

An in-situ exploration of the reflection &  
experience-based learning of professional  
football players and coaches

By

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## **Abstract**

The aim of the current thesis was to critically examine the reflection and experience-based learning of professional football players and coaches at a football club. Specific attention was paid to the influence that the social environment had on players' and coaches' experiences and the extent to which they influenced each others experience-based learning and reflective practice. A case study approach using semi-structured interviews and ethnography including participant observation, informal interviews and audio/video recordings informed the current research. Schön's (1983) experience-based theory of learning and reflective practice was used to represent coaches' and players' reflective practice prior to the application of Foucault (1972, 1979, 1988, 1991a) as social theory. It was found that an institutionally reproduced discourse, which emphasized the importance of winning, governed both coaches' and players' experience-based learning at the club. Positive discourses of reflection were introduced by coaches and embodied by willing and docile players due to the added legitimacy that was associated with their knowledge. Players' reflective practice represented a technology of power as it was dominated by their coaches' presence and resulted in players' interpretations being normalised to the extent that they became self-surveillant. Players' compliance contributed to the construction and reproduction of an overarching disciplinary culture of surveillance that was initially introduced by the club's coaches and made possible through the constant assimilation of data and different forms of performance monitoring (i.e. GPS, video-based PA, physical testing).



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# **Chapter 1. Introduction**

## **1.1 The Current Research Landscape**

Historically, reflection has been conceptualised as “an active persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads” (Dewey, 1933, p.9), and this conceptualisation has informed subsequent interpretations of reflective practice (e.g. Gibbs, 1988; Ghaye & Lillyman, 2000; Lynch, 2000; Dimova & Loughran, 2009). Therefore, an understanding has been developed that “through reflection, he [an individual] can surface and criticise the tacit understandings that have grown up around the repetitive experiences of a specialised practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience” (Schön, 1983, p. 61). Thus, in sport a consensus has been established that learning occurs as a result of experience (Salmela, 1995; Gilbert & Trudel, 2001; Jones, Armour & Potrac, 2003; Irwin, Hanton & Kerwin, 2004; Jones, Armour & Potrac, 2004a; Abraham, Collins & Martindale, 2006; Erickson, Bruner, MacDonald & Côté, 2008) and learning only occurs when an individual actively reflects upon their experience and changes their perspective when encountering similar situations again.

A range of sport related studies investigating reflection have considered how coaches frame their own roles (e.g. Wilcox & Trudel, 1998; McCallister, Blinde & Weiss, 2000; Gilbert & Trudel, 2004a; Lemyre, Trudel & Durand-Bush, 2007), sport coaches’ reflective practice (e.g. Borrie & Knowles, 1998; Borrie et al., 1999; Knowles, Gilbourne, Borrie & Nevill, 2001; Knowles, Tyler, Gilbourne & Eubank, 2006; Ghaye, 2008; Knowles & Gilbourne, 2010)

and how coaches learn from their experiences (e.g. Gilbert & Trudel, 2001). These studies have tended to rely either on Kolb (1987, 2005) (e.g. Irwin et al., 2004; Abraham et al., 2006; Turesky & Gallagher, 2011) or Schön's (1983) theory of experience-based learning and reflective practice to interpret coaches' experiences (e.g. Gilbert & Trudel, 2004a; Lemyre et al., 2007), while Gilbert and Trudel (2001) built on Gilbert's (1999) reflective conversation interpretation of Schön (1983) to locate how youth sport coaches learnt from dilemmas where the outcome was unexpected.

Despite the considerable research that has investigated reflective practice in sport, however, the conceptual lens has remained largely consistent and accepted uncritically (Fendler, 2003). Moreover, current conceptualisations and models of the reflective process have portrayed it as a relatively simplistic and sequential process that operates largely uninfluenced by the social context in which it occurs. As a result, little attention has been paid to how individuals establish their own definitions and understanding of reflection and the impact that this may have on their reflective practice. Therefore, the social factors that influence the process and the individual have tended to be neglected. Reflection has been portrayed as an unbiased and objective process that occurs in a politically neutral environment (see Cotton, 2001; Fendler, 2003). As a result, reflection's position as an "academic virtue and source of privileged knowledge" (Lynch, 2000, p 26) has remained unchallenged. While previous research has acknowledged the importance of the learning environment (e.g. Hodgkinson, Biesta & James, 2008) it has done so in relation to an individuals access to learning opportunities, rather than

considering the influence of context upon an individual and the lens through which they reflect (e.g. Gilbert & Trudel, 2005).

One resource that has become especially prominent within many professional sporting environments in recent years is video-based performance analysis (PA) – (see Hughes & Franks, 2004; Lago, 2009). As a result video-based PA “is now widely accepted among coaches, athletes, and sport scientists as a valuable input in the feedback process” (Drust, 2010, p. 921) partly due to the development of computer and video aided analysis systems, which have allowed for the efficient and accurate objectification of sporting performance (Mackenzie & Cushion, 2013, p. 1). In the knowledge that athletes learn as a result of their experience (Salmela, 1995; Gilbert & Trudel, 2001; Jones et al., 2003; Irwin et al., 2004; Jones et al., 2004a; Abraham et al., 2006; Erickson et al., 2008), the ability to immediately or retrospectively re-examine previous experiences may have significant implications for the manner in which athletes learn from and reflect on their experiences. Little research to date, however, has considered the role of video-based PA within athlete learning.

Moreover, video-based PA delivery, like coaching, is a socially located activity where interaction between player and coach are fundamental to its potential effectiveness (Cushion & Jones, 2006; Potrac & Jones, 2009; Thompson, Potrac & Jones, 2013), yet little is currently known about the dissemination of video-based PA from a social perspective. It has also been proposed that our knowledge about the role and function of video-based PA in the applied setting is relatively limited (Groom, Cushion & Nelson, 2012).

Traditionally, video-based PA has been portrayed as a positive addition to the coaching process by coaches and athletes (e.g. Carling et al., 2005; Drust, 2010; Groom et al., 2011; Wright, Atkins & Jones, 2012; Reeves & Roberts, 2013), but the mechanisms through which individuals' practice is influenced remain unknown. Studies have investigated the perspectives of individuals involved in the compilation, dissemination and receipt of video-based PA (Groom & Cushion, 2005; Groom et al., 2011; Reeves & Roberts, 2013) but research has not yet considered locating video-based PA within a theoretical learning framework. As a result, our understanding of the relationship between video-based PA, experience-based learning and the reflective practice of both coaches and athletes is limited. At the same time, the perceived positive benefits of video-based PA remain critically unchallenged.

However, recent work by Groom et al. (2012) found that a professional youth coach delivered video-based PA in a predominantly authoritarian manner to ensure that he was able to maintain control over the structure of the analysis session. Manley, Palmer and Roderick (2012) adopted a Foucauldian interpretation of the use of video analysis in a professional football Academy, and found that it was used as a mode of surveillance and a disciplinary mechanism that allowed for the promotion of normative behaviours (Foucault, 1979; Lyon, 1993; Gad & Lauritsen, 2009; Young, 2012). As a result, the social environment and culture in which this interaction occurs may have a significant impact on the way video-based PA is interpreted and acted upon by individuals who are exposed to it (Hodkinson et al., 2008; Manley et al., 2012).



Matsumoto (1996) describes culture as being “the set of attitudes, values, beliefs, and behaviors shared by a group of people, but different for each individual, communicated from one generation to the next” (p. 16). Therefore it is suggested that the culture that has been created and developed by individuals within a given sports organisation may have an influence on the way in which video-based PA is used and also perceived. In primarily disciplinary environments, it could be possible that coaches may use video-based PA to gain a level of social control over their athletes as opposed to using it as a way to empower them with newfound knowledge (Foucault, 1991b; Denison, 2007; Lang, 2010; Groom et al., 2011). More sociological theoretical frameworks such as that proposed by Foucault (1972, 1979, 1988) have been advocated for future research (e.g. Groom et al., 2011, 2012; Manley et al., 2012) as they allow for the perspectives of coaches working with video-based PA to be examined whilst investigating the potential contribution that it may have to larger cultural phenomena.

More contemporary research supports the importance placed on the coach’s role in how athletes experience video-based PA. Bampouras, Cronin and Miller (2012) established that the role of the coach within the process of disseminating video-based PA findings can be likened to that of a “gatekeeper” (p.473). They suggested that the compilation of video-based PA content itself can be described as a “black box” (p. 476) in which coaches’ and sports scientists’ prior experience informs what is delivered to players and athletes. Subsequently, the notion that athletes may be subjected to video-based PA instead of occupying an active role in the decision-making process

is also considered (Bampouras et al., 2012; Nelson, Potrac & Groom, 2014). This not only challenges traditional expectations of athlete involvement and ownership in the learning process (Moon 1999a, 1999b; Gilbert & Trudel, 2001) but it also aligns itself with Foucauldian notions of surveillance and discipline given the lack of autonomy relating to their own experience (Foucault, 1991a). In doing so a level of self-determined responsibility appears to have been assumed by coaches within the process of both compiling video-based PA related insights and also in the delivery of analysis sessions. The results of contemporary research (Bampouras et al., 2012; Manley et al., 2012; Nelson et al., 2014) demonstrate that there are gaps in our knowledge and understanding relating to the use of video-based PA within the applied setting. Therefore, critical examinations of the role that video-based PA occupies within reflection, learning and coaching discourse and the immediate performance environment are required.

The concept of discourse was central to Foucault's understanding of how individuals both develop knowledge and also interpret their own experiences and accept certain forms of practice (Smart, 2004). Discourses have been described as practices that "systematically form the objects of which they speak" (Foucault, 1972, p.182) or more recently as "the unwritten rules that guide social practices, produce and regulate the production of statements, and shape what can be perceived and understood" (Denison & Scott-Thomas, 2011, p.29). In the context of this research, the manner in which discourse relating to reflection, learning and coaching has been introduced and established is pivotal to understanding players' and coaches' behaviour.

The environment in which reflection, experience-based learning and the dissemination of video-based PA occur may also have a substantial influence on an individual's experience (e.g. Fejes, 2008; Hodkinson, et al., 2008; Lang, 2010; Groom et al., 2011, 2012). This is especially significant in the context of sports such as professional football, where the culture has been found to exhibit unique disciplinary, unsupportive and power-driven characteristics (e.g. Cushion & Jones, 2006; Parker, 2006; Roderick, 2006a, 2006b; Potrac & Jones, 2009; Cushion & Jones, 2014). For example, Manley et al. (2012) investigated professional youth football to assess the culture in which young players attempt to "make the grade". It was concluded that irrespective of their links to performance enhancement, sports science measurements such as "body weight, hydration levels, heart rate, speed, fitness and physical strength" (p.309) created a culture of surveillance in both professional youth rugby and football. The multitude of performance indicators that can be measured in modern sport created an oligopticon (Latour, 2005) of surveillance for the club's hierarchy in which socially accepted "norms" (Foucault, 1991a) were reinforced and encouraged. Oligopticon surveillance in this context refers to the multiple sources of information that were collected on players' performances through which "sturdy but extremely narrow views of the (connected) whole are made possible" (Latour, 2005, p.181). In short, multiple assessments and forms of feedback from coaches or sports scientists acted as a level of surveillance that allowed for players to be assessed in line with expected standards across a whole host of performance areas. By pooling these different forms of surveillance, a holistic understanding of players' performances was made

possible by the Academy manager, rather than relying on a more central point of surveillance, commonly referred to as panopticon surveillance (Bentham, 1995).

It was found that young players aligned their behaviour with the feedback that was given to them by coaches and sports scientists regarding how they needed to improve their overall game, as they were conscious that their future performance would be equally scrutinised. This capillary-like network of surveillance employed in both professional youth football and rugby ensured that players attempted to be self-surveillant in order to try and impress the individuals who made the decisions about their future careers (Manley et al., 2012). Foucault proposed that a notable by-product of the successful implementation of disciplinary power was that individuals may become self-surveillant (Foucault, 1991a). In a sporting context specifically, this interpretation suggests that if coaches manipulate and maintain control over various spatial and temporal constraints (such as the content and duration of coaching sessions), whilst also using forms of surveillance to assess their athletes' performances, these athletes become self-surveillant. In this process, athletes begin to align their own behaviour with the demands of their coaches autonomously, in order to avoid punishment and enhance their chances of being selected in the team. Therefore an interdependency exists between Foucault's disciplinary power and the creation of self-surveillant individuals (Foucault, 1991a).

Similar levels of docility amongst football players were described by Cushion and Jones (2006, 2014) who following a 10 month ethnography found that a disciplinary culture at a professional football club Academy was underpinned by coaches' use of symbolic violence and their emphasis on winning. Given their position as gatekeepers to players' future success, young players demonstrated a willingness to be complicit and in doing so helped reproduce the performance culture that existed (Cushion & Jones, 2006, 2014). Cushion, Armour and Jones (2006) suggested that in-situ approaches to research such as these allow for the social dynamic between key stakeholders and an organisations overarching culture to be investigated more thoroughly than with interviews alone.

