the stage for influence, via the use of impression management, to set the scene for particular power strategies (e.g. expertise through self-promotion, authorisation to establish formal legitimate power of equity and surveillance); (4) Implementing the power strategy and its aftermath, which questions whether the target, post influence, feels resentful towards the agent (e.g. what was the cost of the influence attempt?). Based upon an evaluation by the agent of the cost of the influence attempt, the agent will re-evaluate their basis of social power.

Moreover, in relation to the present study, Raven (2001, pp. 225–226) has highlighted that ‘there are concerns that an overemphasis on experimental control and quantification had lead researchers to ignore richer data that could be obtained from ongoing observations in the real world’. Indeed, more recently, Schwarzwald *et al.* (2006) have suggested that future studies should consider developing a more direct observational approach to examining social power that does not rely on self-report measurements. The reconceptualised model is of particular utility for the purposes of the present study as Raven (1992) highlights that ‘this model was developed as a guide for research, and for an analysis of on-going interactive situations’ (p. 239). We would advise those desiring a more detailed understanding to read the work of Raven (1992, 1993, 2001, 2004) and Koslowsky and Schwarzwald (2001).

Context and method

A Football Association English Premier League soccer academy¹ U18 team was selected using purposive sampling as the context for the present case study. Access to the context was negotiated by Chris Cushion, an academy coach who was working with a different age-group team within the context. This allowed for a greater degree of access, because of a previous rapport with the research team (Athens 1984). Within such settings, the interactions between coaches and players during traditional ‘on pitch’ coaching sessions have been demonstrated to be highly influenced by power (Cushion and Jones 2006). Furthermore, that ‘players in these academies are constantly scrutinised by coaches who are in-turn predominantly judged, despite the official developmental ethos, on game results’ (Cushion and Jones 2006, p. 146). In such settings, the production of institutional discourse can be described as an interaction between participants current institutional role (i.e. coach/athlete) and their current discursive role (i.e. coach questioner/athlete respondent).

Participants

A 34-year-old male U18 team Head Coach (HC) was observed in his interactions with 22 academy players (P1–P22) within six video-based performance analysis feedback sessions. All players were full-time professionals, aged between 16 and 19 years. HC held the Union of European Football Associations (UEFA) Advanced Licence award. However, he was an inexperienced user of video-based performance analysis feedback in his coaching practice at the outset of the study. That is, the present study represented HC’s early practice experiences of using video-based feedback. Following institutional ethical approval, informed consent was obtained from the coach and players before commencement of the study.

Procedure

An ethnographic framework enabled Ryan Groom to analyse behaviours and interactions between the coach–athlete ‘in situ’ during video-based performance analysis feedback sessions (Cushion and Jones 2006). This involved immersion in the context as a member of the staff undertaking the role of performance analyst, providing technical video analysis support for a 10-month season. Previous experience as a performance analyst with international youth teams allowed Ryan Groom to be accepted by the coaching staff and engage in ‘shop talk’ and related topics with the coaching staff (Cushion and Jones 2006).

The study followed six home match–debrief cycles over the 10-month competitive season. On match days (Saturday), Ryan Groom filmed the games for analysis. Following each game, HC highlighted ‘critical incidents’ that he would like to explore in the post-match debrief session (the following Monday). The games were analysed by using a Sports TecTM SportsCodeTM Pro digital video analysis system. During this process, key match incidents were marked (‘coded’) for future recall by the coach, based around actions in both the attacking and defending thirds of the pitch (e.g. attacking entries, crosses, shots, free kicks, corners and throw-ins, etc.).

Interactions within six video feedback sessions were recorded (audio and visual) via a video camera that was placed at the back of the classroom. The camera was placed in such a way that it captured the coach (HC), the players (P1–P22), Ryan Groom and the video content on a SMART boardTM (interactive screen). The video

recordings were transcribed verbatim and checked for accuracy by Ryan Groom and Lee Nelson².

Data analysis

Data collection and analysis of ‘talk’ were conducted using an applied CA approach (Sacks *et al.* 1974, Schegloff 2007, Heritage and Clayman 2010), with the aim of understanding educational interactions. CA is ‘the systematic analysis of the talk produced in everyday situations of human interaction: talk-in-interaction’ (Hutchby and Wooffitt 2008, p. 11). CA was historically developed within ethnomethodology (Garfinkel 1967), principally by the sociologists Harvey Sacks, Emanuel Schegloff and Gail Jefferson, with the purpose of studying ‘talk in action’ or ‘speech-exchange systems’ (Sacks *et al.* 1974). Sack *et al.* (1974) have suggested that as conversations can accommodate a wide range of situations, an analysis of conversation can reveal the twin features of being context free (as a ‘speech-exchange system’) and yet be capable of revealing extraordinary context sensitivity (i.e. sensitive to places, times and identities of parties within interactions).

Epistemologically, ethnomethodology is located within a phenomenological paradigm, with the aim of examining ‘common-sense thinking’ (Seedhouse 2005, p. 257). Ontologically, ethnomethodology’s position is associated with constructionism, in that; social phenomena and meanings are constantly being accomplished by social actors (Seedhouse 2005). As such CA puts educational events at the centre of the study, examining the social organisation of such activities. In this regard, the examples of talk and interaction can be used to show concrete illustrations of data analysis (Mercer 2010). Importantly, CA has been described as being able to demonstrate how participants build mutual understanding from one action to the next (Have 2000), to ‘portray the progress of the participant’s intersubjectivity’ (Seedhouse 2005, p. 263).

CA as an analytical tool

Actions accomplished by talk operate through turns at talk (Schegloff 2007). Turn taking is a process by which interactants allocate the right or obligation to participate in an interaction, which is interactionally managed (locally within the interaction) and structurally constrained (Sacks *et al.* 1974). The building blocks by which turns are created are known as turn constructional units, which consists of *grammar* (i.e. sentences, clauses, phrases and lexical items), *phonetics* (i.e. rising and falling of intonation) and a recognisable action within a *context* (Schegloff 2007). When analysing talk in interaction ‘one wants to write down not only *what* has been said, but *how* it has been said’ (Have 2007, p. 94) thus capturing phonetic properties of utterances. Therefore, the transcription includes details such as spaces and silences, overlapping speech, pace, stretches, stresses and volume (Sacks *et al.* 1974, Have 2007, Schegloff 2007). In addition to the transcription of ‘words spoken’ in standard orthography, vocal sounds that can be interpreted as words (i.e. ‘mmm’, ‘eh’, ‘uh’, etc.) or that might play a role in the interaction are also transcribed (Sacks *et al.* 1974, Have 2007, Schegloff 2007). See Table 1 for the conventions used in transcription.

Table 1. Transcription symbols (Schegloff 2007, Heritage and Clayman 2010).

Symbol	Meaning
[Beginning of overlapping talk
]	End of overlapping talk
=	Lines connected by two equals signs by different speaker indicate that the second followed the first with no discernable silence between them, or was 'latched' to it
(0.5)	Number in parentheses indicates silence, represented in tenths of seconds
(.)	A dot in parentheses indicates a 'micropause', audible but not readily measurable; ordinary less than 0.2 s
.	Punctuation marks are not used grammatically, but to indicate intonation. The period indicates a falling, or final, intonation contour, not necessarily the end of a sentence
?	A question mark indicates rising intonation, not necessarily a question
,	A comma indicates continuing intonation not necessarily a clause boundary
::	Colons are used to indicate the prolongation or stretching of the sound just proceeding them. The more colons the longer the stretching
<u>word</u>	Underlining is used to indicate some form of stress or emphasis, either by increased loudness or pitch. The more underlining the greater the emphasis.
WOrd	Underlining sometimes is placed under the first letter or two of a word
-	Especially loud talk is indicated by upper case. The louder, the more letters in upper case
-	A hyphen after a word or part of a word indicates a cut-off or self-interruption
><	The up and down arrows mark sharper intonation rises or falls
><	The combination of 'more than' and 'less than' symbols indicates that the talk between them is compressed or rushed
°	The degree sign indicates that the talk following it was markedly quiet or soft
°	When there are two degree signs, the talk between them is markedly softer than the talk around it
()	When all or part of an utterance is in parentheses, or the speaker identification is, this indicates uncertainty on the transcriber's part, but represents a likely possibility. Empty parentheses indicate that something is being said inaudibly (or in some cases, speaker identification can be achieved)
(())	Double parentheses are used to mark transcriber's description of events, rather than representations of the. Thus ((coughs)), ((sniff)), etc

Basic turn allocation respondents are selected in one of two ways. First, those in which next turn is allocated by current speaker's selecting next speaker or second those where a next turn is allocated by self-selection (Sacks *et al.* 1974). The allocation of turns is governed by a basic set of rules, firstly: (a) when turns are allocated by the current speaker, the 'party selected has the right and is obliged to take the next turn to speak' (Sacks *et al.* 1974, p. 704); (b) 'If the turn-so-far does not select a party to take the next turn, then self selection may but need not be instituted' (Sacks *et al.* 1974, p. 704). The first starter acquires the right to a turn and transfer occurs at that place and (c) 'If the turn-so-far is constructed in a way as not to involve the use of a current speaker selects next technique, then the current speaker may, but need not continue, unless another self-selects' (Sacks *et al.* 1974, p. 704). Secondly, if at the initial

transition-relevance place of an initial turn-constructural unit neither a nor b has operated, and following the provision of c, the current speaker has continued, then the rule-set a-c re-applies at the next transition-relevance place, and recurs at each transition-relevance place until transfer is effected. (Sacks *et al.* 1974, p. 704)

In addition, Schegloff (2007, p. 13) suggests that *conversational sequences* can be understood to comprise of ‘adjacency pairs’, composed of a minimum of: (a) two turns, (b) by different speakers, (c) adjacently placed; that is one after the other, (d) that these two turns are relatively ordered (first part – initiation/second part – response) and (e) that the pair types are related (i.e. greeting–greeting, question–answer, offer – accept/decline, etc.).