Foucault (1972, 1979, 1988, 1991a, 1991b, 1999) has often been used in case study research as a theoretical framework with which to challenge assumptions and generate a level of understanding relating to environmental conditions. In addition to Manley et al. (2012), a similar approach was adopted by Lang (2010) who used Foucault to examine the techniques that were employed in swimming by coaches to ensure surveillance and discipline within their athletes. As alluded to earlier, these are key Foucauldian themes; he was concerned with how the management and control of individuals' actions allow for disciplinary power to be exerted and maintained through the use of surveillance techniques (Foucault, 1991a).

Moreover, Denison (2007) used Foucault to interpret an otherwise unquestioned athletes poor performance. As a result, it was concluded that a lack of input into their own training regime and location may have contributed

to them being docile and potentially demotivated (Denison, 2007). These three studies emphasise the value of using social theory to investigate the influence that a culture may have on individuals operating within a given environment.

Interestingly, Foucault (1988) has also been used in a handful of studies to critically examine reflection and the disciplinary qualities that reflection may possess (e.g. Cotton, 2001; Fendler, 2003; Fejes, 2008). In a similar vein the current research sought to develop this critical line of enquiry into an examination of players' and coaches' own reflective practice, experience-based learning and their experiences of video-based PA in the context of Schön's (1983) experience-based theory of learning and reflective practice. Such an approach provides an opportunity to add to the current body of research by considering the relationship between reflection and video-based PA whilst also examining the influence of the culture in which it occurs (see Groom et al., 2011, 2012).

Therefore given the plethora of research that has focused on reflection and video-based PA in isolation (e.g. Knowles et al., 2001; Carling et al., 2005; Knowles et al., 2006; Ghaye, 2008; Knowles & Gilbourne, 2010; Wright, Atkins & Jones, 2012; Reeves & Roberts, 2013), whilst neglecting the potential social factors that may influence individuals' experiences, an alternative and more socially inclusive approach is required. The aim of this research was to critically address reflection, experience-based learning and the use of video-based PA within the context of a professional football club. The significance of the research is reflected in the unique critical approach

that was implemented and the new knowledge and understanding that has been generated about previously un-investigated social factors relating to reflection and experience-based learning. By implementing social theory (Foucault, 1972, 1979, 1988, 1991a, 1999b, 1999) to critically examine how the social environment influenced the learning experiences of individuals who co-existed within the same culture in-situ, the interaction that occurred between key stakeholders and their respective influences on each other were investigated.

To date, no previous research in sport has critically challenged the role of reflection from a social perspective, or considered the perspectives of players and coaches simultaneously within the same sporting organisation. The research also critically examined the role of video-based PA within players' and coaches' reflection and experience-based learning, which has not previously been considered. In doing so, the research challenged commonly held assumptions regarding reflection, experience-based learning and the use of video-based PA, whilst addressing current gaps in our knowledge and understanding about their application in the applied setting.

## **1.2 Research Questions**

Given that the current thesis was a case study, which examined the culture at a professional football club, it was important to establish how both reflection and coaching had been conceptualised and defined amongst the key stakeholders at the club. In order to achieve this, Foucault's fundamental concept of discourse was used in order to establish how understanding and knowledge relating to both reflection and coaching had been developed and

who the main contributors were to that knowledge construction (Foucault, 1977). It was also important to investigate the extent to which discourses of coaching and reflection influenced the behaviour of both players and coaches at the club:

- (1) How are discourses<sup>1</sup> of reflection and coaching defined and to what extent do they influence player and coach learning?

The second research question of the thesis revolved around the cultural influence on players' and coaches' behaviour. The first research question was concerned with how discourses were socially created at the club, but the culture itself required significant attention. With this in mind, Foucault (1972, 1979, 1988, 1991a, 1991b, 1999) was used as social theory, so that the prevalent culture at the club could be established. Following this, the learning experiences and reflective practice of both players and coaches were examined in the context of the social environment in which they co-existed. Schön (1983) was used as a theoretical framework to locate the learning experiences of both players and coaches, based on its previous successful application in sport (Gilbert & Trudel, 2001) and the emphasis placed upon the applied practitioner within the framework's initial formulation. In doing so, a holistic and unique approach to understanding the influence of the club's culture was implemented:

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<sup>1</sup> Discourses were defined as practices that "systematically form the objects of which they speak" (Foucault, 1972, p.182)



- (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches?

The third research question related to the influence of video-based PA within players' and coaches' experiences. Whilst much research has assumed that video-based PA plays a pivotal role in the coaching process (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011), little is actually known about the specific function it serves and specific situations where it is particularly useful. This is accentuated from an athlete perspective as few studies have considered their experiences of video-based PA (see Bampouras et al., 2012; Nelson et al., 2014 for exceptions). In this instance, given the apparent link between reflection and video-based PA, the role of video-based PA within players' and coaches' reflection was examined:

- (3) What effect does video-based PA have on players' and coaches' reflective practice and experience-based learning?

Throughout the thesis, the interlinked nature of the social environment, culture and its subsequent impact on the experiences of both the club's players and coaches was considered. As a result, building on research done by Manley et al. (2012), the fourth research question was concerned with investigating whether the culture at the club influenced how video-based PA was used and perceived by the participants (players and coaches). By adopting this

approach, the nuances and gritty reality associated with the dissemination of video-based PA delivery was examined from a social perspective:

- (4) To what extent is the use of video-based PA influenced by the culture in which it is implemented?

### **1.3 The Organisation of the thesis**

Following this chapter there is a *Review of Literature* (Chapter Two), which considers the current experience-based learning and reflection literature, whilst also examining how video-based PA has been positioned within the research following its recent emergence. In doing so, largely uncritical and positive perceptions of reflection are established and discussed in relation to idealistic and simplistic representations of how video-based PA is disseminated in the applied setting. As a result, a need to critically examine reflection and learning from a social and cultural perspective was established. Research that has been undertaken in relation to both sports' coaching and also coaching within the professional football environment is from a social perspective. It is proposed that in order to provide a unique contribution to the existing literature, research should investigate the underlying function surrounding the use of video-based PA, and the reality of how it is actually used. Research that has adopted Foucault as a theoretical framework when investigating sporting environments was also considered in the *Review of Literature* given that a number of Foucauldian concepts such as discourse, power, surveillance and discipline helped inform the interpretation of the data in this thesis.

Following the *Review of Literature*, an extensive *Methodology* (Chapter Three) is presented. Within Chapter Three I outline how I decided upon the research approach that was adopted across the three studies (Chapters Four, Five & Six). Literature is provided to support the applicability of a case study approach given the current and relatively limited understanding that has been generated as a result of previous reflection, learning and video-based PA research. Discussion regarding the assumptions and beliefs that I have accepted given the approach that I have adopted in this thesis is also included. Within the *Methodology* there is also a section that focuses on *Demonstrating Reflexivity and Ensuring Quality Within the Research Process*, providing an insight into my own journey and evolution as a researcher throughout the PhD process. The focus of the PhD has changed significantly since I began the process approximately five years ago so it is important to make the reasons for the current direction and focus of the research as transparent as possible.

This then leads into Chapters Four, Five and Six which are the main research studies. All three of the studies were underpinned by an approach to data collection which consisted of semi-structured interviewing, ethnography and participant observation given that I, as the primary researcher, was positioned in the research setting for 12 months. This approach allowed for coach and player perspectives to be examined individually but with the opportunity to examine the influence of others, and the environment, on their own experiences. Chapter Four specifically addresses research questions (1), (2) and (3), as the experience-based learning and reflection of professional

football players at East United FC is examined. Chapter Five focuses on the experience-based learning and reflection of the coaches at the club and in doing so also addresses research questions (1), (2) and (3). Chapter Six is concerned with investigating the cultural influences that were present at the club from a Foucauldian perspective and addresses research questions (2) and (4) specifically. Throughout Chapters Four, Five and Six links are made to concepts and themes that influenced the experiences of both players and coaches at the club. Finally, Chapter Seven summarizes the thesis, positions the research within the current literature, and acknowledges the limitations of the thesis whilst providing implications for improving practice in the applied setting. Considerations for future research in this area are also suggested.

## **Chapter 2. Review of Literature**

This review of literature outlines the current themes and overall understanding that has been generated within research relating to reflection, experience-based learning, coaching and the use of video-based PA. In order to provide context to how the respective research landscapes have developed, both mainstream and football specific research are considered and discussed. The limitations associated with prominent methodologies that have been used within reflection, experience-based learning, coaching and PA research are also discussed in the context of how future research may attempt to address both similar and different issues within the field. The seemingly interconnected nature of reflection, experience-based learning, coaching and video-based PA is also discussed throughout the chapter; irrespective of the lack of research that has directly considered the links between the concepts. The final part of the chapter relates to the potential application of social theory to future sport research, namely that of Michel Foucault, to critically challenge common assumptions that dominate and underpin the current research landscapes in the fields of reflection and experience-based learning, coaching and PA.

### **2.1 Reflection & Experience-Based Learning**

There has been a significant interest in the concept of reflection during recent years (Jay & Johnson, 2002; Vieira & Marques, 2002; Clarke & Otaky, 2006; Akbari, 2007), attributed to its purpose of contributing to improvements in professional practice (Saylor, 1990; Osterman & Kottkamp, 1993; Hodges, 1996; Swain, 1998; Ghaye & Lillyman, 2000; Johns, 2000; Lynch, 2000; Mayes 2001a, 2001b; Artzt & Armour-Thomas, 2002; Jay & Johnson, 2002;

Margolis, 2002; Moore & Ash, 2002; Rock & Levin, 2002; Tabachnick & Zeichner, 2002; Branch, 2010).

### *2.1.1 A Background to John Dewey & Reflective Thinking*

John Dewey, often considered as a founding father of reflection (Dimova & Loughran, 2009), was eager to make reference to reflection being a conscious process and one that differed from “routine action” (Dewey, 1933, p. 9). He claimed that in routine action, social reality is taken for granted and actions, albeit goal oriented, are not cognitively evaluated where “reflective action is an active persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads” (Dewey, 1933, p.9 as cited by Smyth, 1992, p. 268). To place Dewey’s (1933) understanding of reflection into context, Dimova and Loughran (2009) explained that reflection goes beyond any superficial sense of merely thinking about practice.

Dewey proposed that individuals engage in a process, which is initiated by a *Problem* that is deemed to be a cause for concern. Individuals then engage in *Suggestions* and *Reasoning* stages where “the possibilities that spring to mind when confronted by a puzzling situation” (Dimova & Loughran, 2009, p.207) and the compiling of information, ideas and previous experiences in order to expand on the suggestions occur respectively. It is suggested that the *Reasoning* stage, “develops the idea into a form in which it is more apposite to the problem” (Dewey, 1933, p. 112). Having achieved this, Dewey (1933) concluded the process by stating that *Testing* refers to actively implementing the decision made as a result of the *Hypothesis* stage.

Dewey was, however, eager to explain that while this may be done in either an overt or covert way (Dimova & Loughran, 2009); even if the result is not the desired outcome it is still instructive as it “either brings to light a new problem or helps to define and clarify the problem...Nothing shows the trained thinker better than the use [made of] errors and mistakes” (Dewey, 1933, p. 112-114).

### *2.1.2 Donald Schön's Experience-Based Theory of Learning & Reflective Practice*

Donald Schön based much of his work and understanding of reflection and learning on Dewey (1933) but what makes his work distinct is its link to a practitioner's experience. His understanding of reflection and experience-based learning occurred as a result of case studies that investigated how knowledge was constructed following experience in six professional domains: (a) architecture, (b) psychotherapy, (c) engineering, (d) scientific research, (e) town planning and (f) business management (Schön, 1983, 1987). The common distinction that is often cited between the two approaches is that Schön (1983) interpreted learning as a process that occurred as a result of reflecting upon increased applied practice as a practitioner, whereas Dewey (1933) referred to reflection and learning as rational and scientific thinking that occurred irrespective of practitioner experience (Farrell, 2012). In order to bring context to his proposals Schön (1983) devised a theory of experience-based learning and reflective practice that involved individuals engaging in a *Reflective Conversation* (similar to Dewey's reflective thinking) in response to a problem that is highlighted.

Schön (1983) argued that each learning experience is unique to a practitioner given that their perception of the World and interpretation of any given situation will be different from other practitioners. As a result, practitioners both have and develop *Role Frames* that determine how they interpret the situation and the whole learning process (see Figure 1.). It is proposed that *Role Frames* filter the information that is deemed to be the most salient by the practitioner and allows for relevant and unique problem solving. *Role Frames* are flexible and may vary from situation to situation and may evolve over time following increased exposure and experience; hence the emphasis on learning and development from experience. It is suggested that personal growth, however, only occurs through the reframing of a situation in a virtual environment (i.e. internally). In short, reality is perceived and informed by the content of an individual's *Role Frame*.

Gilbert (1999) explained that Schön's theory of experience-based learning and reflective practice is underpinned by six assumptions; (1) learning is best conceived as a process rather than an outcome, (2) learning is a continuous process grounded in experience, (3) learning requires the resolution of conflicts, (4) learning is a holistic process of adaptation to the World, (5) learning involves constant transactions between the person and the environment and (6) learning is the process of creating knowledge. Arguably, Schön's (1983) theory of experience-based learning and reflective practice stands apart from other reflection and experience-based learning theories because of its focus on the construction of domain-specific knowledge gained during professional practice. As a result, his proposed model arguably represents the processes that professionals have been found to engage in.



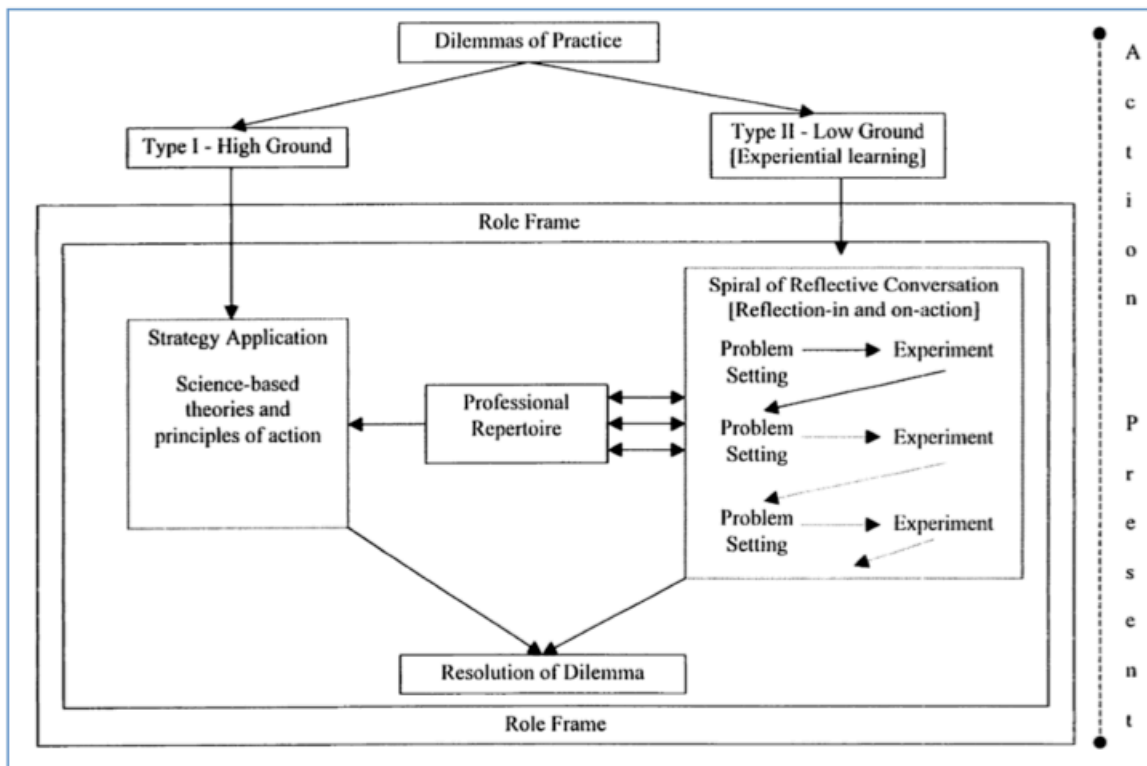


Figure 1. Adaptation of Schön's Theory of Reflective Practice (Gilbert, 1999)

Within Gilbert's (1999) graphical depiction of Schön's (1983) theory it is proposed that practitioners are faced with either issues that they are relatively familiar with and have a significant amount of knowledge about (Type 1 – High Ground), or issues that they have had minimal prior exposure to, and as a result, they have minimal pre-defined solutions (Type 2 – Low Ground) to manage the situation. It is proposed that in both situations, familiarity will be sought from previous experiences that inhabit similar characteristics. If a *Low Ground* dilemma is encountered, it is proposed that a process of hypothesis testing occurs within a *Reflective Conversation* (see Figure 1.), which is mediated by the prior knowledge and experience of the practitioner (*Professional Repertoire* – see Figure. 1). As a result of both reflection-in and on-action throughout this process, which involves the experimentation of varying solutions, strategies will finally be developed and applied that aim to

resolve the content of the initial dilemma. Alternatively, if a *High Ground* dilemma is encountered, it is proposed that “*science-based theories and principles of action*”, which have been developed by the practitioner as a result of prior experience to similar situations, are implemented in order to manage the situation (see Figure 1.).

As part of the construction of Schön's (1983) theory of experience-based learning and reflective practice, he advocated that individuals reflect both in (during) and on action (following). *Reflection-in-action* is understandably synonymous with the actual event itself and is guided by knowledge in use, and theory in use, and as a result makes limited contact with pre-determined espoused theory. This form of reflection only occurs in situations where the immediate dilemma is perceived as being unexpected, troubling or puzzling (Gilbert & Trudel, 2001). *Reflection-on-action*, relates to the cognitions and interpretation of events (via verbalised & non-verbalised thoughts) that occur after the situation. This form of retrospective action has been described as being relatively narrow, yet continues to inform learning, action and theory building (Moon, 1999).

Dewey (1960), on the other hand, considered reflection to be focussed on being outside the action and concerned with future action rather than during the actual action itself. Schön (1983) believed that knowledge construction occurred as a process of critical reflection-in- and on-action but that it is also dependent on the element of surprise. If a course of action leads to an anticipated or expected result, he proposed that there is no need to critically reflect on underlying theories as to what happened. When a decision

or action leads to an outcome that was unexpected, however, this may stimulate a process of critical inquiry as to why (Schön, 1983).

Gilbert (1999) has provided an excellent applied interpretation of Schön's (1983) theory of experience-based learning and reflective practice, however it is clear that further adaptations within empirical research are required to complement this work (Gilbert, 1999). While Gilbert and Trudel's study (2001) will be discussed later in the chapter (p. 39), few direct adaptations of the 'reflective conversation' concept have occurred within peer-reviewed research. Therefore, future research looking to adopt Schön (1983) should align itself with the assumptions of his work by investigating the reflection of practitioners within the applied setting (as he initially did when compiling the model). Similarly, given the individual and evolving nature of role frames, research approaches that implement both interviews and observations would allow for the construction of individuals' role frames to be initially established prior to witnessing how they directly influence their reflective practice in the applied setting.

### *2.1.3 Reflection & Experience-Based Learning Research*

Many scholars across the Western world sought to expand on the initial work of John Dewey (1933) in relation to reflective thinking and created their own respective versions (e.g. Bode, 1940; Rugg, 1947; Hullfish & Smith, 1961; Tom, 1984; Zeichner, 1983; Gibbs, 1988). However, much reflection research appears to commonly cite or review models of reflection without critically challenging their construction or applicability in varying contexts (Knowles & Gilbourne, 2010; van Woerkom, 2010). Moreover, a willingness to categorise or 'model' individuals reflective experiences may have actually

detracted from the context surrounding why they had initially interpreted their experiences in a certain manner. Moreover, schematic representations of the process are arguably quite conceptually limited. By representing the process as cyclical in nature (e.g. Kolb, 1984, Gibbs, 1988; Ghaye & Lillyman, 2000; Kolb, 2005), they infer a notion of simplicity and logic to the manner in which individuals reflect upon their experience.

More recent reflection and experience-based learning research has focussed on the reflective competencies of individuals in disciplines such as education and the different factors that can influence teaching and learning (Ashraf & Rarieya, 2008; Fazio, 2009; Farias & Ramírez, 2010; Swanson, 2010). This has been based on the fundamental premise that reflection is a precursor to effective practice (Lynch, 2000). Moreover, 'critical reflection' as investigated by Parra, Gutierrez and Aldana (2014) in relation to teaching, has been adopted as the gold standard of reflection (Grossman, 2008; Larrivee, 2008). Parra et al. (2014) examined the extent to which professors reflected on varying situations that occurred within the classroom and then applied a framework with which to enhance their ability to reflect. It was acknowledged during the research however, that the "series of rules unique to the culture of schools" that the professors were from would have undoubtedly framed their experiences and frames of reference (Parra et al., 2014, p.11). Despite this, however, little attention was paid to how the cultures were constructed and the extent to which they may have influenced frames of reference. Thus in-situ approaches that include observations and consider the culture in which learning occurs, have the potential to produce more comprehensive understandings of the context surrounding learning experiences. Moreover,

interviewing all involved may allow for the relationship that existed between them to be considered within the construction of knowledge and learning.

Irrespective of the evidence supporting the need for individuals to be able to critically reflect (i.e. Parra et al., 2014), Nilsson (2013) focussed on the role of others during the reflective process as she examined the influence of a “critical friend” (p. 196). It was found that teachers were prompted by their ‘critical friend’ into rethinking their values, beliefs and professional practice as teachers. The role of the critical friend moved from an “expert on teaching”, to a co-producer of knowledge” as a result of the trust and respect that was developed during the respective meetings (p.205). Whilst some of the social connotations associated with reflecting in the presence of others were considered, detail regarding the background and assumptions held by the critical friend were not discussed. As a result, the extent to which teachers autonomously re-examined their practice, as opposed to aligning their perceptions with that of the critical friend, remain unclear (Fejes, 2008, 2013). Similar to Parra et al. (2014), the findings were based on the recollections and discussions within meetings between teachers but no observations of interactions between students and teachers were conducted. Moreover, students’ perspectives of the learning environment that had been created were not considered.

Discussions relating to the applicability of varying models or representations of reflection are prevalent (e.g. Costa & Kallick 1993; Hatton & Smith 1995; Lee 2005; Russell, 2005; Schuck & Russell 2005; Faull & Cropley, 2009; Black & Lowright 2010; Hickson 2011; Colin, Karsenti & Komis, 2013; Lane 2014). Similarly, books (Zeichner & Liston, 1996;

Loughran 2006), book chapters (Richardson, 1990; Lyons 2010) and unpublished doctoral theses (Desjardins, 2000; Beauchamp, 2006) have also tended to focus on the manner in which reflection is defined and represented within the literature. Despite this body of work, research maintains a narrow focus on the fundamental questions relating to the underlying purpose of reflection (Cotton, 2001; Fendler, 2003).

Only a small number (e.g. Cotton, 2001; Fendler 2003) have challenged traditional assumptions of reflection and questioned the involvement of others within the reflective process. They proposed that the use of reflection to compare individuals' thoughts and practice to sets of pre-determined guidelines or pre-requisites has remained critically unchallenged. Despite the premise that individuals learn as a result of reflecting upon their own experiences, much recent reflection research appears to indicate that individuals are only able to do so if either in the presence of others (e.g. Costa & Kallick, 1993; Foucault, 1998; Schuck & Russell, 2005; Loughran, 2006; Lyons, 2010), or when comparing their behaviour to a set of guidelines as to how to behave (Smyth, 1992).

In summary, empirical research focussed on re-examining the fundamental role of reflective practice is required, rather than renewed attempts to model and represent reflection more accurately than in previous models. In-situ approaches to investigating reflection that complement existing research (e.g. Nilsson, 2013; Parra et al., 2014) by considering the social interaction that occurs between key stakeholders within the reflective process, the social environment in which this process occurs and the perspectives of individuals involved in the process are supported.

Approaches such as this would provide empirical data to complement the arguments proposed by Cotton (2001) and Fendler (2003) whilst also challenging common assumptions about reflection. Moreover, it would address the current limitations of much reflection research that has predominantly examined the reflective practice of individuals in isolation as opposed to varying potential social influences on reflection (Faull & Cropley, 2009).

#### *2.1.4 Sport Related Reflection & Experience-Based Learning Research*

The recent increase in the volume of reflection research has also been replicated within sport (Erickson, Bruner, MacDonald & Côté, 2008; Gilbert, 2009; Mallett, Trudel, Lyle & Rynne, 2009; Cropley, Miles & Peel, 2012). Despite this, however, inconsistencies still exist amongst the models that authors have used to try and represent athletes' or coaches' experiences. For example Knowles, Gilbourne, Borrie and Telfer (2001) used Mezirow (1981), Goodman (1984) and Powell (1989) as a theoretical framework to investigate the levels of reflection that were developed and demonstrated by eight undergraduate students/coaches following a coaching placement. However, when Knowles, Tyler, Gilbourne and Eubank (2006) investigated the reflective practice engaged in by graduate students/coaches who were no longer enrolled on an undergraduate degree programme, Gibbs' (1988) reflective cycle was instead used as a framework. This lack of conceptual consistency appears to be representative of much reflection research that has been conducted in sport to date (Threlfall, 2014).

In Knowles et al. (2001), eight students attended lectures prior to going on their respective placements, and semi-structured interviews were undertaken early on in their placements (less than 30% of their placement done). Students attended five one-hour workshops to develop “reflective skills and confidence” (Knowles et al., 2001, p.193). After their placements, students completed an annual report about their learning and wrote a ‘confessional tale’. A second interview examined changes that had occurred since their previous semi-structured interview. As previously mentioned, the theoretical lens that Knowles et al. (2001) employed drew on the work of Mezirow (1981), Goodman (1984) and Powell (1989) – see Table 1.