Mercer (2010) highlights that a particular strength of CA is that transcribed talk remains throughout the analysis, rather than being reduced to categories at an early stage. Therefore, researchers do not need to make initial judgments about the meaning of the data which cannot be revised (Mercer 2010). Consequently, CA differs from critical discourse analysis (CDA) in that CA is interested in what is going on in exchanges between participants, whilst CDA begins with imposing the analyst’s own concerns upon the research project (Schegloff 1997). However, CA as an approach has not been without its criticisms. Indeed, despite CA having its ‘origins in the discipline of sociology’, CA is ‘frequently criticised for being unresponsive to what might be called the sociological agenda’ – concerned with the analysis of class, power, ideology and related social structures (Hutchby and Wooffitt 2008, p. 208). Although,

CA can be seen as dealing with a possible analysis of power, where power is viewed in terms of differential distributions of discursive resources which enable certain participants to achieve interactional effects that are not available, or are differentially available, to others in the settings. (Hutchby and Wooffitt 2008, pp. 216–217)

It is the ‘pure’ CA approach to describing conversation without the use of such theoretical frameworks which has caused CA to remain a relatively unused approach within modern social research. However, applied (or institutional) CA has been outlined as a variation from ‘pure’ CA, whereby ‘institutional talk’ as opposed to ‘everyday talk’ is examined within a broader theoretical framework (Heritage 2005, Have 2007). Have (2000, p. 189) further explains that

in pure CA, the focus is on the local practices of turn-taking, sequential organisation, etc. in and for themselves, while in applied CA attention shifts to the tensions between those local practices and any larger structures in which these are embedded, such as institutional rules, instructions, accounting obligations, etc.

Here, Heritage (2005, p. 106) outlines three features of institutional talk that may be considered to be different from ‘everyday conversation’:

- (1) The interaction normally involves the participants in specific goal orientations that are tied to their institutional-relevant identities (i.e. coach–athlete).
- (2) The interaction involves special constraints upon what will be treated as allowable contributions to the business in hand (i.e. topic focus and sequential organisation).
- (3) The interaction is associated with inferential frameworks and procedures that are particular to specific institutional contexts (i.e. English Premier League Academy).

Furthermore, Heritage (2005, p. 110) highlighted that ‘the challenge has been to identify and describe the range of practices through which identities – and whatever form of power and inequality may be associated with them – are linked to specific actions in interaction’. More recently, CA has been described as ‘an evolving field of inquiry’ (Hutchby and Wooffitt 2008, p. 182), with many extensions to early CA approaches evident within the literature (Richards 2005, Seedhouse 2005, Hutchby and Wooffitt 2008). In this regard, it has been suggested that CA is able to provide ‘a “holistic” portrayal of language use that reveals the reflexive relationship between form, function, sequence and social identity and social/institutional context’ (Seedhouse 2005, p. 263). Whilst typical early CA research does not include a theoretical basis, the application of CA to classroom research has seen an amalgamation of different theoretical frameworks (Mori and Zuengler 2008). However, this method should not be interpreted as an attempt to generalise coach–athlete interactions from the present study to all coach–athlete relationships. The purpose here is to examine and explain how the social world operates locally through peoples actions (Mercer 2010), through a detailed analysis of the interactions of the participant coach (HC) with a group of athletes (P1–P22).

Theoretical considerations

Following an applied CA approach to analysing the classroom interactions, the work of Raven (1992, 1993, 2001) was selected in an attempt to explain the origins of the social organisation of power within the context (Jones 2009). However, in selecting one theoretical framework over another, it is important to recognise that as researchers our positions are not value free and the direction of this paper and the language and terminology used clearly reflects preferences for particular theoretical positions (Wright 2008). Consequently, as readers of differing theoretical orientations read and engage in our data and consider our findings and conclusions, they may find themselves drawn to other potential interpretations of the data. In an attempt to address this issue, Ryan Groom engaged in reflexive conversations with Chris Cushion and Lee Nelson, where the data prompted the need for explanation (Wright 2008). During these conversations, alternative theoretical interpretations were discussed. Indeed, Wright (2008, p. 6) suggests ‘the ontological and epistemological positions underpinning most contemporary qualitative methodologies take reality to be contingent on context and meaning constituted through the interactions of participants and researchers’. In this regard, we concur with the views of Potrac and Jones (2009) that as researchers we have the final responsibility for the text and that we should consequently engage in rigorous interpretation.

Results and discussion

Extract 1, players and coach watch the first of the three goals conceded on Saturday from a free kick:

- 1 HC: Alright inswinging free kick (.) we have ↑two on ‘im initially (0.4) one
- 2 comes off i:t, (1.2) >so we don’t< need two out there (.) cos it’s >not a sh-<
- 3 (.) it’s not a shot so he’s done the right thing coming off i:t (.) but then, (.)
- 4 whoever it is (.) I’m >not exactly< sure who it is runs back in and (0.4) doe:s)
- 5 (.) does nothing (.) look at this (3.6) one player here unmarked (1.0) marked

- 6 by him (0.8) °(?)° (0.6) one player here (2.4) unma::rked (.) so o:ne for one
 7 man (0.4) one for one man (.) >one for one man< (2.8) >(another) one< (0.8)
 8 one for one (man)/(there)
 9 P1: ((coughs))
 10 (0.4)
 11 HC: °Is that (one of ours)°
 12 P1: No: °no° (.) that's me I come across
 13 HC: That's you, (.) no that's you there isn't it
 14 P1: °Yeah°
 15 HC: So who's that
 16 P3: [(Player 4 plays there (.) Player 4 was there)]
 17 P?: [(?)]
 18 HC: Right (.) so he:'s, (.) we have to say that he's unmarked (then)/(man) (.) he's
 19 not marked the right side (0.8) okay, (0.6) ↑is he marked?
 20 P7: °I was (?) (at the back)
 21 HC: You just said you were marking 'im,
 22 P7: °Yeah°
 23 HC: Okay
 24 HC: Right both those players unma:rked
 25 P?: (?)
 26 HC: Right
 27 P6: One of the refs (.) blocking o:ff (.) the deep one
 28 (0.8)
 29 P6: One of our players (near the) refs
 30 HC: There=
 31 P6: =Yeah screening off
 32 HC: °Yeah° (.) this playe:r (we'll) take that that's a (?) the ball that's okay (.) SO
 33 BASIcally we've gone ONE (.) two (.) three (.) FOUR players unmarked
 34 (0.6) four players unmarked (.) in a set piece (2.8) from the start
 35 (13.8)
 36 HC: Now wha:t they do: he:re (.)just pause it there (.) they swing the ball to the
 37 back po:st (.) and >they already got< two against o:ne and our player gets
 38 stuck right under it ca:n't get their feet sorted out t- to head it away (.) our
 39 central players get dra::wn to that ba:ll (.) and ↑they leave the other two at
 40 the back post (1.2) so we 'ave (.) two against one he:re and then we end up
 41 wi:th, (.) well it ends up with all these three are not ma:rked (.) cos all the
 42 players get drawn to the ball and don't think anything about ma:rking the:m,
 43 (0.4) °>just run it again<°
 44 (13.8)
 45 HC: °Just run it back just a second plea:se° (3.8) °just go slow (.) go slow° (3.8)
 46 °and stop there° (2.0) now chaps we've got too many players that aren't
 47 getting in amongst them and getting tight enough look at this here (.) <one (.)
 48 two> three players (.) doing nothing (.) nothing at all (1.8) an overload here,
 49 (.) players that aren't getting marked (.) I mean here (.) it seems like we:'re (.)
 50 we're tight enough but there's two agains- see we've got two against one
 51 he:re (.) and then two against one there, (.) in the two most crucial areas of
 52 the goal, (11.8) players on the fringes of things (.) outside of everything (0.6)
 53 one two three four (?) next one

In the interactional example³ in lines 1–8, HC augments the video picture of the situation in which a goal was conceded from a free kick. HC uses a combination of 'expert power' and 'direct informational power' (Raven 1992, 1993) to persuade the players that his analysis of the unfolding events is correct. Such an approach is theorised to relate to a soft tactic, emanating from the coach's personal resources (i.e. coaching knowledge). In line 11, HC questions the players to identify a player in the picture. P1 starts to speak to identify himself as the player in question (line

12), thus responding to the invitation to speak (adjacency pair). In line 13, HC rejects P1's analysis of his position and again invites P1 to re-respond to the question to which P1 responds affirmatively in line 14 (adjacency pair). Again in line 15, HC questions the group as to the identity of a player, to which P3 accepts the invitation to speak (adjacency pair), offering P4 as the response (line 16). In lines 18 and 19, HC further explains his reasoning for highlighting the players as being 'unmarked' via a combination of 'direct informational' and 'expert power' (Raven 2001). In an attempt to correct player understanding, 'surveillance' is suggested to be unimportant, as future reward or punishment based on the influence attempt is not offered (Raven 2001).