Table 1. Assessment of reflection mark scheme for Stages 2 and 4 data based on adapted criteria of Mezirow (1981), Goodman (1984) and Powell (1989) as used by Knowles et al. (2001)

Level	State description	Criteria
1a	Reflectivity	Awareness, observation, description <i>Description of a short dribbling drill session with junior players</i>
1b	Affective reflectivity	Awareness of feelings (subjects) <i>1a followed by analysis of feelings, e.g. coach feeling happy/disappointed about session outcome</i>
2	Reflection to reach given objectives	Criterion for reflection are limited to issues of efficiency, effectiveness and accountability <i>1a, 1b and recognition of need for readjustment of skill level to achieve session aims</i>
3a	Reflection on the relationships between principles and practice	There is an assessment of the implications and consequences of actions and self beliefs/values as well as the underlying rationale for practice <i>1a, 1b, 2 and recognition another coaching style may be appropriate for session delivery</i>
3b	Wider reflection	Practitioner contributes towards discussion in practice with others regarding the nature of beliefs and moral issues <i>1a, 1b, 2, 3a, 3b and discussion with others/coach educators regarding culture of coaching in youth football</i>
4	Critical reflection	Issues of justice and emancipation enter deliberations over the value of professional goals and practice. The practitioner makes links between the setting of everyday practice and broader social structure and forces and may contribute to ethical decision making in practice <i>As above and discussion as to whether view of teaching is commensurate with global issues in teaching children in other areas, policies and legislation</i>



Students' responses were assessed and subsequently categorised between level 1a (reflectivity) and level 4 (critical reflection). It was found that 5 of the 8 coaches made an improvement in their reflective level. However, only 3 of the coaches made a 2 or more reflective level improvement, with one coach actually decreasing 1 level. Improvements in reflection were attributed to the completion of reflective journals (Emden, 1991; Bulman, 1994; Riley-Doucet & Wilson, 1997) and the attendance at reflective workshops every two weeks. Therefore, it was concluded that coaches' ability to reflect can be improved both by independent and also 'guided' or supervised reflection. Knowles and colleagues adopted a similar approach to data collection in their 2006 work investigating the reflective practice of coaching science graduates outside of a structured programme. Six graduates were interviewed with an interview schedule based on Gibbs' (1988) reflective cycle. The coaches had begun to adapt reflective processes and models that were most convenient; often informal and undocumented reflection. Documented reflection, such as reflective journal writing, was not used. The coaches cited a lack of time to fully engage in the process and reflection had become informal (Knowles et al., 2006) and often reflection-on-action rather than reflection-in-action (Schön, 1983).

The coaches used Gibbs' (1988) reflective cycle as a model, with the final two stages of his model (*alternatives for action* and *action planning*) being deemed the most important phases. This was explained in the context that "reflection must manifest itself into an outcome or action" (Knowles et al., 2006, p. 172). However, the changes coaches implemented based on these phases were not always clear. There was also a distinct lack of critical

reflection demonstrated by coaches in this study, i.e. making reference to social, political and economic factors that may influence practice, though it has been proposed that technical and practical reflection should not be perceived as being less valuable than critical reflection (Knowles, 2009; Knowles & Gilbourne, 2010; Knowles, Katz & Gilbourne, 2012).

Uncertainty surrounding the importance of critical reflection accurately represents a research landscape in which there appears to be seemingly endless discussion about what 'type' of reflection is superior (Grossman, 2008; Larrivee, 2008). While Knowles (Knowles, 2009; Knowles & Gilbourne, 2010) originally sought to categorise reflection prioritising critical reflection, more recently she has suggested that categorising reflection may be misleading. Hierarchically ranking different types of reflection is therefore perhaps less important than considering the conditions that contribute reflecting in a certain manner (Cotton, 2001; Fendler, 2003). Complementing interviews with observations for example, may provide an insight into how coaches' reflection influences their coaching practice. Moreover 'guided' or supervised reflection requires further research attention, as the necessity of 'others' within the reflective process is unclear. Future research may also seek to examine the perspectives and discourse of reflection held by all stakeholders involved in the reflective process and their respective influences on each others' practice.

The complexity of the reflective process is demonstrated in the number of models that have been created in order to try and conceptualise the varying stages that an individual may engage in (Hatton & Smith, 1995; Knowles et

al., 2001; Lee, 2005; Black & Plowright, 2010; Hickson, 2011; Lane et al., 2014). As a result, a simple definition has proved to be elusive (James & Clarke, 1994; Ghaye & Lillyman, 2000). Given its complexity and the varying interpretations of reflection and experienced-based learning that exist, multiple approaches have been adopted to investigating it as a concept (e.g. Gilbert & Trudel, 2001, 2005; Trudel & Gilbert, 2006; Werthner & Trudel, 2006; Lemyre, Trudel & Durand-Bush, 2007). For example in a peer reviewed journal article, Peel et al. (2013) used an autoethnographic approach to investigate the reflective practice of a part-time, volunteer sport coach, whereas Threlfall (2014) conducted a three-way email discussion with two elite athletes surrounding their reflective practice. Other approaches have included case studies (Werthner & Trudel, 2006) and semi-structured interviews (Lemyre et al., 2007). Irrespective of the focus of the research, a tendency has remained within reflection research to focus on the reflective practice of either the coach or the athlete. No previous reflection research in sport has critically examined the reflective practice of both coaches *and* athletes, whilst considering how their reflection may influence each other's respective approaches to similar dilemmas.

Similar trends exist within experience-based learning research, where research focussing on 'how' coaches learn as a result of their experience has become prevalent in both peer reviewed journal articles (e.g. Gilbert & Trudel, 1999; Gilbert & Trudel, 2001, 2004a; Werthner & Trudel, 2006; Lemyre et al., 2007) and book chapters (e.g. Trudel & Gilbert, 2006). In building on the work of Gilbert (1999), Gilbert and Trudel (2001) used Schön's (1983) theory of

experience-based learning and reflective practice to examine how model youth sport coaches learnt to coach through experience. A multiple case study approach was adopted, which involved three youth team sport coaches from football and three from ice hockey. Coaches were deemed to be model coaches if they “(a) demonstrated interest in learning about the theory and practice of coaching; (b) respected in the local sporting community or their commitment to youth sport; (c) considered good leaders, teachers and organizers; and (d) kept winning in perspective and encouraged children to respect the rules of the game, their competitors, and officials” (Gilbert & Trudel, 2001, p. 18).

Six sources of evidence underpinned the data collection; background interviews, documents, observations and on-site interviews, interval summary interviews and member check interviews. Coaches were both interviewed and observed as “each coach was videotaped and audiotaped at least three times in regularly scheduled games and practices” (p. 19). They were required to wear microphones so that their behaviour within games or training could be used to “validate statements the coaches made during the interviews” (p.19). This comprehensive methodological approach found that coaches engaged in a ‘Reflective Conversation’ cycle (similar to Gilbert, 1999) as a result of encountering coaching issues that were interpreted as being dilemmas of practice (see Figure 2.). Gilbert and Trudel (2001) modified the model proposed by Gilbert (1999) as further focus was placed upon the varying strategies that coaches implemented (*Strategy Generation*).

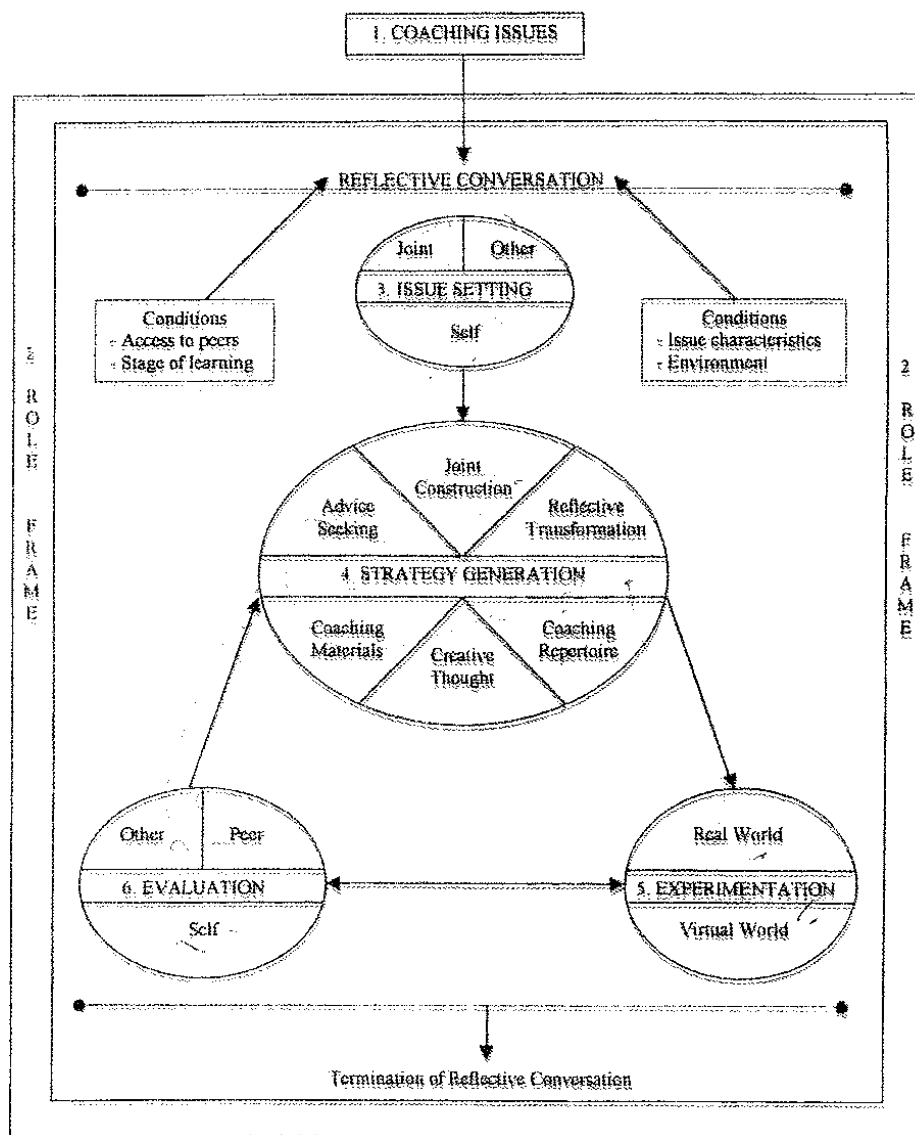


Figure 2. Model Youth Sport Coaches' Reflective Conversations  
(Gilbert & Trudel, 2001)

As in Gilbert (1999), it was proposed that coaches initially acknowledge that there is an issue (1. *Coaching Issues*) that does not align with the way in which they have framed their role (2. *Role Frames*). In the context of the six model youth sport coaches, 90 coaching issues were discussed that related to “(1) athlete behaviour: athlete actions and attitudes that could affect team dynamics and performance, (2) athlete performances: execution and mastery of sport-specific skills and tactics, (3) coach profile: personal challenges, based on coach and athlete characteristics, that a coach perceived as direct

influences on his or her coaching ability, (4) parental influences: parent interactions with athletes, coaching staff, officials and administrators and (5) team organisation: team management, including coordination of athletes before, during, and after training and competition” (p.24). Coaches’ role frames were informed by the age and competition level of participants, discipline, fun, personal growth and development, positive team environment, sport-specific development, winning, emphasis on the team, equity and safety (Gilbert & Trudel, 2001).

It is suggested that the reflective conversation itself is immediately influenced by an individual’s access to peers and the stage of learning that they are currently at. Similarly, the actual characteristics of the issue itself and the environment in which it has occurred will influence how an individual perceives the issue on which they are reflecting (Gilbert & Trudel, 2001). Whilst this was not necessarily expanded upon with any great detail in their study, Gilbert (1999) had failed to acknowledge at all the social environment in which learning occurs.

Gilbert and Trudel (2001) proposed that the initial phase of *Issue Setting* (3.) involves how issues are identified and framed. This can either be done alone (Self), in the presence of others when discussion on the topic occurs (Joint) or when merely receiving comments from others without discussion (Other). Coaches in Gilbert and Trudel’s (2001) study primarily established issues themselves or with peer involvement (joint). Following this initial phase, it is suggested that an individual will generate a relevant strategy (4. *Strategy Generation*), in order to manage the situation that they have encountered. Model youth sport coaches relied predominantly on six

strategies; *Joint Construction*, *Advice Seeking*, *Reflective Transformation*, *Coaching Materials*, *Creative Thought* and *Coaching Repertoire*. It was suggested that *Joint Construction* referred to the mutual development of a strategy with one or more peers. *Advice Seeking*, on the other hand, involved seeking the advice of a peer or expert without actually contributing to the outcome of the interaction. *Reflective Transformation* described instances where coaches had observed other coaches and how they had managed similar dilemmas, with *Coaching Materials* being the consultation of formally prepared resources. The other two strategies that were relied upon were *Creative Thought*; internally exploring creative and introspective cognitive processes, and *Coaching Repertoire*, which represented the use of existing strategies from a coach's personal repertoire of experience (Gilbert & Trudel, 2001).

Having generated a strategy, it was suggested by Gilbert and Trudel (2001) that there are two ways in which an individual can implement and assess the applicability of the chosen strategy (5. *Experimentation*). *Real World Experimentation* refers to trialling the strategy in the actual context for which it was designed, whereas *Virtual World Experimentation* is the trialling of a strategy in a simulated context, which can be done alone or with peers. An example of this would be a coach implementing a tactical strategy on a tactics board, with an assistant coach's input prior to implementing it during an actual session. Following the *Experimentation* phase, individuals inevitably evaluate the strategy's impact (6. *Evaluation*). As part of the evaluation process, it is suggested that evaluative comments from individuals such as players or parents may be received (Other), as well as those from respected

peers (Peer) and also an introspective review based on personal observations (Self) may occur. Following this process it is proposed that an individual may re-engage in generating and implementing strategies if the outcome is not as the individual had foreseen. Following potentially multiple strategy regenerations, the reflective conversation is terminated in relation to the coaching issue that has been initially identified.

This study is one of the few to adopt Schön's (1983) theory of experience-based learning and reflective practice, and in doing so, the authors have used one of the most comprehensive methodological approaches to examining the topic. By combining both observations and interviews they were able to validate coaches' responses during the semi-structured interviews and generate comprehensive role frames and representations of their experience-based learning. However, as with much research that has been discussed within this section, the influence that a coach's reflective practice and learning had on their athletes' reflection and learning remained un-examined. Moreover, potential social influences on reflection and experience-based learning such as the social environments or cultures that existed at the coaches' respective clubs were also neglected. Therefore, future research investigating reflection and experience-based learning should look to replicate the dual use of observations and interviews as seen in Gilbert and Trudel (2001), whilst considering the perspectives of both athletes and coaches and also the social context in which learning occurs.

Cushion et al. (2010) conducted a systematic review of coach learning literature and considered national governing bodies' reliance on implementing



formal coach education in the context of informal and non-formal learning experiences. Moreover, they critically evaluated the content of quality of the research that has been conducted in relation to coach learning (Cushion et al., 2010). They found that there is a relative absence of empirically informed research relating to coach learning as too often the research landscape does not reflect the varying ways in which coaches actually learn. With this critique in mind, future research regarding reflection and experience-based learning should consider adopting longitudinal, in-situ approaches where substantial periods of observation occur in order to accurately represent how participants learn.

This section has focussed on specific peer reviewed research that reflects the themes under consideration across the wider reflection and experience-based learning in sport research landscape. Research has tended to focus on how coaches learn or reflect upon their experience (e.g. Gilbert & Trudel, 2001, 2004a; Knowles et al., 2006; Werthner & Trudel, 2006; Lemrye et al., 2007), the different types of reflection used by coaches (e.g. Knowles et al., 2001; Gilbert & Trudel, 2005; Peel et al., 2013), and how athletes perceive reflection (e.g. Threfall, 2014). Traditionally, research has portrayed reflection and experience-based learning as an activity that occurs irrespective of the social environment in which individuals are situated, and the influence of others within the process have also been neglected.

Therefore future research may consider in-situ approaches that consider the social context in which learning and reflection occurs whilst also examining the interaction that occurs between key stakeholders' within the

reflective process. As a result, longitudinal case study-based approaches to investigating reflection and experience-based learning that include both observations and interviews are encouraged, where the manner in which both athletes *and* coaches learn can be fully understood as well as examining any potential environmental influences. Researchers are encouraged to locate participants' experiences within existing frameworks, as opposed to continuously using different approaches/models with different underlying assumptions (e.g. Gilbert, 1999; Gilbert & Trudel, 2001; Knowles et al., 2001, 2006; Werthner & Trudel, 2006; Lemyre et al., 2007). Moreover future research that considers how the experiences of elite athletes and coaches may differ from practitioners operating at youth or non-elite level is encouraged.

## **2.2 Sports Coaching**

Coaches' roles in sport are synonymous with educating and improving their athletes (Lyle, 2002). As a result, coaches effectively occupy the role of teacher or facilitator within their athletes' learning and reflection (Franks, 2002). Thus, it could be argued that athletes' learning opportunities are directly influenced by their coaches and as a by-product, research regarding how coaches 'coach' is worthy of attention. Based on the importance of sports coaches' roles in developing, nurturing and managing athletes of varying abilities, it is perhaps unsurprising that a number of models and conceptualisations of the coaching process have been proposed (see Cushion et al., 2006).

As with many of the topics discussed within this review of literature however, coaching is a process that involves social interaction and occurs

within a wider social environment and as a result one universal definition or model has proved elusive (Cushion et al., 2010). In their article reviewing literature relating to the coaching process Cushion et al. (2006) proposed that '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 cultural elements of the process are often underplayed' (p.83). As part of the paper, the authors classified "models *for* (idealistic representations of the process) and *of* coaching (based on empirical research)" (Cushion et al., 2006, p. 84).

It was proposed that commonly cited models *for* coaching such as Franks, Sinclair, Thomson and Goodman (1986), Fairs (1987), Sherman, Crassini, Maschette and Sands (1997) and Lyle (2002) have attempted to oversimplify the complex series of interactions that occur between coach and athlete within 'coaching' (Lyle, 1996; Cross & Eilice, 1997; Mathers, 1997; Lyle, 1999). Lyle (2002) did, however, acknowledge external influences and constraints whilst also making reference to the social interaction that occurs within a wider cultural context. Cushion et al. (2006) suggest that these models are almost hypothetical in nature and are based on intuitive knowledge as they are "not founded on actual coaching practice" (p.87). As a result they often provide a relatively limited understanding of the social interaction that underpins coaching (Cushion, 2004; Jones, Armour & Potrac, 2004a).

Models *of* coaching (e.g. Côté, Salmela, Trudel, Baria & Russell, 1995; McClean & Chelladurai, 1995; d'Arrippe-Longueville, Fournier & Dubois, 1998) have attempted to locate and depict the coaching process based on data relating to expert coaches' practice (Cushion et al., 2006). Whilst these

models have provided a more in-depth social understanding of coaching, issues relating to their construction still remain. It was suggested by authors who adopted Côté et al.'s (1995) model that the complexity of the coach-athlete relationship is potentially under represented in their model (Salmela & Moraes, 2003). McClean and Chelladurai (1995) on the other hand focussed greatly on the characteristics of the coach involved within the process, and in doing so portrayed coaching itself as being largely unproblematic. Given that these models were founded on data from expert coaches it is proposed that while they provide an important contribution to our knowledge of coaching, they are also limited in that they are governed solely by their experiences (Cushion et al., 2006).

In their study investigating the perceived effectiveness of interactions between coaches and athletes in elite judo, d'Arippe-Longueville et al. (1998) were one of the few authors to consider both coaches and athletes' perspectives simultaneously. Three male national team coaches and six of their elite female athletes were interviewed relating to "high-level experience, knowledge, and styles of the participants coaching or training" along with coach-athlete interactions (d'Arippe-Longueville et al., 1998, p. 320). It was found that a number of interaction strategies were used by coaches; stimulating interpersonal rivalry, provoking athletes verbally, displaying indifference, entering into direct conflict, developing specific team cohesion and exhibiting favouritism. Athletes' interaction strategies on the other hand involved: showing diplomacy, achieving exceptional performance, soliciting the head coach directly, diversifying sources of information and bypassing conventional rules.

Interestingly, the athletes' willingness to 'show diplomacy' and accept both inequitable attitudes and complete 'non-adapted' training tasks highlights how politically grounded coach-athlete interactions were. Athletes employed these strategies throughout their careers and justified them as a way "to avoid conflict that could negatively affect their well-being and also allowed each a sense of autonomy while maintaining the teacher-student hierarchy within the sport" (d'Arippe-Longueville et al., 1998, p. 325). The results of this study challenge idealistic and apolitical representations of coach-athlete interactions as coaches actively sought to 'provoke' their athletes as it was "seen as a positive stimulant in terms of optimizing performance" (d'Arippe-Longueville et al., 1998, p. 323), with their athletes having to demonstrate diplomacy to avoid further conflict. Therefore, the coach-athlete relationship appears to be laden with political agendas that are played out within constant power struggles. Future research is encouraged to re-visit d'Arippe-Longueville et al.'s (1998) results and challenge often socially neutral portrayals of the coaching process and coach-athlete interactions.

Cushion et al. (2006) highlighted in-situ examples such as Saury and Durand (1998), Poczwadowski, Barott and Henschen (2002) and Cushion (2001), who located themselves within the research setting to complement interview data with direct observations of coaching practice. In short, it was proposed that future research aimed at modelling the complexity of the coaching process or providing an insight into the social and cultural barriers that may affect coaching (Potrac & Jones, 2009) should also be underpinned by in-situ approaches that involve ethnography and participant observation (e.g. Saury & Durand, 1998; Cushion, 2001; Poczwadowski et al., 2002; Cushion &

Jones, 2006, 2014). Approaches that rely solely on coach interview data are governed by the interpretations, philosophies and perceptions of participants without observations that may critically challenge their responses.

More recent research concerning the roles of sports coaches within the coaching process has likened them to 'orchestrators' (Wallace, 2007; Jones, Bailey & Thompson, 2013; Santos, Jones & Mesquita, 2013). Despite Cushion et al.'s (2006) calls for in-situ research, Santos et al. (2013) relied on interviews with five top-level Portuguese coaches from a variety of sports in order to investigate how they perceived their respective roles. Coaches were selected through purposive sampling and worked in volleyball, handball, football, athletics and swimming. They had an average age of 44.5 years and all participants had graduated as physical education teachers. Coaches were interviewed twice and interviews lasted between 45 and 85 minutes.

Data analysis revealed themes such as *the nature of the job and the need for stakeholder "buy-in", generating an illusion of control among followers, scaffolding the context to generate instability and noticing to inform action* emerged as a result of their analysis. Emphasis was placed on ensuring athletes bought in to their respective philosophy, and also on recruiting and selecting the appropriate personnel both in terms of athletes and fellow coaches (Potrac, Jones & Armour, 2002; Jones, Armour & Potrac, 2004b). Interestingly, coaches cited the need to create the optimal learning environment in which athletes experienced "controlled instability" (Santos et al., 2013, p.268). This term referred to the fact that "nothing should be taken for granted" (p. 268) and that "athletes always have to feel that they cannot

predict the behavior of the coach” (p.269).

It was found that coaches orchestrated the training environment through the “construction and estimation of pedagogical strategies” (Santos et al., 2013, p.271), which was underpinned by coaches anticipating athletes perceptions and responses to certain situations in advance. This allowed coaches to implement strategies that skillfully manipulated athletes’ future perceptions and their overall experience within the environment (e.g. Wallace & Pocklington, 2002; Jones & Wallace, 2005, 2006; Wallace, 2007; Hemmestad, Jones & Standal, 2010; Jones et al., 2013). In a similar way to d’Arippe-Longueville et al. (1998), the findings of this research draw attention to the agenda laden reality of coach-athlete interactions and coaches’ perceived outcomes of the coaching process. Elements of coaches’ practice have been interpreted as a form of disciplinary control in which athletes’ experiences are manipulated in line with an intended outcome; i.e. “controlled instability” (Santos et al., 2013, p. 268).

In summary, the coaching process has traditionally been portrayed as an unproblematic and cyclical process that occurs largely unaffected by the social environment that surrounds it (e.g. Franks et al., 1986; Fairs, 1987; McClean & Chelladurai, 1995; Sherman et al., 1997). More recently, however, research has attempted to acknowledge the social and political element of sports coaching in varying contexts (e.g. d’Arippe-Longueville et al., 1998; Saury & Durand, 1998; Poczwardowski et al., 2002; Cushion & Jones, 2006, 2014). Moreover, the social and political reality of coaching has been realized (e.g. d’Arippe-Longueville et al., 1998; Santos et al., 2013), to

the extent that coaches' interactions with their athletes may be underpinned by a disciplinary or normalising agenda. As a result, future sports coaching research may look to align the social nature of the process with socially inclusive methodologies (ethnography, participant observation etc.). This would allow for a comprehensive examination of coach-athlete interactions and the environment in which they occur (Cushion et al., 2006). Similarly, other situations that are underpinned by coach-athlete interactions such as during the dissemination of video-based PA or when reflecting upon performance may also be considered given the impact that agenda laden coach behaviour may have on players' experiences.

#### *2.2.1 Football Related Coaching Research*

In the previous section it has been established that coaching is a social activity that is determined by the interactions that occur between coach and athlete. The culture of professional football has been proven to exhibit unique characteristics such as insecurity, discipline and the regular use of symbolic violence by those in positions of power (Parker, 1996; Cushion & Jones, 2006; Roderick, 2006b). Therefore, the 'type' of coaching that occurs within this social environment appears to be markedly different from coaching that occurs in other sports and alternative cultures. Cushion and Jones (2006, 2014) conducted two in-situ, ethnographic research studies to investigate coaching at a professional football club Academy.

In Cushion and Jones (2006), the lead author was located within the Academy at Albion Football Club (a Premier League club) and conducted observations "over periods ranging from 2 to 4 days of each week during the



season”, which varied in length from “2 hours to day-long” (p. 146). This ethnographical approach, which was used across a period of 10 months, included participant observation and semi-structured interviews that were conducted at the end of the season with five coaches who were predominantly involved with the Academy. It was found that coaching practice was dominated by the use of symbolic violence as coaches were positioned as gatekeepers who decided whether players ‘made it’ or not. Coaches dominated young players’ experiences through dictatorial coaching and placed added emphasis on players’ willingness to show a ‘good’ attitude. If players failed to demonstrate this they were punished, excluded or rejected. Given the imbalances in power that existed within the coach-player relationship, players complied with their coaches’ demands, as they did not want to disappoint the stakeholders who effectively determined their futures. It was found that players’ lack of power and willingness to impress contributed to the reproduction of a disciplinary culture that was established by their coaches in an attempt to strengthen their positions of power (Cushion & Jones, 2006).