Again in the closing remark of line 19, HC asked a closed question to the group, with a particular emphasis on the point ('↑ is he marked?') to which P1 accepts HC's invitation to speak (adjacency pair), in a quieter tone ('°I was (?) (at the back)°'), identifying himself as marking the player in question (line 20). However, in line 21, HC directly challenges P1's ('You just said you were marking 'im'), to which P1 responds affirmatively (adjacency pair), in a markedly softer tone (line 22). In line 22, P1 corrects his previous interaction (Jefferson 1974), in agreement with HC ('°Yeah°'). Jefferson (1974) describes such an error as an 'interactional' error, when one party is attempting to speak appropriately to a co-participant. In line 24, HC reinforces this correction ('Right both those players unma:rked'). In line 25, one of the players mumbles inaudibly. To which HC, responds ('Right'). At this point P6 explains that the referee is blocking off one of the players that should be marked (lines 27–29). In line 30, HC responds in an attempt to understand P6's assessment ('There='). To which P6 confirms HC's understanding of the situation in line 31 (adjacency pair), 'latching' [(=)] onto HC's utterance ('=Yeah screening off'). In lines 32–52, HC continues with a tactical analysis of the unfolding situation on the video screen using both 'direct informational' and 'expert power' to influence the players to accept his evaluation of the event (Raven 1992, 1993).

In lines 46–53, HC highlights the players that are not performing their roles and responsibilities in the situation ('now chaps we've got too many players that aren't getting in amongst them and getting tight enough'). Similarly, in lines 47–49, HC highlights how the players are doing 'nothing' ('look at this here (.)<one (.) two>three players (.) doing nothing (.) nothing at all (1.8) an overload here, (.) players that aren't getting marked'). HC's utterances are delivered with pauses in talk [(.)], communicating a disbelief in the unfolding tactical situation. This form of influence maybe understood as 'legitimate power of responsibility' (Raven 1992, 1993), where unless the players fulfil their defensive roles individually (lines 52 and 53 'players on the fringes of things (.) outside of everything (0.6) one two three four'), the collective defensive roles and responsibilities of the team and HC's goals as coach cannot be achieved. Indeed, the lexical choice of 'we' rather than 'you' throughout (lines 1, 2, 33, 40, 46, 49 and 50) suggests that HC is trying to create a sense of shared responsibility within the group as a collective identity (Heritage 2005). A similar desire for control 'over' athletes to achieve 'work-task-related identity' (Heritage 2005, p. 111), has been demonstrated in a number of investigations into elite-level coach–athlete interactions (e.g. Potrac *et al.* 2002, Jowett and Cockerill 2003, Jones *et al.* 2004, Cushion and Jones 2006, Purdy *et al.* 2008). Indeed, research by Jowett (2003, p. 455) highlighted that the coach 'explained the importance of being able to influence and exert power on the athlete in a construc-

tive way in order to make the athlete benefit [teach/coach/instruct]’. However, it has been suggested that such power struggles can compromise the quality of the coach–athlete relationship and its effectiveness (Jowett 2003, Jowett and Cockerill 2003), which may lead to coach–athlete conflict and the ‘withdrawal of best efforts’ from athletes (Purdy *et al.* 2008). Therefore, future research may consider the long-term impacts of the prolonged use of institutional power by coaches and how this affects the coach–athlete relationship.

Extract 2, players and coach watch the second of the three goals conceded on Saturday (the second from a free kick). The video plays and the coaches and players watch in silence. Once finished, Ryan Groom returns to the start of the clip with the set up of the free kick paused: in the opening section, HC counts the players on the SMART board™ interactive screen.

- 1 HC: One for one he:re, (2.8) one for one the:re, (0.8) TWO (0.6) on the one
 2 ↑there, (2.2) one for one (0.4) °one for one° (.) one for one (.) so STRAIGHT
 3 away: from the start again (.) we’re outnumbered in the middle.
 4 (10.4)
- 5 HC: >C’n you stop there<, (1.0) °one (.) two (.) three° (.) °one (two three)° (.)
 6 right look listen (.) we got ONE (1.2) t:wo (.) three (.) four (.) five (.) six (0.4)
 7 seven (.) and I’m not sure but- (0.6) on the (ball) we should have one (that
 8 would be ei:ght) (0.4) (and then) two (.) (up sorting out there) I assume that’s
 9 we might have have two on the ball one there (1.4) ↑if they’ve got one on the
 10 edge, (0.4) one on the edge (.) do we need two players here (.) (there and
 11 there) (1.8) (who’s got) (.) one’s got to go back onto him, (.) you can’t have a
 12 free player (0.4) okay (.) just run that again slowly, (.) now Player 8 has got
 13 to better on that he’s not in here but he has to do better here on thi:s first
 14 (header) (he lets) them get across the front of him, (.) but thi:s, (.) so ↑that
 15 has to be better and now the next bit now the next bit now the next bit (0.4)
 16 keep going (3.8) (°is he here°) (P8 that’s your man) just let ‘im go (0.4) just
 17 come ri:ght off (you)/(him) (2.8) three mistakes <number one we don’t get
 18 marked up early enough in the box, (.) man for man we don’t win that
 19 header, (0.4) and people swi:tching off <again look stop there >just a<
 20 minute (.) just ↑(peo-), (.) you’re not near anybody,
 21 P1: (I ju-)
- 22 HC: You’re not (.) you’re not (.) and ↑you’re not (.) there’s too many players that
 23 a:ren’t (bu:y) people locking in on people >getting< goalsi:de of people (0.4)
 24 what were you saying P1?
- 25 P1: Cos I was ma:rkng (?) (the man) (?) (my ‘ead) (.) (and as I was marking the)
 26 sta:rt ‘ee runs out (.) and another person runs in now look (.) (here) (look)
 27 look what’s going on there
- 28 HC: Your man runs out
- 29 P1: Yeah (.) he runs ou:t and another [(one)]
- 30 HC: [So did] you stay with that (man)
- 31 P1: No
- 32 HC: Why not
- 33 P1: No I (tr-) what’s that (.) P2 had two (runners)
- 34 HC: Yeah
- 35 P1: And I ‘ad one
- 36 HC: Yeah
- 37 P1: My man runs out, and P2’s man runs across and I stayed with ‘im
- 38 HC: So why didn’t y- (.) wh- my question is why don’t you stay with your man.
 39 (0.4)
- 40 P1: Cos ‘ees run out to: (.) (to look he’s on the edge of the box now, and the
 41 other man is more dangerous) hasn’t followed in
- 42 HC: It’s

- 43 P1: (?)
 44 HC: We need to stay with our men (.) in the box (0.4) we can't even get marking
 45 right (.) never mind switching across people and passing people on in the box
 46 (.) we can't even get ↑that right (.) ↓show them that one more time.
 47 (18.0)

In the opening monologue of Extract 2 (lines 1 and 2), HC counts how many of the opposition players are marked by the team. HC uses a forceful 'mode' of communication (Raven 2001) in an authoritarian manner to address the team ('STRAIGHT away from the start again (.) we're outnumbered in the middle'). This can be seen as a display of 'legitimate power of responsibility' (Raven 1992, 1993) by HC (hard power tactic), with the players for 'failing him', and not fulfilling their roles within the team. In lines 6–20, HC attempts to capture the players' attention ('look right listen') and continues with an influence attempt using both 'expert power' and 'direct informational power' (soft power tactics, Raven 1992, 1993). In line 16, HC directly challenges P2 ('that's your man. Yeah? You just let him come right off you') for not fulfilling his role via a 'legitimate power of responsibility' influence attempt (Raven 1992, 1993). However, no transition relevancy place or invitation to talk is offered to P2 to explain his actions and HC's talk remains continuous (Sacks *et al.* 1974).

In lines 17–20, HC summarises the three mistakes that he felt lead to the goal ('we don't get marked up early enough in the box, (.) man for man we don't win that header, (0.4) and people switching off') and proceeds to directly challenge players within the team through using the 'hard tactic' of 'legitimate power of responsibility' (Raven 1992, 1993, 2001). In line 21, P1 starts to talk but stops prematurely ('I ju-') thus repairing the trouble (Jefferson 1974, Sacks *et al.* 1974, Schegloff 1992), and allowing HC to continue (lines 22–24). In lines 25–27, P1 takes a turn to speak (adjacency pair) when invited by HC ('what were you saying P1?'). In response to lines 25–27, P1 initiates a preparatory resistance attempt, developing a counter argument (Raven 1992, 1993, French and Raven 2001). In line 28, HC attempts to understand the point that was made in lines 25–27, which P1 continues in line 29 (adjacency pair). In line 30, HC's overlaps P1's, causing P1 to repair this trouble by stopping (Jefferson 1974, Sacks *et al.* 1974, Schegloff 1992, Heritage and Clayman 2010). HC offers a question to P1 and invites P1 to speak again ('did you stay with that man'), to which P1 responds (adjacency pair) negatively (line 31). HC again invites P1 to speak and clarify his decision (line 32). In lines 33, 35 and 37 P1 tries to explain the reason behind his decision to change the player that he is marking ('there were two runners, and that 'his man runs out, and P2's man runs across'), to which HC offers verbal encouragement (lines 34 and 36). Through this interaction, P1's resistance to the influence attempt can further be understood by a 're-evaluation of others' (Raven 1992, 1993, French and Raven 2001), in respect to the actions of fellow teammates.