While this study was with young elite players, feelings of uncertainty amongst senior professional football players have also been found to be common (Roderick, 2006b). When players experience injuries, loss of form and expiring contracts it has been found that they often receive little support or guidance in a ruthless and unforgiving environment that promotes internal competition (Parker, 1996). As one player put it *“At the end of the day, you know, everyone is in it for themselves. And quite often players would shit on each other if it came to it”* (Roderick, 2006b, p. 251). Therefore, while the

structure of coaching within professional football exhibits and promotes cultural characteristics such as discipline, punishment and a win at all costs mentality, even in times of difficulty or uncertainty for players the social environment continues to offer little support (Parker, 1996; Cushion & Jones, 2006; Roderick, 2006a, 2006b; Cushion & Jones, 2014).

Cushion and Jones (2014) complemented their research in 2006 by investigating the construction and reproduction of the performance environment at the same Academy in order to place the coaches' practice into context. Data was collected by a similar 10-month ethnographical approach, which included semi-structured interviews with coaches and focus group interviews with a random sample of academy players. It was found that a "hidden curriculum" was maintained through "a socialisation of practice passed on unconsciously through the formal and routine activities of the club" (Cushion & Jones, 2014, p.282).

Young players were constantly reminded of their positions within the social hierarchy at the club by being forced to do 'jobs' that senior players no longer had to do and by wearing training kit that indicated their relative status and 'worth' within the club (e.g. professional, Academy, trialist). Academy players had no input into their training regime and were expected to comply with their coaches' demands irrespective of whether they believed them to be fair or not (Cushion & Jones, 2006, 2014). It was also found that a culture of winning dominated the experiences of young players, irrespective of an understanding that Academies should be focussed around the development of players from multiple perspectives (Football Association, 1998).

As a result, players were punished and publicly humiliated in front of their peers if they fell short of the coaches' expectations (Cushion & Jones, 2014). This culture was socially constructed by the actions of the coaches, but also the players, who were complicit. Using Bourdieu (1984), as they had done in Cushion and Jones (2006), it was proposed that symbolic violence underpinned the reproduction of the club's culture and club specific practices (Bourdieu & Wacquant, 1992; Jenkins, 1992). Coaches used "systems of symbolism and meaning (culture) in a way that ensured they were experienced as legitimate" (Cushion & Jones, 2014, p.292). In doing so coaches could be aggressive or threatening with their behaviour towards players, irrespective of whether they intended to carry out the action or not. By attending the club on a daily basis and partaking in training sessions and cultural rituals without challenge, players demonstrated complicity and in turn facilitated the reproduction of club specific discourse and the overarching culture (Foucault, 1972).

Potrac et al. (2002) considered the perspectives and experiences of an elite football coach through systematic observations and interviewing. They specifically investigated what he perceived to be the key determinants of success within this environment. 'Brian', a coach who was qualified to the highest level and had been coaching for over 20 years, was working at a Division 1 club during data collection. Observations were conducted three times during the early, mid and late phases of the season in order to gain an accurate representation of his practice across the season. Each observation

typically lasted 45 minutes and complemented two interviews that were conducted at the end of the season with Brian.

It was found that within his coaching behaviour, Brian predominantly used 'instruction' when working with his players. This was based on the premise that "they've [the players] got to be told what is expected of them" (Potrac et al., 2002, p.191) and that instruction allows coaches to demonstrate their "extensive knowledge of football" (p.192). Interestingly, this was something Brian had highlighted as being vitally important as players would immediately judge and 'test' coaches if they believed them to be lacking in this department. As a result, instruction was used to alleviate their concerns, assert his authority over the group and gain their 'respect' (Potrac et al., 2002, p.192).

This study provides further evidence as to the benefits of adopting case study, in-situ research that combines both observations and formal interviews. In this instance, Brian's coaching practice was able to be initially established prior to being placed into much needed context by the players' perceptions and expectations at the club. Future research may adopt similar methods to Potrac et al. (2002) whilst also considering the perspectives of both players *and* coaches during interviews in order to provide further context surrounding coaches' practice and the experiences of both players and coaches.

This section has considered literature relating to coaching practice within professional football. It is perhaps unsurprising based on coaches' and players' self-determined and accepted roles within the coaching process that a culture of discipline, insecurity and ruthlessness has remained relatively

robust within professional football (Cushion & Jones, 2014). To complement the knowledge and understanding that has been established and discussed in the literature within this section, future in-situ and multi-method approaches that examine both players' *and* coaches' experiences and behaviour are supported. Similar methodological approaches to Potrac et al. (2002), and Cushion and Jones (2006, 2014) are encouraged in future research within senior elite professional football so that players' *and* coaches' experiences can be examined from a social perspective.

Applied research such as this may seek to consider how players and coaches co-exist within the same social environment and contribute to the construction of a club's culture (Cushion & Jones, 2006, 2014), given its overarching and determining influence. Given that elite youth football players' professional futures are largely dictated by their coaches, future research may also consider the experiences of senior professional football players who do not operate within the same contractual constraints.

## **2.3 Performance Analysis Research**

### *2.3.1 Putting the Context of Performance Analysis Research into Perspective*

Despite its role within the coaching process, historically the nature of PA research has focussed on the analysis of sports event statistics (Hughes, 1996). This is reflected in the volume of research concerning the analysis of KPI's in relation to the outcome of competition (e.g. Feltner, 1989; Best, Bartlett & Morriss, 1993; Elliott, Baker & Foster, 1993; Sakurai, Ikegami, Okamoto, Yabe & Toyoshima, 1993; McGarry & Franks, 1995; Morriss & Bartlett, 1996; Sherwood, Hinrichs & Yamaguchi, 1997; Cook & Strike, 2000;

Hughes, Wells & Matthews, 2000; Stretch, Bartlett & Davids, 2000; Murray & Hughes, 2001; Eaves & Hughes, 2003; Davey, Anderson & James, 2005; Hughes & Jones, 2005). Whilst it is proposed that “theme fields, like coaching science, are developing and, by nature, require descriptive studies for basic understanding and accumulation of knowledge” (Gilbert & Trudel, 2004b, p. 395), comparatively little investigation into the use of video-based PA within the applied setting has occurred. In order to enhance our knowledge of how video-based PA is used and examine what the perceptions of key stakeholders within the environment are, a shift in research approach is required. Furthermore, it could be suggested that the fundamental purpose of PA; to improve performance through enhanced feedback, needs to be re-visited in the context of how athletes interpret their own experiences.

Mayes, O'Donoghue, Garland and Davidson (2009) located the role of video-based PA within the coaching process in netball (see Figure 3.). Whilst this model provides us with a basic understanding of how video-based PA may contribute to the feedback loop within coaching, it is arguably flawed. No consideration is made for the environment in which video-based PA is implemented, despite its potential influence on the function that it may serve (see Manley et al., 2012). Moreover, the cyclical representation of compiling and delivering information portrays it as a simple, sequential and idealistic process, which is incongruent with the ‘gritty reality’ that is associated with coaching (Potrac & Jones, 2009, p. 561). Similarly, little or no information is provided as to the roles and responsibilities of either the coach or the analyst throughout the process. It is important to note that some of the conceptual concerns that have been highlighted in relation to Mayes et al.'s (2009) model

of using video-based PA within the coaching process also apply to other representations of the analysis process (e.g. O'Donoghue, 2006).

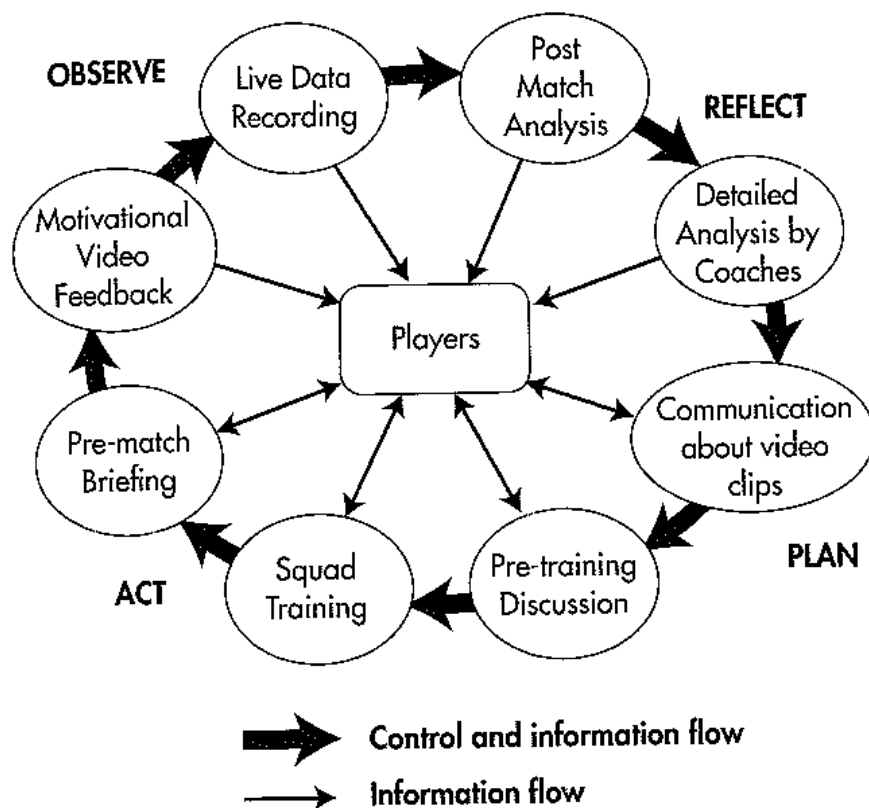


Figure 3. Video-based PA in a Coaching Context (Mayes et al., 2009)

It is clear that video-based PA has emerged as a useful resource that surpasses the data collecting capacities of original hand notation systems (Hughes & Franks, 2004). The development of computer and video aided analysis systems (such as Sportscore ©, Focus X2 ©, ProZone and Sport Universal Process AMISCO Pro © match analysis systems) has enhanced accessibility to resources in order to analyse sporting events objectively (Carling, Williams & Reilly, 2005), and as a result, research frequently utilises these data (e.g. Jenkins, Morgan & O'Donoghue, 2007; Di Salvo, Gregson, Atkinson, Tordoff & Drust, 2009). It is now widely accepted that coaches use video within weekly meetings (Guadagnoli, Holcomb & Davis, 2002; Gasston,

2004; O'Donoghue & Longville, 2004) where coaches and players typically watch match footage, analyse strengths and weaknesses and identify specific areas for improvement (Groom & Cushion, 2005). In football specifically it has been reported that match analysis is vitally important to success, forming the basis of weekly training programmes (Thelwell, 2005).

Only recently, however, have the perspectives of individuals involved in the collection of PA data and the delivery of video-based PA been considered within the literature (e.g. Bampouras, Cronin & Miller, 2012; Butterworth, Turner & Johnstone, 2012; Wright, Atkins & Jones, 2012). Irrespective of the applied nature of video-based PA delivery and the social interaction that occurs between coaches and athletes as part of the process, Wright et al. (2012) implemented an online survey to gain the perspectives of 46 elite professional and semi-professional coaches from rugby league (46%), hockey (21%), football (18%), basketball (9%) and rugby union (7%). Thirty-four questions were structured within six topics relating to demographic information, analysis process, feedback, implications for coaching practice, key performance indicators and the value of performance analysis. By using a survey to collect data, the authors appear to imply that the use of video-based PA is a simplistic, structured and apolitical process, which can be accurately represented by choosing a pre-determined answer as coaches adopt a 'one size fits all' approach within their practice. As a result, coaches were unable to expand or describe reasons for why their uses of video-based PA may have changed in varying scenarios.

It was found that 68% of coaches had access to a performance analyst who provided analysis on their behalf, and that for 93% of coaches'



performance analysis influenced their short term planning. Whilst 86% of coaches said that they used key performance indicators (KPIs) to code behaviours from a match, only 47% of coaches were very confident that these performance indicators could actually be attributed to success. Therefore, coaches embodied the focus of much PA literature by using KPI's, despite not having an underlying belief that they were necessarily applicable. Due to the design of the study, however, any potential reasons as to why coaches found KPI's inapplicable within their coaching practice remain unknown. Whilst interviewing seven badminton coaches (average age of 51), Butterworth et al. (2012) adopted a similarly prescriptive approach to gaining data as they asked coaches to assess pre-determined forms of PA (performance profiles, court schematics and statistics) rather than discussing other pertinent and overarching issues regarding the use of video-based PA. Therefore, future research concerning the use of video-based PA in the applied setting is therefore encouraged to adopt in-situ or applied methodologies that directly observe the complexity of the process and are capable of providing much needed context to how video-based PA is used as opposed to relying on methods that focus solely on responses to pre-determined questions or topics.

Bampouras et al. (2012) was the first study to investigate the perspectives of different stakeholders within the process of disseminating video-based PA. A sport scientist (Tae Kwon Do), an international coach (Netball) and a former professional athlete (Rugby) were interviewed in relation to their experiences and roles within the process of disseminating video-based PA in their respective sports. Based on participants' responses the authors created a

consensus model of performance analytic process (see Figure 4.). One of the most noteworthy aspects of the model is the 'Black Box' in which coaches and sports scientists used their previous experience to determine what was the salient information that needed to be fed back to their athletes. This then contributed to an "Immutable Mobile: Notational Analytic Output" that was produced in the form of "graphs, charts, models etc." (p.471).