In line 38, HC questions P1 ('So why didn't y- (.) wh- my question is why don't you stay with your man'), to which P1 responds (adjacency pair), in lines 40 and 41 with an explanation of his decision to change the player that he is marking (i.e. that the player that ran into the box is more dangerous). Therefore, resisting HC's interpretation of the event and associated influence attempt, through a counter argument (Raven 1992, 1993). In lines 42 and 43, both HC and P1 start to talk, whereby P1 repairs the error to enabling HC to speak (Jefferson 1974, Sacks *et al.*

1974, Schegloff 1992, Heritage and Clayman 2010). Following this repair, in lines 44–46, HC ‘presents himself’ (Goffman 1959, Strauss 1959) in an authoritative (‘we need to sta:y with our men (.) in the box’) and sarcastic manner (‘we can’t even get marking right (.) never mind switching across people and passing people on in the box (.) we can’t even get ↑that right’), with emphasis upon the ‘mode’ of delivery (Raven 1992). Here, HC ‘managed the disagreement’ with a display of institutional authority (Greatbatch 1992, Clayman and Heritage 2002a, 2002b, Heritage 2005), in an attempt to retain respect and control over the group interactions (Potrac *et al.* 2002, Jowett 2003, Jowett and Cockerill 2003, Purdy *et al.* 2008, McArdle *et al.* 2010). Here, P1 can be seen to be responsive to the interactional constraints which are institutional in character and origin by refraining to talk (Heritage 2005). Such interactional practices are in contrast to findings from alternative coaching contexts, which highlight the importance of fostering respect and developing athletes’ autonomy (d’Arripe-Longueville *et al.* 2001). Importantly, Raven (1992) suggests that the agent not only chooses the power base, but also the power ‘mode’, in which the influence is exerted (i.e. loud, forceful, threatening or in a soft, friendly and light-hearted approach). Whilst the empirical evidence on the effects of ‘mode’ is still quite limited, this has been suggested to be even more important at times than the basis of power (Raven 1992). Consequently, the relationship between the nature of the influence attempt and the aftermath upon the target appears a salient area for future research.

Finally, in line 46 HC gives the instruction ‘to view the goal again’. This may be viewed as a ‘coercive power’ influence attempt (Raven 1992, 1993), or punishment for poor performance, given that the players have already watched and discussed the video a number of times. This may also be viewed as an attempt by HC to reassert his authority over the group to ‘soften the players up’ for future influence attempts (Raven 1992, 1993). Similar exercises of power, using ‘preparatory devices’ and ‘manipulation strategies’ have previously been demonstrated within the coaching literature (Jones *et al.* 2004, Cushion and Jones 2006, Potrac and Jones 2009).

Towards an understanding of institutional talk in performance analysis feedback sessions

The present paper demonstrates that the coach could be seen to have ‘presented himself’ through speech (Goffman 1959, Strauss 1959), in his institutional role (Heritage 2005) of ‘Head Coach’ via his interactions with the players in an authoritarian manner. Specifically, the coach could be seen to exercise control over the sequential organisation of the sessions, via asymmetrical turn-taking allocations, control over the topic of discussion and the use of questioning (i.e. adjacency paired interactions; coach request for information – athlete response) to reinforce his social basis of power (Raven 1992, 1993). The sequential organisation of the interaction was the primary means by which HC’s institutional identity was established and maintained (i.e. Head Coach). This was demonstrated in the asymmetry in institutional talk, which ‘both reflects and embodies differential access to resources and to power’ (Heritage 2005, p. 114). As such, the interaction of the players was ‘constrained’ to predominately answering questions and responding to invitations to speak from HC (Heritage 2005). Indeed, within the context of a large group, control over topic and speakership is often restricted to a single guiding individual, whose

authority is thereby reinforced (Heritage 2005). That is, the turn-taking system offers the participants constrained interactional affordances (Heritage 2005). Here, the participants (i.e. players) recognised that they should follow these interactional rules as a moral obligation, therefore the turn-taking system can be seen to be an act of normative organisation in its own right (Heritage 2005). As such, a local social structure was created within the interaction between HC and the players, in which a particular ‘work-task-related identity’ (Heritage 2005, p. 111), that of the HCs role being instructional, correctional and to modify behaviour, was sustained by HC within the interactions (Halkowski 1990, Potrac *et al.* 2002, 2007, Jones *et al.* 2003, 2004, Jowett 2003, Heritage 2005, Cushion and Jones 2006, Purdy *et al.* 2008, McArdle *et al.* 2010).

Conclusion

This paper examined the interactions that occurred between a coach and group of athletes within the delivery of video-based performance analysis feedback in an elite-level junior soccer environment. Analysis of the interactions revealed that the coach attempted to exercise control over the sequential organisation of the sessions, via asymmetrical turn-taking allocations, an unequal opportunity to talk, control over the topic of discussion within the interactions and the use of questioning to select speakers to take turns to talk and reinforce his interactional goals. The work of Raven (1992, 1993, 2001) was used to understand and critique coaching discourse ‘in situ’. Raven’s (1992, 1993, 2001) work illuminated the origin of the power sources of a number of interactional practices. For example, to achieve the desired interactional tasks, the participant coach used a combination of ‘expert’ (i.e. the coach knows best) and ‘informational’ power (i.e. the coach carefully explains preferable behaviour), emanating from the coach’s personal knowledge (soft power tactics). The agent’s power resource here is one of ‘credibility’ (Koslowsky and Schwarzwald 2001). In addition, within the interactions, the participant coach drew upon his institutional role to highlight a ‘legitimate power of responsibility’ (i.e. the institutional role of the coach affords the right to prescribe behaviour) in that, the athletes should adhere to his interactional requests (hard power tactic). Within this institutional role, the agent drew upon a ‘normative’ power resource for such influence attempts (Koslowsky and Schwarzwald 2001). Finally, the multiple viewing of negative past performances can be understood to be a ‘coercive power’ influence attempt, as a form of punishment for poor performance (hard power tactic). Here, negative images of poor performance were used by the coach to reassert his authority over the group to ‘soften the players up’ for future influence attempts (Raven 1992, 1993). In such instances, the agent’s power resource was one of ‘control’ (Koslowsky and Schwarzwald 2001).

These findings add to the growing body of research in sports coaching, which highlight the dominant authoritarian discourse within coach–athlete relationships (e.g. Potrac *et al.* 2002, Cushion and Jones 2006, Purdy *et al.* 2008). Specifically, ‘coaching content’ or a ‘coaching agenda’ was delivered ‘to athletes’ within an asymmetrical power relationship, which was produced and legitimised within a hierarchical institutional context. Here, recent research has highlighted how openness and honesty from athletes receiving post-performance debriefing was constrained by the perceived power of the coach (McArdle *et al.* 2010). Similarly, within the present study substantive ‘discrepancies in experience, technical knowledge, and rights

to express knowledge' restricted the athletes' interactions within the institutional context (Heritage 2005, p. 114), which may result in unintended consequences (i.e. loss of respect, athlete resistance, non-learning, cf. Nelson *et al.* in press). Therefore, future studies should consider how coaches' beliefs regarding athlete learning impact upon their coaching behaviour (Cushion 2010), particularly with the evolving use of video-based performance analysis feedback.

Given the case study approach undertaken in the present paper, the research findings speak specifically of the context and relationships investigated. In addition, it is important to recognise that the exchanges presented represent the early practice experiences of the participant coach using video-based performance analysis feedback. Therefore, generalising the findings of the present study to other contexts and different coach–athlete relationships should be treated carefully. Indeed, despite the strength of CA as method for providing a rich account of patterns within micro-level interactions with specific illustrative examples, like other forms of qualitative research, employing CA often leaves researchers open to the charge of selecting particular examples to support their arguments (Mercer 2010). As such, it is important to acknowledge that the interactions that were recorded 'in shot' are only part of a much wider range of social interactions (Hammersley 2003). In this regard, Sacks (1984) highlighted that 'other things, to be sure, happened, but at least what was on the tape had happened' (p. 26).

Building upon this work, future research wishing to understand broader interactional practices of coaches should look to move beyond the current tendency to treat coaching as a series of unconnected episodes, which can be dissected and its parts aggregated (Potrac *et al.* 2000, Jones *et al.* 2002). That is, whilst coaching scholars have started to build a valuable picture of the behaviours of coaches in practice environments (e.g. Potrac *et al.* 2007), game situations (e.g. Smith and Cushion 2006) and within performance feedback sessions (e.g. Nelson *et al.* in press), limited consideration has been paid to what happens between such episodes. Methodologically, such an approach remains challenging, and will no doubt require the utilisation of sensitive methodologies (i.e. grounded theory, ethnographic observations, CA, narrative analysis and visual methods, etc.), potentially in combination with more established methods for analysing coaching practice (i.e. systematic observation, interviews and focus groups, etc.). For example, within the pedagogical use of video-based performance analysis feedback, researchers could consider the utility of combining such methods to illuminate a 'truer' picture of realities of coaching practice and the subsequent effects of such practices upon the athlete (Potrac *et al.* 2002, Jones 2009). Of particular interest for the purposes of coach education, future study may consider how coaching knowledge is constructed and related to a 'coaching identity', in an attempt to illuminate how such interactional practices are culturally produced and reproduced (Goffman 1959, Strauss 1959, Jones *et al.* 2002, 2003, Cushion *et al.* 2003). Indeed, Raven (1992) suggests that the power/interaction model of interpersonal influence 'may be useful for those who are in positions of influence, to help them understand more clearly the bases for their own actions, and the possibilities of alternatives' (p. 240). Here, coaches' should be mindful of how the power relations within such feedback sessions may impact upon athlete learning. Interrogating practice in this way could impact upon the nature of the coach–athlete relationship (Cushion and Jones 2006).

Notes

1. A Premier League Academy is the highest ranking youth development scheme within England, and is a mandatory requirement for membership to the English Premier League. Premier League Academies aim to provide education and support to young players during their transition into and out of, full-time professional football.
2. We would like to acknowledge the assistance of Dr. Christianne Pollock in the transcription process.
3. Coach-athlete talk is discussed in the present tense as the interactions unfold (cf. Hal-kowski, 1990, Schegloff, 2007, Heritage and Clayman, 2010).

Notes on contributors

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Appendix 3

COACHES PERCEPTIONS OF THE USE OF VIDEO ANALYSIS: A CASE STUDY

RYAN GROOM and CHRIS CUSHION

Many Premiership football teams have adopted video based match analysis into their preparation for matches. Clubs such as Arsenal, Chelsea, Liverpool, and Manchester United have used match analysis systems to break down matches providing statistical information of both a *Physiological* and *Technical* nature. Historically, this information was created using hand notation, where statistical data would be collected on paper. However, the introduction of computer-based systems, where the statistical information is linked to the video, has signalled a conceptually different use of the analysis information. Namely, the information itself can be viewed directly by the players as a selection of video instances. This allows managers and coaching staff to use this information to provide feedback to the players regarding individual, unit and team performance in matches. This information may vary from *Physiological* information relating to sprint/walk/jog ratio data (see Strudwick & Reilly, 2001) to specific *Technical* and *Tactical* information for example, team shape, midfield pressure, and the use of diagonal balls. Also, elements of decision-making such as, the selection of passing and marking options and positional play can be highlighted. Typically, video analysis is often used to highlight strengths and weakness of players, thus attempting to reinforce behaviours using positive modelling.

Although the use of video may appear appealing to many coaches, little is known as to the effectiveness of this approach to training and match preparation. Often the assumption is made that if the players see what they are doing right or wrong, this will reinforce good or appropriate behaviour, also that the more information the players have the better. However, research from the mainstream motor learning literature has highlighted several key issues relating to the provision of feedback in learning. For example, Williams (1999) highlights ten aspects which can affect the effectiveness of feedback:

- Feedback should be constructive.
- Develop a model for comparison (Performance Goal).
- Feedback should relate to the players' skill level.
- Frequency should depend on the learners' skill level.
- Do not provide too much information.
- Do not provide feedback that is too precise.

- Provide feedback at the right time.
- Provide the learners with the opportunity to practise the skill.
- Try to provide positive rather than negative feedback.
- Provide some variety in the delivery of feedback.

Currently, there is a limited amount of research that supports the use of video-based coaching sessions. This is particularly surprising as modern pedagogy has highlighted the importance of "reflective practise" to consolidate and improve new coaching methods (see Knowles, Gilbourne, Borrie, & Nevill, 2001). Also, with advances in video and computer technology, there has been a reduction in the size and cost of cameras and laptop computers, which has enabled video feedback to be used as a tool for developing youth players and not solely a luxury for the 1st team. Therefore, the aim of this paper is to reflect upon the 2003/04 season using video analysis with an U17 team of 1st year scholars.

Methodology

The participants in this study were two professional Advanced Licensed Youth coaches; both were ex-professional players and had over seven years of coaching experience. As no previous research has attempted to reflect on the coaches' perceptions of the use of video analysis, an exploratory qualitative methodology was employed to examine coaches' perceptions of the video analysis sessions carried out during the 2003/04 season. A semi-structured interview with the two coaches (C1 & C2) was used to identify key themes and trends across the participants.

The semi-structured interview consisted of questions relating to five key areas:

- (1) General usefulness of the video sessions (*Usefulness*).
- (2) What had been learnt in the sessions (*Learning*).
- (3) Whether the sessions had influenced their reflection on the matches (*Reflection*).

- (4) Whether the length of the session was right (*Timing*).
- (5) Whether the video sessions had had an impact on any mental aspects (*Mental Aspects*).

Coaching Philosophy

Central to the construction and delivery of the video feedback sessions was the experience and philosophy of the coaches who identified the themes of the session: Technical/tactical content, how the information is delivered (timing/style), and the tone of the sessions (positive/negative). In the interview with the coaches a clear philosophy had developed, which was to try to create a positive learning experience for players, whilst providing them with the information they required to improve on previous team and individual performances:

"The first thing we said at the start is that we did not want it to be a negative thing (C2).

"We've won games, quite comfortably, threes, fours, but we've always been able to come in on a Monday morning, and go well done in this area, but you could have improved on that, but I don't think it has been in a negative way, I think the balance has been right (C1)."

Data Analysis Coaches Perceptions Usefulness

The coaches found that the video analysis sessions were useful for providing feedback on specific areas of the game that players often found hard to recall. This enabled the coaches to discuss decision-making:

"If someone's made a technical mistake on the ball, we can say this is what you did, a cross where instead they could have stood it up at the back post, which would have been the best option but then elected to whip it, we can stop and say look (C2)."

Also, the video provided the players with a view of the game that is often reserved for the coaches:

"We can talk about it but until they actually see it up on the board on the screen, then they don't know what we are saying, they can see it for themselves the mistakes that they are making, but they have also gained so much confidence seeing themselves up there doing well (C1)."

Learning

The coaches perceived that the video sessions had been useful in improving players' game understanding. The main advantages the coaches highlighted using a video-based approach was that you could work on the players understanding of their positions in relation to the team both "on and off the ball":

"For me it's their positional sense, whereas we can do it out there on the training ground, which is a great starting point, but in games they've got to make decision really quickly, on a Monday morning you can say see the position you were in, and work with the team to get a bit more understanding (C1)."

The coaches also identified that the session had encouraged players to analyse the game and their own performance in a critical manner:

"It's a learning curve for them, it's probably the first time that they have had to sit down and maybe look at themselves (C1)."

Technical Information

The coaches also perceived that the video analysis was particularly useful for highlighting technical information for the players. The video

enabled the coaches to highlight the players "in-game performances" relating to their decision-making skills and their roles and responsibilities within the team, for example:

- Technical mistakes on the ball.
- The selection of passing options.
- To highlight overplaying in certain areas of the field.
- Goals scored against us at set plays.
- Players caught wrong side.
- Positional play.
- Organisation.
- Defending at set pieces.
- Marking positions.

Reflection

The next section highlights some of the main themes, concerned with how video analysis sessions have altered the coaches' own reflection on the previous game. In the initial video session both coaches reported that they were pleasantly surprised with both the team and individual performances, given the chance to review the game analytically using the video:

"We were better than we thought, the players are better individually and as a team, than I thought myself personally, in terms of what we have done with the video, we look more organised, using the video equipment they understand their jobs and roles, it can only help them as players really (C1)."

Importantly, the video analysis gave the coaches a chance to reflect on the match when the emotions from the game had passed:

"Sometimes I think that the players have performed better at times when you see them on the video than when you are actually there at the game (C2)."

The coaches perceived that the video had been particularly useful in highlighting action "off the ball" as sometimes the coaches were concentrating towards the "on the ball" play:

"Sometimes, because you think you've seen the game you think that you've seen everything, but then when you look back on the video you realise that, missed that, didn't know he did that, that was good or that was bad, sometimes you can see a reoccurring thing, where someone is making a constant mistake in a certain situation (C2)."

Also, because of the success the team had experienced in the filmed matches, the coaches where able to analyse where the success had



come from, and use this information to develop the team's playing style:

"We now have a style of play, where, and its come sort of through the video seen where how well we have done through a lot of pressurising, because we have seen it work, its really honed it down, that we did not really have at the start of the season, the style of play (C2)."

The coaches felt that on reflection, the use of video analysis with the players had given them an extra medium to express their coaching ideas through:

"It's certainly helped me in my development as a coach, I've never had that video equipment, but now we can do it, on a Monday morning to sit down with yourself and go through it's helped us as coaches ourselves (C1)."

Timing

The coaches were asked to reflect on their perceptions of the timings of the video analysis sessions. Typically, the sessions consisted of a 30-40 minute debrief of the game. Video instances were selected to reflect key themes from the game, which the coaches had decided they wanted to highlight (eg pressuring, attacking play, defensive play, team shape, and goals). These video clips were then displayed by a projector onto a wall in there sections and the coaches would highlight key points and ask the players questions relating to their decision-making and examine alternative options:

"At times we were maybe long winded, at the end we had a fair idea of what you were going to show us, and we got quite hot on it (C2)."

The coaches both felt that as they became more comfortable with the use of the video session, that their efficiency improved:

"As the season went on it got better, at first for me we were going into the unknown, because I'd never done it before, and you know it's a learning curve for me, and as the season went on we got quicker and quicker and went crash, bang wallop, got the points and that was it, we moved on (C1)."

They also felt that the players experienced a similar learning curve to the introduction of video analysis sessions into their weekly training programme:

"The players got an understanding of it as well, the longer the season went on mentally if you like, when they were coming in for training, right were going to sit there and go through the video, for both parties really from the coaching point of view and the players (C1)."

Mental Aspects

Two main themes came through the interview with the coaches,' firstly, that they were able to give the players Technical Feedback relating to game performance and secondly, the positive impact both coaches felt that the video sessions had had on their players Confidence:

"Due to just how we have played especially in our home games it has improved their confidence on the video to see them winning games and scoring goals (C2)."

The coaches also felt that it was important for the players themselves to see how well they had performed, as in the past the coaches could only give the players this information using general praise. Both coaches felt that this was a particularly powerful way to build confidence in the team:

"The big thing is they have seen themselves being a success on the video (C2)."