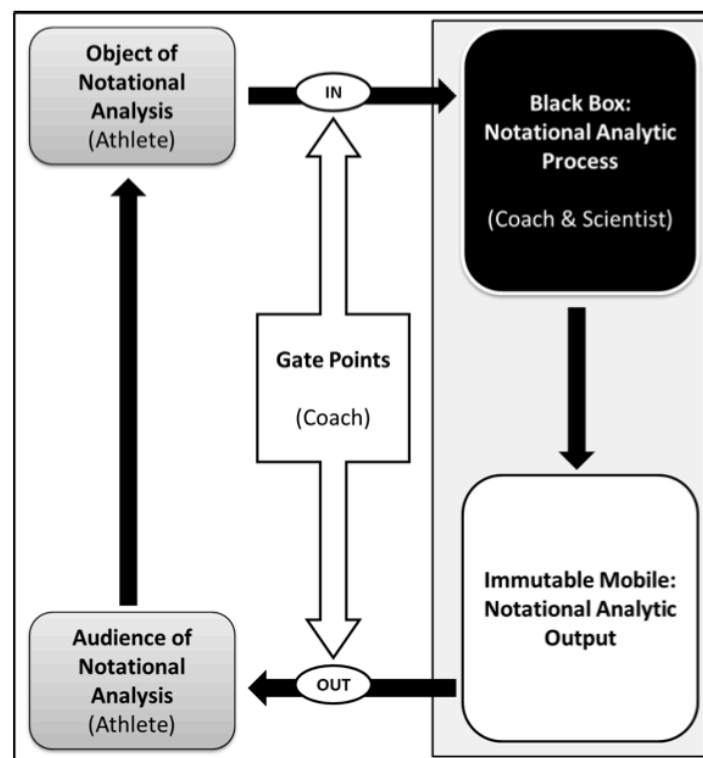


Figure 4. Consensus model of performance analytic process  
(Bampouras et al., 2012)

By modelling the process in this manner and critically challenging the respective role of sports scientists, coaches and athletes, it was found that the coach acted as the "gatekeeper" within the process (Bampouras et al., 2012, p. 473). As a result, athletes were subjected to PA as opposed to having been actively involved in the decision-making process as to what should be reflected upon and what impact this may have on future training/performance.

This provides us with a valuable insight into the social dynamic surrounding how video-based PA may be used within the applied setting and challenges simplistic representations of the process (e.g. O'Donoghue, 2006; Mayes et al., 2009).

The main criticism that could be aimed at Bampouras et al.'s (2012) research is that the three participants were not from the same sport. As a result they had not been involved in the process of compiling and delivering video-based PA together. Therefore, whilst their experiences may have been similar, the social environment and culture surrounding their experiences may have been markedly different. Moreover, given that only one coach, sports scientist and athlete were involved in the study, the suitability of creating a 'consensus' model based on three stakeholders' individual experiences may also be questioned (see Figure 4.). Future research may look to complement this research by investigating the perspectives of individuals who occupy different roles within the process of disseminating video-based PA information, but are at the same club/institution. In doing so, a greater understanding of the extent to which the culture or social environment may have contributed to their respective roles and behaviour could be gained.

This section has considered literature in relation to PA and video-based PA in sport. The overall access to PA related data has evolved dramatically in recent years due to enhancements in computer and video technology (Carling et al., 2005). This increased availability of data has resulted in a significant increase in the amount of video-based PA research that has been conducted. Predominantly, however, research topics have tended to focus around the

examination of KPI's in relation to competition outcome (e.g. McGarry & Franks, 1995; Murray & Hughes, 2001; O'Donoghue, 2001; McGarry, 2006; Lames & McGarry, 2007), as opposed to how video-based PA is implemented within applied coaching practice.

More recent research has considered the perspectives of individuals involved in the coaching-analysis-feedback process although the methodological approaches that have been adopted have provided a relatively limited interrogation of the social dynamic surrounding the process (e.g. Butterworth et al., 2012; Wright et al., 2012). While Bampouras et al. (2012) has provided the most insight into the respective roles of key stakeholders during the compilation and delivery of video-based PA, scholars may also consider using in-situ and case study-based research in future. Such approaches would further our understanding of the interactions that occur between coaches and athletes during the process of disseminating video-based PA within a shared environment (Yin, 2003; Groom et al., 2011, 2012).

### *2.3.2 Football Related Performance Analysis Research*

The direction and scope of football related PA research has largely mirrored the more general field of PA (as discussed above). As a result, research has primarily focused on KPI's such as possession and passing patterns (e.g. James, Jones, & Mellalieu, 2004; Scoulding, James & Taylor, 2004; Dawson, Appleby, & Stewart, 2005; Hughes & Franks, 2005; Redwood-Brown, 2008), technical and physical comparisons across different leagues (e.g. Bloomfield, Polman, & O'Donoghue, 2004; Coelho e Silva, Figueiredo, Sobral, & Molina, 2004; Kan et al., 2004), statistical analyses of goal scoring probabilities (e.g.

Pollard & Reep, 1997; Ensum, Pollard, & Taylor, 2004; Armatas, Yiannakos, & Sileloglou, 2007), the activity profiles of footballers (e.g. O'Donoghue, 2002; Lago-Peñas, Rey, Lago-Ballesteros, Casais, & Dominguez, 2009), comparisons across major tournaments (e.g. Luhtanen, Belinskij, Haïrinen, & Vañttinen, 2001; Armatas et al., 2007), goals analyses (e.g. Lanham, 1993; Garganta, Maia, & Basto, 1997; Johnson & Murphy, 2010), and the assessment of differing playing styles (e.g. Bate, 1988; Hughes, 1990; Yamanaka, Hughes, & Lott, 1993; Pollard & Reep, 1997; Hughes & Franks, 2005).

While this research has made some contribution to developing and furthering a more systematic understanding of football performance, it has also contributed to a limited understanding of how video-based PA findings such as these are disseminated in the applied setting. A critical review undertaken by Mackenzie and Cushion (2013) challenged the focus of this research given the inherent difficulties in attributing success to any given aspect of performance (O'Donoghue, 2010). The quality of the research that has been undertaken was also specifically questioned. For example within 44 research articles that were concerned with analysing aspects of technical performance, 81% did not specifically acknowledge the influence of the opposition within their results. Similarly, 70% of investigations that were not conducted at neutral venues failed to acknowledge the influence of match location within their results. Moreover with regards to the physical demands of football, 12 of the 15 articles that were reviewed did not acknowledge the opposition within their studies. This is irrespective of research that has established the influence that both match location and the quality of opposition can have on

team's performances (Lago, 2009). Further issues relating to the assumptions that underpin much football-based PA research, the sample sizes used and the lack of operational definitions that are presented within much football-based PA were also discussed and critically challenged (see Mackenzie & Cushion, 2013, in *Appendices*).

There has, however, been a shift away from KPI research in recent years, with the influence of social factors involved in the use of video-based PA receiving more attention (e.g. Groom et al., 2011; Groom, Cushion & Nelson, 2012; Reeves & Roberts, 2013). Groom and Cushion (2005) used semi-structured questionnaires to investigate the use of video feedback given to ten U17 footballers in relation to both their own and their team's performance. Individual players' preferred learning styles were examined using Felder and Solomon's (1991) Learning Style Inventory prior to questions being used that related to usefulness, learning, reflection, timing and mental aspects (Groom & Cushion, 2004).

The results suggested that players were predominantly kinaesthetic learners, as they preferred 'doing it on the pitch' yet "all players reported that they found the video-debrief sessions useful" (Groom & Cushion, 2005, p. 42). It was also found that video-based PA can be a very powerful tool to increase players' knowledge and understanding of the game, although coaches should be aware of the balance of feedback given to the players. Having used questionnaires to investigate players' responses to video-based PA feedback, context surrounding the reasons why players interpreted the sessions in a certain manner was not provided. Moreover, any potential environmental

influences that may have framed their interpretations were also not considered within this methodology.

More recently Groom et al. (2011) adopted a Grounded Theory approach to investigating the delivery of video-based PA by England youth soccer coaches. 14 English youth soccer coaches were interviewed over a 12-month period, with interviews lasting between 30 and 70 minutes. Four of the coaches were female, and were responsible for coaching female England national teams with the 10 male coaches being responsible for coaching male England national teams. Coaches had an average age of 46.6 years and had on average 22 years coaching experience. Coaches were asked open-ended questions relating to “their experiences and perceptions of using video-based PA in their coaching practice” (Groom et al., 2011, p. 18)

It was found that six subcategories of contextual factors (social environment, coaching and delivery philosophy, presentation format, session design, recipient qualities and delivery process) framed the manner in which analysis sessions were delivered by coaches. Moreover, the outcomes of sessions and the different types of sessions were considered from the coaches' perspectives. As a result, issues relating to changes in behaviour, facilitating learning, improving efficacy and increasing motivation all contributed to how and why coaches used video-based PA in a certain manner (Groom et al., 2011). Following this process a grounded theory of the factors that contribute to the delivery of video-based PA was presented (see Figure 5.).

Groom et al. (2011) have provided a valuable insight into the factors that influence video-based PA delivery, but there are a number of assumptions associated with their representation of the process that require further consideration. Groom et al. (2011) adopted a post-positivist approach to representing the process of disseminating video-based PA as they have reduced the varying contributory factors into a step-by-step process that can be replicated or carried out seemingly irrespective of the social environment (Biddle et al., 2001; Bryman, 2012). In doing so, the fluidity and presence of social factors that may influence the process are arguably lost. For example, whilst the model suggests that the process of disseminating video-based PA is framed by the 'social environment', there is no direct link or interconnectedness between the two concepts within the diagram. As a result, the model assumes that the process of disseminating video-based PA can occur equally effectively in any social environment, which is arguably idealistic and unrealistic (Manley et al., 2012). Similarly, it suggests that the 'coaching and delivery philosophy' held by coaches is formulated irrespective of the social environment that they operate in.

While modelling this complex set of social interactions is undoubtedly difficult given their fluid nature, the relative simplicity of Groom et al.'s (2011) model may be perhaps misleading. The delivery and receipt of video-based PA is a social process, which occurs within an overarching social environment that is constructed and reproduced by both coach and athletes' actions and beliefs. Therefore, the social environment is influenced and regularly informed by changes in coaches and athletes' behaviour. Future research may benefit from adopting case study research to investigate the use of video-based PA,



where an in-depth knowledge and understanding of the social factors that influence its use may be gained.

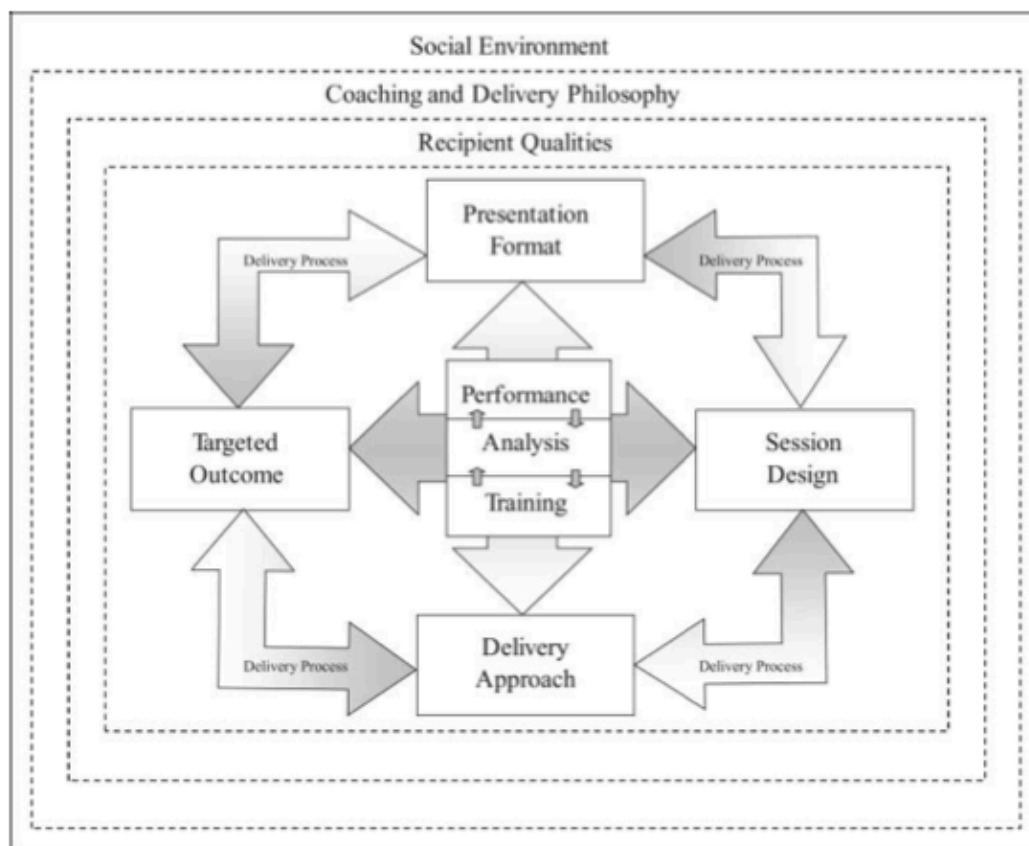


Figure 5. A grounded theory of the delivery of video-based performance analysis by England youth soccer coaches (Groom et al., 2011)

Groom et al. (2012) complemented their work in 2011 by investigating the content of analysis sessions delivered at an Academy within an English Premier League Club. A 10-month ethnography allowed for the primary researcher to record and analyse video-based feedback sessions delivered by an Academy coach to his players. A 34-year-old U18 Head Coach was observed in his interactions with 22 academy players within six video-based PA sessions. While the coach held the UEFA Advanced Coaching Licence he was a relatively inexperienced user of video-based PA. Analysis sessions were filmed by a video camera at the back of the classroom, which allowed for

the language used by the coach to be examined with conversation analysis techniques (Sacks, Schegloff & Jefferson, 1974; Schegloff, 2007; Heritage & Clayman, 2010).