Summary

For the coaches, the video analysis had been a useful tool in the development of their players. Specifically, the coaches felt that the video feedback had improved four key areas of the players' development:

Benefit for the Players

- Players Technical and Tactical Knowledge was improved.
- Critical Thinking was developed.
- Decision-Making was improved.
- Confidence was improved.

The coaches also felt that the video session had improved three key aspects of their own coaching practise:

Benefit for the Coaches

- Assisted in the development of an effective style of play for the team.
- Enhanced their own professional development and coaching practice.
- Allowed for an in-depth review of matches.

Further Reading

Knowles, Z, Gilbourne, D, Borrie, A. and Nevill, A. (2001). Developing the reflective sports coach: A study exploring the processes of reflective practice within a higher education coaching programme. Reflective Practice. Vol. 2, pp.185-207.

Strudwick, T. and Reilly, T. (2001). Work-rate profiles of elite premier league football players. Insight. Issue 2, Volume 4, pp 28-29.

Williams, A.M. (1999). Providing feedback during skill learning: The ten commandments. Insight. Issue3, Volume 3, pp 12-13.

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Amateur Adult Training System of play: Keep it flexible

Teach your team to adapt to ever-changing tactical situations by BUTCH LAUFFER, Men's Head Coach, West Texas A&M

Tactical flexibility is required for each positional group (defense, midfield and attack) and also for the team as a whole. Therefore tactical flexibility is a crucial aspect of training, and using a modern 4–2–3–1 shape as a basic attacking and defending structure provides a great deal of flexibility.

TACTICAL FLEXIBILITY IN THE 4–2–3–1 SYSTEM THE 4–2–3–1 SYSTEM ALLOWS A TEAM TO CHANGE ITS PLAYING STYLE QUICKLY:

- For a stronger defense, switch from 4–2–3–1 to 4–4–2 or 4–5–1. This provides broader coverage in the midfield and also allows the team to develop a defending box with the two center backs and the two defensive midfielders. This tactical innovation is based on the concept of defending the place from which most goals are scored.

- For a stronger attack, switch from 4–2–3–1 to 4–3–3. This reinforces the attackers with two extra forwards in the outside positions. A wing attack is the best way to beat a compact, ball-oriented defense formation.

In the 4–2–3–1 shape the three midfielders function as both midfielders and forwards, based on their starting positions. Of the three, the two wide players have the hardest job because of the space they have to cover. These players must be able to cope with the demands of playing



Appendix 4

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As part of the research and match analysis work that I have carried out with you, I am writing to ask for permission to conduct a semi-structured interview with you to evaluate the work we have undertaken this season. This research will form part of my first study in my PhD program at Brunel University to examine the perceptions of usefulness of match analysis. The interview aims to examine your perceptions of the analysis work we have undertaken and assesses what you think that players have learnt.

The results of the interviews will be summarised and may be published, although your names will not be included (unless otherwise agreed). I will present a copy of my findings back to you as soon as possible.

Yours Faithfully,

Ryan Groom BSc, MPhil

Coaches Voluntary Informed Consent

I have read the above informed consent. The nature, demands, risks and benefits of the project have been explained to me. I understand that I may withdraw my consent and discontinue participation at any time with out penalty or loss of benefit to myself.

Coaches Signature.....Date.....

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

Researcher's Signature.....Date.....

Appendix 5

Coaching Demographic Information

Name:.....

Age:.....

Coaching Experience (Years):.....

Years of Professional Coaching Experience:.....

Highest Coaching Qualification:.....

Highest Level Played at:

.....
.....
.....

Other Related Qualification:

(e.g. Teaching Certificates, FA Tutor)

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Squads Worked With (please describe role head coach/assistant coach etc.)

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Have you ever received video analysis as a player? If so what was your opinion of it from a player's perspective?

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Coaches Perceptions of Video Analysis

Q1. How would you describe your coaching philosophy?

Q2. How long have you used video analysis for in your coaching practice?

Q3. Have you found using video analysis useful?

- How?
- Why?
- Specific examples from practice.

Q4. Can you think of a good example that highlights how you have found it useful?

- How?
- Why?
- Specific examples from practice.

Q5. How do you typically use the video analysis with the players/squad?

- How?
- Why?
- Specific examples from practice.

Q6. What kind of things do you like to show the players/squads?

- How?
- Why?
- Specific examples from practice.

Q7. What kind of things do you think it can improve in the players?

- How?
- Why?
- Specific examples from practice.

Q8. What do you think is the most powerful thing about using video analysis?

- How?
- Why?
- Specific examples from practice.

Q9. Do you think using video feedback with players can actually change what the players do in the next game?

- How?
- Why?
- Specific examples from practice.

Q10. Do you use video to prepare teams for a game?

- How?
- Why?
- Specific examples from practice.

Q11. Are there any things that you are cautious about when selecting video clips to show players?

- How?
- Why?
- Specific examples from practice.

Q12. Has using the video changed the way you reflect on the game or on individual players?

- How?
- Why?
- Specific examples from practice.

Appendix 6

R Groom BSc, MPhil
Department of Sports Science
Brunel University
Middlesex
Uxbridge
UB8 3PH

To: [REDACTED] & [REDACTED]
[REDACTED] Academy

Dear [REDACTED],

As part of the match analysis work that I will carry out with you and the [REDACTED] U18 team, I am writing to ask for permission for yourselves and the players to take part in a study to evaluate the work we will undertake this season. This would involve recording the performance analysis feedback sessions for analysis to assess the future work that we will undertake.

This research will form part of my PhD program at Brunel University to examine the perceptions of usefulness of match analysis. The results of the analysis will be summarised and may be published, although your names and the players' names will not be included (unless otherwise agreed). I will present a copy of my findings back to you as soon as possible.

Yours Faithfully,

Ryan Groom BSc, MPhil

Academy Director and Head Coach Coach Voluntary Informed Consent

I have read the above informed consent. The nature, demands, risks and benefits of the project have been explained to me. I understand that we may withdraw our consent and discontinue participation at any time with out penalty or loss of benefit to myself.

Coaches Signature.....Date.....

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

Researcher's Signature.....Date.....

Appendix 7

R Groom BSc, MPhil
Department of Sports Science
Brunel University
Middlesex
Uxbridge
UB8 3PH

Dear Player,

As part of the match analysis work that I will carry out with the [REDACTED] U18 team, I am writing to ask you to take part in a study to evaluate the work that we will undertake this season. This would involve recording the performance analysis feedback sessions for analysis to assess the future work that we will undertake.

This research will form part of my PhD program at Brunel University to examine the perceptions of usefulness of match analysis. The results of the analysis will be summarised and may be published, although your names and the players' names will not be included (unless otherwise agreed).

Yours Faithfully,

Ryan Groom BSc, MPhil

Player Voluntary Informed Assent

I have read the above informed assent. The nature, demands, risks and benefits of the project have been explained to me. I understand that I may withdraw my consent for the squad and discontinue their participation at any time with out penalty or loss of benefit to myself.

PlayerDate.....

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

Researcher's Signature.....Date.....

Appendix 8

R Groom BSc, MPhil
Department of Sports Science
Manchester Metropolitan University
Crewe Green Road
Crewe
Cheshire

21/0/2010

To: [REDACTED]
[REDACTED] FC

Dear [REDACTED],

As part of the research and match analysis work that I have carried out with you and the [REDACTED] U18 team, I would like to interview you regarding your thoughts and your experiences regarding the development of your professional practice. Starting with our initial work together at [REDACTED], I would like to examine; what, if and how your professional practice has changed and developed regarding the delivery of video-based performance analysis.

This research will form part of my PhD program at Loughborough University and elements of the work may be published in academic journals, although your identity will remain anonymous unless otherwise agreed by yourself. I will present a copy of my findings back to you as soon as possible.

Yours Faithfully,

Ryan Groom BSc, MPhil

Coaches Voluntary Informed Consent

I have read the above informed consent. The nature, demands, risks and benefits of the project have been explained to me. I understand that we may withdraw our consent and discontinue participation at any time with out penalty or loss of benefit to myself.

Coaches Signature.....Date.....

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

Researcher's Signature.....Date.....

Appendix 9

Coaching Demographic Information

Name:.....

Age:.....

Coaching Experience (Years):.....

Years of Professional Coaching Experience:.....

Highest Coaching Qualification:.....

Highest Level Played at:

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Other Related Qualification:

(e.g. Teaching Certificates, FA Tutor)

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Squads Worked With (please describe role head coach/assistant coach etc.)

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Have you ever received video analysis as a player? If so what was your opinion of it from a player's perspective?

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Study 3 Example Interview Questions

Q1. Starting with your time at [REDACTED] FC how would you describe your early coaching philosophy, the things that you thought were important and how did you see yourself as a young coach?

- Is there anything that stands out early in your practice when you said ‘I definitely wouldn’t do those things now’, any specific examples?

Q2. What are your memories from working with U18 team, good memories and bad memories, at that time in your coaching career?

Q3. How would you describe the whole context; you know your role, working with the players and the environment with that U18 team?

- What were your main sort of duties and roles?

Q4. What was it like the balance between development and winning with that squad?

Q5. How would you describe that U18 group?

- The talent that was available to you and the character of the players?

Q6. How would you describe your role at [REDACTED] FC now?

- How is it different? What are your roles and responsibilities with the first team?

Video Reflection

I would just like to show you some examples; When we worked together at [REDACTED] FC we recorded 10 of the sessions at [REDACTED] FC, I’ve just got some different examples of different phases that I would like you to have a look at of your early practice, so if anything comes up you can stop it or just say what you are thinking, your kind of reflections on this

- If I just stop that there for the moment, are you watching that example, what do you think looking back on that now? How do you reflect on the early experience?
- What are your thoughts on that there?

Appendix 10

CHAPTER 21: CONVERSATION ANALYSIS

Ryan Groom Manchester Metropolitan University, UK

Lee Nelson University of Hull, UK

Paul Potrac Edge Hill University, UK

Christopher Cushion Loughborough, UK

INTRODUCTION AND OVERVIEW

The interactions that occur between coaches and athletes within the coaching context are widely acknowledged to be a central feature of sports coaching (e.g. Arripe-Longuville et al. 2001; Cushion and Jones 2006; Purdy et al. 2008). However, few methods for studying the use of language have been employed in the sports coaching literature in comparison to the techniques and procedures employed within the social sciences. Phillips and Hardy (2002) have highlighted that such approaches are often collectively termed “discourse analysis” and aimed at exploring the relationship between the practices of talking, writing, and reality through the analysis of data from interviews, documents, political speeches, and naturally occurring conversations (see Chapter 20). Whilst there are similarities across the range of methods for analysing interactions, these approaches are often underpinned by differing ontological (the nature of reality), epistemological (the nature of knowledge) positions with regard to the importance placed upon the social and historical context, the role of the analyst in interpreting the data, and the empirical material under investigation. This chapter principally focuses upon conversation analysis (CA) as a methodological approach to better understand the nuanced, temporal, initiation, reaction and exchange processes that

occur within coaching contexts (Jones et al. 2010). Informed by a “social research” approach, the aim of such investigation is to produce knowledge through the inspection of empirical evidence to understand the structures and processes evident in “the social world” (Ten Have 2004). Through such an investigation, we argue that some of the everyday realities, structures and processes of sports coaching may become more visible and thus better understood.

Why do CA?

Within sports coaching, CA is an under used methodological approach which holds a great deal of potential to further understand the interactions that occur between coach and athlete within the coaching context for the following reasons:

1. CA is empirically grounded and therefore well placed to generate the sort of discoveries that can inform practice.
2. Its focus on practical accomplishments through interaction establishes a natural link with professional practice
3. Because its raw materials are publically observable phenomena, these are available as resources in any subsequent training interventions.

(Richards 2005: 4)

Therefore, CA offers a potentially fruitful avenue to ‘understand broader interactional practices of coaches’ and ‘move beyond the current tendency to treat coaching as a series of unconnected episodes, which can be dissected and its parts aggregated’ (Groom et al. 2012: 454).

Language as a cultural resource

Language is of central importance to understanding human interaction as ‘whatever their characteristics, it appears that all societies and sub-units have a central resource for their integration and organization of interaction – an organization informed by the use of language’ (Schegloff 2007: xiii). This is the first key concept that highlights the importance of CA (the why of CA), which drives researchers to further explore how people go about making sense of each other in their day-to-day interactions and in context specific situations (e.g. student-teacher, a doctor-patient or coach-athlete etc.). When studying interactions, a number of methodological choices are available. However, all approaches to the study of “talk-in-interaction” necessitate that words or utterances in interaction are the central phenomena under investigation. Therefore, this approach to studying sports coaching differs methodologically from other approaches as the study of language more directly captures the on-going empirical events of interest (i.e. talk in interaction).

Interaction as social order

The second key concept to understand when undertaking CA is that interactions are patterned and ordered, and the purpose of CA is to make this social order clearer

through analytical inspection. In laying the foundations for the study of interaction, Goffman (1955, 1983) established that social interaction is a form of social order, which comprises of interactional rights and obligations, termed the interactional order. Here, Goffman (1967) noted that interaction has an underlying structural organization or syntax, stating that ‘I assume that the proper study of interaction is not the individual and his psychology, but rather the syntactical relations among acts of different persons mutually present to one another’ (Goffman 1967: 2). It is through this syntax that provides participants in interaction with the sequential ordering of actions (Goffman 1971). An example of the patterning of interactions that we might see in conversations would be that: one party talks while the other party listens, and during this time the party that listens pays attention to what is said and responds accordingly (Schegloff 2007). Importantly, Heritage and Clayman (2010) explain that through Goffman’s view, interaction is the site where face, self, and identity are expressed. Therefore, through an analysis of such structures people’s motivations and identities can be established. While Goffman viewed the organization of interaction to be a domain to be studied in its own right, he did not propose a systematic methodological approach to understand the structures and rules within talk-in-interaction (Heritage and Clayman 2010).

CA’s ontological, epistemological, and theoretical position

Although influential, Goffman was interested in how face and identity are associated with action and the motivation of moral conduct, rather than examining how participants understand one another within interaction (Heritage and Clayman 2010). Therefore, questions regarding the structure of the interaction itself and shared

understanding within interaction remained unexplored. Here, the work of Harold Garfinkel highlighted that all human action, including Goffman's work on interactional order, is built upon the foundation that people are able to make shared sense of situations throughout interactions, which enables people to understand situations (Heritage and Clayman 2010). Garfinkel's theoretical contribution towards the development of conversation analysis is based upon his work outlining ethnomethodology (Garfinkel 1967), which has been described as a kind of social inquiry that focuses upon 'the ways in which collectively members create and maintain a sense of order and intelligibility in social life' (Ten Have 2004: 14). In further explaining ethnomethodology's theoretical position Garfinkel (1967) states that 'I use the term "ethnomethodology" to refer to the investigation of the rational properties of indexical expression and other practical actions as contingent ongoing accomplishments of organized artful practices of everyday life' (Garfinkel 1967: 11). Here, indexical expressions relate to local, time-bound and situational aspects of action, whose sense depends upon the local circumstances in which they are uttered, such as "you" and "yesterday" (Ten Have 2004). Ethnomethodology's ontological position (nature of reality) is rooted within social constructionism, where 'social phenomena and their meanings are constantly being accomplished by social actors' (Bryman 2001: 18). Therefore, conversation analysis aims to reveal the organization and construction of social reality by participants within interactions (Seedhouse 2005). From an epistemological (nature of knowledge) perspective, conversation analysis is located within a phenomenological paradigm with the aim of examining common-sense thinking through the analysis of the procedural infrastructure of situated action (Seedhouse 2005; Ten Have 2007). Following the work of Garfinkel (1967), Harvey

Sacks 'was on the look-out for new possibilities for doing sociology, which might provide alternatives to the established forms of sociological discourse' at the time, with particular emphasis on the treatment of empirical materials (Ten Have 2007: 7). Here, Sacks developed the notion of sequential analysis, which forms the basis of CA (Ten Have 2004).

APPLIED ISSUES AND CONSIDERATIONS

A number of analytical tools are available for the conversation analyst. However, all CA work requires utterances to be recorded and transcribed in a great deal of detail to capture the interactions 'as they are'. This section will focus on selecting and recording interactions, transcribing and annotating text, and the CA concepts of turn taking, adjacency pairs, and error repair (the how of CA). Within this section, we will draw on interactional examples from our work undertaking CA in sports coaching (Groom et al. 2012).

Selecting and recording interactions

The first consideration when undertaking conversational analysis work is the specific research question that you are trying to address. This raises a number of initial questions:

1. What kind of interactions between the coach and athlete are you trying to understand?

2. What are the ethical issues and potential consequences of such an analysis?
3. How can these interactions be best captured and recorded (video/audio)?

In considering Question 1, it is worthwhile examining the existing body of literature in sports coaching and identifying a specific research question that may add to our theoretical and/or empirical understanding of sports coaching (see Chapter 7). For example, you may decide that you would like to explore the patterning of interactions between a coach and a group of athletes over the course of a competitive season to explore how the team's results impact the coach-athlete interactions. Following the selection of a research question, the next stage is to consider access and ethical issues regarding the data collection and analysis (Question 2). For example, you may need to consider the impact of your observations and analysis on the coach-athlete relationship or how the data collection may impact on your relationship with the coach during ethnographic work. Other potential ethical issues may include consideration of anonymity of the participants, the age and consent of the participants and what you will do with the data once collected and analyzed (i.e. publication in a journal article or presentation at a conference). These issues need to be considered early in the process and fully explained to the participants as part of your voluntary informed consent (see Chapter 10). Once these issues have been considered the next stage is to start to plan the collection of data (Question 3). During this phase it is important to ensure that you can gain access to the population under investigation and that you can record the interactions that take place in a naturalistic manner, whilst retaining a high level of audio quality for later analysis. In our work (Groom et al. 2012), the classroom environment provided an excellent physical space to both audio and video record the

coach-athlete interactions away from potentially difficult weather conditions and large distances between the coach and the athlete on the training field.

Transcribing and annotating text

The analysis process involves a detailed understanding of both the symbols and procedures of CA and the development of the skills to listen and analyze in detail the subtleties of interactions that CA is based upon. Some textbooks in this area provide excellent examples of annotated text and the accompanying audio files (e.g. Schegloff 2007). For coaching scholars working within a university setting, you may be lucky enough to have a sociology department with experts in CA who may be able to guide you in the early stages of your work. Alternatively, a number of professional companies exist, who specialize in the transcription of CA that may be able to help you work with your data. A good tip here is to speak directly to the analyst involved in your work and explain the purpose of your research and the particular form of transcription and annotation that you would like to use on your work. The following example (Example 1) is taken from the work of Groom et al. (2012: 447-48) and highlights a series of recorded interactions between a Head Coach (HC) and his group of players (P1-P24) in a video-based feedback session. At this point we have removed the conversation analysis annotations for reader clarity.

Example 1:

1 HC: Alright inswinging free kick we have two on 'im initially one
2 comes off it, so we don't need two out there cos it's not a sh-

3 it's not a shot so he's done the right thing coming off it but then,
4 whoever it is I'm not exactly sure who it is runs back in and does
5 does nothing look at this one player here unmarked marked
6 by him one player here unmarked so one for one
7 man one for one man one for one man another one
8 one for one man there
9 P1: ((coughs))
10 ((pause))
11 HC: Is that one of ours?
12 P1: No, no that's me I come across
13 HC: That's you, no that's you there isn't it?
14 P1: Yeah
15 HC: So who's that?
16 P3: Player 4 plays there Player 4 was there
17 P?:
18 HC: Right so he's, we have to say that he's unmarked then?
19 not marked the right side okay, is he marked?
20 P7: I was at the back
21 HC: You just said you were marking 'im?
22 P7: Yeah
23 HC: Okay
24 HC: Right both those players unmarked
25 P?: (?)
26 HC: Right
27 P6: One of the refs blocking off the deep one
28 ((pause))
29 P6: One of our players near the ref
30 HC: There
31 P6: Yeah screening off
32 HC: Yeah this player we'll take that that's the ball that's okay so
33 basically we've gone one, two, three, four players unmarked
34 four players unmarked in a set piece from the start

Whilst this example is a verbatim transcript of the interactions, there remains a lack of detail about how the utterances were articulated by the participants. From a CA perspective, this level of transcription fails to consider important information regarding meaning in this context. In this respect, conversation analysts contend that 'one wants to write down not only what has been said, but how it has been said' when analysing talk in interaction (Ten Have 2007: 94); thus capturing the phonetic properties of utterances.

The following example (Example 2) is the same passage of interaction taken from Groom et al. (2012: 447-48) but includes the CA notations outlined in Table 6.

Example 2:

1 HC: Alright inswinging free kick (.) we have ↑two on ‘im initially (0.4) one
2 comes off i:t, (1.2) >so we don’t< need two out there (.) cos it’s >not a sh-<
3 (.) it’s not a shot so he’s done the right thing coming off i:t (.) but then, (.)
4 whoever it is (.) I’m >not exactly< sure who it is runs back in and (0.4) doe:s)
5 (.) does nothing (.) look at this (3.6) one player here unmarked (1.0) marked
6 by him (0.8) °(?)° (0.6) one player here (2.4) unma::rked (.) so o:ne for one
7 man (0.4) one for one man (.) >one for one man< (2.8) >(another) one< (0.8)
8 one for one (man)/(there)
9 P1: ((coughs))
10 (0.4)
11 HC: °Is that (one of ours)°
12 P1: No: °no° (.) that’s me I come across
13 HC: That’s you, (.) no that’s you there isn’t it
14 P1: °Yeah°
15 HC: So who’s that
16 P3: [(Player 4 plays there (.) Player 4 was there)]
17 P?: [(?)]
18 HC: Right (.) so he:’s, (.) we have to say that he’s unmarked (then)/(man) (.) he’s
19 not marked the right side (0.8) okay, (0.6) ↑is he marked?
20 P7: °I was (?) (at the back)
21 HC: You just said you were marking ‘im,
22 P7: °Yeah°
23 HC: Okay
24 HC: Right both those players unma:rked
25 P?: (?)
26 HC: Right
27 P6: One of the refs (.) blocking o:ff (.) the deep one
28 (0.8)
29 P6: One of our players (near the) refs
30 HC: There=
31 P6: =Yeah screening off
32 HC: °Yeah° (.) this playe:r (we’ll) take that that’s a (?) the ball that’s okay (.) SO
33 BASically we’ve gone ONE (.) two (.) three (.) FOUR players unmarked
34 (0.6) four players unmarked (.) in a set piece (2.8) from the sta:rt
35 (13.8)

Many readers might be put off by CA annotations. This is understandable, as the text often appears intelligible at first sight. Indeed, to start with it is often advisable to have copies of not only the transcribed and annotated utterances of text but also of audio files to listen to talk as you read the annotated data.

INSERT TABLE 6 ABOUT HERE

Once the data has been transcribed using the symbols of CA the pauses, emphasis and sequencing of the interactions (including speakers talking over each other) become more visible. This is one of the strengths of the conversation analysis approach, highlighting the detail in the analysis and transcription all of which have meaning for participants in interaction. This is the key to CA work. Once the data has been annotated you are now in a position to explore the utterances to highlight key patterns in interaction such as turn taking sequences, adjacency pairing, and error repair.

Turn taking

One of the major features of conversation analysis is “turn taking”. Turn taking is a process by which interactants allocate the right or obligation to participate in an interaction, which is interactionally managed (locally within the interaction) and structurally constrained (Sacks et al. 1974). Therefore, within conversations and

dialogue one person tends to speak (takes their turn) while the other person listens. The following example taken from the previously presented Groom et al. (2012: 448) excerpt, highlights how the interactions between a coach and athlete comprise of turns (Turn 1 line 29, Turn 2 line 30, Turn 3 line 31).

Example 3:

29 P6: One of our players (near the) refs
30 HC: There=
31 P6: =Yeah screening off

Adjacency pairs

Schegloff (2007) highlights that adjacency pairs are characterized by a minimum of: (a) two turns, (b) by different speakers, (c) adjacently placed (one after the other), and (d) that are relatively ordered by a first part (i.e. the initiation of an exchange such as a question, request, offer, invitation announcement) and second part (i.e. answer, grant, reject, accept, decline, agree/disagree, acknowledge). In the following example, the participants (i.e. athletes) recognise that they should follow these interactional rules as a moral obligation (i.e. I ought to respond to the request), therefore the turn-taking system can be seen to be an act of normative organization in its own right (Heritage 2005). This can be seen in the following example taken from Groom et al. (2012: 448).

Example 4:

13 HC: That's you, (.) no that's you there isn't it
14 P1: °Yeah°

As you can see, the two utterances in Example 4 consist of two turns, by different speakers, adjacently and relatively ordered; in that, the Head Coach asks the athletes a question (line 13) and one of the players (P1) responds affirmatively to this question (line 14). Therefore, this small sequence of interaction is adjacently paired.

Error repair

However, sometimes during interaction the natural order of turn taking can be disrupted when a speaker speaks out of turn. To correct this “interactional error” error repair devices are used in conversations. The work of Jefferson (1974) highlights how error correction is a form of interactional resource. The following example (Example 5), again taken from the previously identified Groom et al. (2012: 450) data extract, highlights a basic example of an error repair in a conversation. Following the description of the team conceding a goal (lines 16 -20), one of the players (P1) starts to speak (line 21). However, as the coach continues his analysis P1 stops talking. This is an example of an error repair. Following this the Head Coach later asks P1 what he was saying (line 24), to which P1 responds (an interaction that is an adjacency pair).

Example 5:

16 keep going (3.8) (°is he here°) (P8 that's your man) just let 'im go (0.4) just
17 come ri:ght off (you)/(him) (2.8) three mistakes <number one we don't get
18 marked up early enough in the box, (.) man for man we don't win that
19 header, (0.4) and people swi:tching off <again look stop there >just a<
20 minute (.) just ↑(peo-), (.) you're not near anybody,

21 P1: (I ju-)
22 HC: You're not (.) you're not (.) and ↑you're not (.) there's too many players that
23 a:ren't (bu:y) people locking in on people >getting< goalsi:de of people (0.4)
24 what were you saying P1?
25 P1: Cos I was ma:rking (?) (the man) (?) (my 'ead) (.) (and as I was marking the
26 sta:rt 'ee runs out (.) and another person runs in now look (.) (here) (look)
27 look what's going on there

REFLECTIONS FROM THE FIELD

Whilst conversation analysis work is typically based upon analysing the interactions between people in everyday conversations, the analytical tools offer us a great deal of potential to further understand the essence of those interactions that occur in sports coaching contexts. Our journey to undertake a CA project in sports coaching (Groom et al. 2012) started with an interest in trying to understand: how coaches coach, and what the mechanisms coaches use in interactions are. Through engaging in the CA literature a number of features and techniques were evident which appeared useful to offer a means of exploring the temporal nuances of coach-athlete interactions (Jones et al. 2010). We felt that CA offered the most advanced theoretical and procedural analytical approach to dealing with these feature of talk in interaction. That is, other approaches were unable to capture the same degree of detail as CA once the utterances had been converted to text.

However, one of the main challenges in undertaking our work was to address one of the major criticism of CA, that despite having its 'origins in the discipline of sociology, CA is frequently criticized for being unresponsive to what might be called the "sociological agenda" – concerned with the analysis of class, power, ideology and related social structures' (Hutchby and Wooffitt 2008: 208). Therefore, in an attempt to overcome this

issue we provided a traditional institutional CA analysis of talk in interactions using line numbers for reference and CA annotations within the analysis (cf. Sacks et al. 1974) but also a secondary theoretically based analysis drawing upon Heritage's (2005) concept of "work-task-related identity" and B. H. Raven's work on social power. This multilayer analysis enabled us to better explain the sequential organization of the interactions and the on-going construction of the social identities of the interactants within the coaching context. However, one of the concerns that we have with our work is that the CA annotations will prevent other researchers reading and engaging in our work, even though we feel that the work has made a novel contribution to understanding the patterning of coach-athlete interaction with our field.

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