It was found that the coach used video examples to supplement his critical commentary in order to assert 'expert and direct informational power' over his players (Raven, 1992, 1993). Moreover, the coach adopted a number of techniques such as addressing the team in an 'authoritarian manner' (Groom et al., 2012, p.13) in order to display a 'legitimate power of responsibility' (Raven, 1992, 1993). The coach dominated the sequential organisation of analysis sessions, controlled the topic under discussion and also the opportunities for athletes to respond. It was therefore concluded that video-based PA can provide coaches with the opportunity to exercise control over their players (Groom et al., 2012). Thus video-based PA has the potential to be used as a disciplinary mechanism. This novel approach to investigating the use of video-based PA within the applied setting has generated new knowledge as to how it may be commonly used. As a result, in-situ approaches that mirror the techniques used in this study are encouraged when investigating how video-based PA is used in the applied setting.

More recently, Reeves and Roberts (2013) investigated the perspectives of Academy players, coaches and performance analysts in relation to video-based PA. One-off semi-structured interviews were conducted with five Academy players, a UEFA A Licenced coach and two full time performance analysts from an English Premier League Academy team. Interviews lasted

between 12 minutes and 43 minutes and were focussed around 14 open-ended questions which were concerned with “how PA impacted upon team and individual performance” (p. 202). It was found that a largely positive perception of how video-based PA can facilitate the process of providing relevant feedback to players was held at the club. Players, coaches and analysts described how video-based PA can help with efficient reflection on an individual level and can contribute to a team operating more effectively (Reeves & Roberts, 2013). Moreover, both coaches and analysts referred to video-based PA as a motivational tool, although they did acknowledge that the content of analysis sessions should be closely managed.

While this study is the first to investigate multiple perspectives of individuals occupying different roles at the same club in relation to video-based PA, the complexity of the process is once again lost through a reliance on one data source (i.e. interviews). Future research may look to complement Reeves and Roberts’ (2013) methodology with systematic observation and ethnography in order to examine the reality of the process that players and coaches describe. In doing so, themes that both players and coaches mention from their respective standpoints can be examined directly in-situ.

Within this section it has been highlighted that traditionally much video-based PA research in football has focussed on the investigation of KPI’s (e.g. Scoulding et al., 2004; Dawson et al., 2005; Hughes & Franks, 2005; Redwood-Brown, 2008; Lago, 2009), but more recent research has considered the delivery of video-based PA within the professional football club environment (Groom et al., 2011, 2012; Reeves & Roberts, 2013). Given the

authoritarian manner in which analysis sessions were delivered in Groom et al. (2012), and the level of docility demonstrated by players in Reeves and Roberts (2013). It appears that there may be disciplinary effects or consequences associated with the use of video-based PA. As a result, scholars may consider implementing social theory in future research to critically examine the experiences of both players *and* coaches from a disciplinary perspective. This is especially relevant in the context of the unique and often disciplinary culture of professional football (Cushion & Jones, 2006; Roderick, 2006a, 2006b; Cushion & Jones, 2014). Scholars may also wish to address the lack of research that has considered video-based PA from a learning perspective (e.g. Groom & Cushion, 2004; Carling et al., 2005; Groom et al., 2011), by examining players' and coaches' reflective practice and experience-based learning in response to their exposure to video-based PA.

## **2.4 Social Theory**

Within much of the research that has been discussed within this chapter, a prominent criticism has been that scholars have commonly failed to acknowledge the social context in which reflection, coaching and/or the use of video-based PA occurs. As a result, within much coaching and PA research especially, relatively little is known about the influence that the social environment may have on the practice and conduct of individuals operating within it. Therefore, the use of established, social theoretical frameworks may provide a valuable insight into the extent to which reflection, coaching and the

use of video-based PA are socially constructed and/or influenced by the wider social context in which they are used.

One theorist whose ideas and concepts are directly applicable to both sport and reflection is Foucault (1972, 1979, 1980, 1991a, 1991b, 1999), who examined the social construction of knowledge, how power relations are established between individuals and how institutions are able to maintain control over individuals by manipulating their behaviour. Given sports coaching research has implied that coaches may adopt disciplinary techniques to control their athletes (e.g. d'Arrippe-Longueville et al., 1998; Cushion & Jones, 2006; Santos et al., 2013; Cushion & Jones, 2014), the disciplinary focus of Foucault's work has a 'goodness of fit' with the topics under discussion. Similarly, in the previous section it was proposed that the use of video-based PA may have some disciplinary effects on athletes and as such, his ideas relating to discipline and punishment are equally applicable.

Foucault believed that power is not rigid or pre-determined and instead "individuals are [thus] the vehicles of power, not its point of application. Individuals are not passive, inert entities who are simply at the receiving end of power..." (Foucault, 1980, p. 98). In this context, power was understood as being fluid as power relations between individuals were interchangeable. He believed that it was the skilful and tactical use of techniques relating to disciplinary power that allowed for imbalances in power relations to be established and maintained. Fundamental to Foucault's concepts was the notion of discourse, which he described as accepted truths that "systematically form the objects of which they speak" (Foucault, 1972, p.182).

He believed that discourse directly informs the activities, attitudes and behaviours of individuals in everyday life; if you believe something to be true then you will act accordingly. Therefore, it was the establishment and reproduction of relevant discourse that was believed to underpin individuals' willingness to be governed and allow for their behaviour to be normalised (Foucault, 1972, 1991b). Disciplinary power refers to the exercise of power over a population through monitoring and surveillance as "[t]he chief function of disciplinary power is to 'train'" (Foucault, 1991a, p.170). Foucault proposed that disciplinary power could be exerted over individuals as a result of *hierarchical observation, normalising judgements and examination* (Foucault, 1977; Allan, 2013), which were "permanent in its effects, even if it is discontinuous in its action" (Foucault, 1991a, p.201). As a result Foucault advocated that individuals could be manipulated, by the presence of surveillance and the threat of punishment, into normalising their own behaviour in line with socially desired norms.

#### *2.4.1 Foucault & Reflection*

The adaptation of Foucauldian concepts within reflection research in recent years has specific relevance to the areas of sports coaching and video-based PA that have been discussed within this review (e.g. Fejes, 2008, 2013). Professionalism in coaching and the use of video-based PA as a feedback mechanism are synonymous with the concept of reflecting upon practice and making enhanced future decisions. Subsequently, the applicability of Foucauldian concepts relating to discourse, power and knowledge within reflection research support its use as a theoretical framework within future

sports coaching and/or video-based PA research that is concerned with examining links to reflection.

In the *Reflection & Experience-Based Learning Research* section of this review (p. 31) it was highlighted that within mainstream reflection literature, assumptions relating to the positive and altruistic nature of reflection have remained largely unchallenged (Cotton, 2001; Fendler, 2003). Fejes (2008), however, critically challenged the use of reflection within nursing from a Foucauldian perspective. The author interviewed 42 nursing managers, supervisors and trainee nurses in order to gain a holistic understanding of how reflection was commonly used within nursing. It was concluded that reflection “is not a neutral or apolitical practice” (Fejes, 2008, p. 243) and instead it is a precursor for normalising behaviour. Reflection within nursing commonly occurs within a group environment and has been described as a “confessional practice” (Fejes, 2008, p. 247). Within such groups it is common for nurses to share experiences amongst themselves prior to a level of guidance being provided by a supervisor, and by making their feelings and thoughts public, nurses expose themselves to two of the necessary conditions required for disciplinary power to be exerted; *examination* and *normalising judgements* (Foucault, 1991a).

In this context, Fejes (2008) interpreted reflection as a technology of power, which sought to “determine the conduct of the individuals & submit them to certain ends or domination & objectivising of the subject” (Foucault, 1988, p.18). The presence of others within the reflective process provided a critical gaze that allowed for the normalisation of the ‘confessor’s (Foucault, 1991b; Fejes, 2008, p. 247) future behaviour. As a result, it was concluded

that reflection is used tactically within health organisations in an attempt to govern nurses' behaviour and future interpretations of similar situations (Gastaldo & Holmes, 1999; Gilbert, 2001, Holmes & Gastaldo, 2002; Mantzoukas & Jasper, 2004; Rolfe & Gardner, 2006; Fejes, 2008).

Given that both sports coaching and the use of video-based PA within sport are both supervised activities, future research that is concerned with investigating the context surrounding athletes and coaches' experiences may also seek to employ Foucault (1972, 1979, 1991a, 1998) as a theoretical framework. Moreover, future research regarding reflection in sport may also adopt his concepts to see whether the disciplinary outcomes that occur within nursing are equally prevalent in sporting scenarios.

While not solely focussing on nursing, both Cotton (2001) and Fendler (2003) also made reference to the disciplinary agenda that can be associated with the use of reflection. They agree with Fejes (2008) that reflection is not a politically neutral process and question the assumed ability of individuals to be able to objectively reflect upon their experiences irrespective of the environment that they operate in. As a result, they also cited the potential influence of 'powerful others' (Foucault, 1998) who may influence or dictate the lens with which individuals make sense of their experiences, and in doing so support the interpretation of reflection as a technology of power and also the self in certain circumstances (Foucault, 1988; Cotton, 2001; Fendler, 2003; Fejes, 2008). Future research into the role of 'others' within reflective practice is required, through which the perspectives of all stakeholders within the process of reflection are ascertained and considered.



While the perspectives of nursing practitioners who occupy varying roles (nurses, supervisors, managers) have been considered in the context of reflective practice (Fejes, 2008), how their actions contribute to the larger social construction of a culture/social environment is not commonly considered. Therefore, future research may use Foucault as a theoretical framework to investigate the interaction that occurs between individuals' disciplinary actions within a culture and how the culture itself is formulated and maintained.

#### *2.4.2 Foucault in Sport*

Recently there has been a significant increase in the amount of scholars who have applied Foucauldian concepts to varying situations within sport (e.g. Rail & Harvey, 1995; Foster, 2003; Pringle & Markula, 2005; Denison, 2007; Lang, 2010; Denison & Avner, 2011; Denison, Mills & Jones, 2013; Mills & Denison, 2013; Denison & Mills, 2014). As a result, Foucault's concepts have been found to be applicable to multiple sporting scenarios. In particular, the formation and influence of discourse, surveillance and technologies of power in sports such as elite gymnastics (Harvey & Sparks, 1991), body-building (Rail & Harvey, 1995), synchronised swimming (Johns & Johns, 2000), youth swimming (Rinehart, 1998; Lang, 2010) and distance running (Denison, 2007; Mills & Denison, 2013; Denison & Mills, 2014) have been particularly noteworthy. One reason for the diversity of sports that have been investigated may be that within these sports athletes' bodies are often open to public assessment and as a result can specifically be the point of subjugation. This aligns itself with much of Foucault's work, which focussed on the training of

the body in relation to varying forms of punishment or control (Foucault, 1979).

Johns and Johns (2000) used Foucauldian concepts of discourse and technologies of power and the self to investigate the dietary intake of athletes from different sports (Foucault, 1988). 17 athletes (four male wrestlers, one female wrestler, one female synchronized swimmer, three female gymnasts, four male and four female track athletes) who had an average age of 20 were interviewed. Interviews focussed on their experiences of nutrition and dietary practices in preparation for high performance sport and lasted between 35 and 60 minutes. It was found that discourse of performance and athletic appearance (weight management) had a significant influence on how athletes behaved. Athletes had developed discourses relating to suitable food intake and gymnasts in particular subjected themselves to poor diets in order to maintain culturally acceptable appearances within their sports. As a result, dieting occupied the role of a technology of the self as athletes actively subjected themselves to minimal food intake in order to try and achieve the essential qualities of “docility-utility” (Foucault, 1977, p.138).

Johns and Johns (2000) found that competition occupied the role of a technology of power as it provided a clinical gaze with which athletes’ docility could be directly assessed. It was also found that coaches used forms of surveillance, such as weighing their athletes, in order to encourage further compliance from their athletes (Johns & Johns, 2000). This contributed to a level of self-surveillance being achieved whereby athletes actively subjected themselves to additional training regimes and diet plans in order to avoid punishment and achieve perceived success (Johns & Johns, 2000). In short,

discourses relating to how athletes 'should' behave within certain sports and the actions of the coach to encourage and reproduce these discourses can act as a form of social control. While this study provides an insight into the potential determining influence that ingrained and socialised discourse can have on athletes' own discourse and subsequent behaviour, future research may adopt methodological techniques that complement interviews as opposed to using them as the sole form of data collection. Case study approaches, for example, that include in-situ participant observation of the training environment, coupled with interviews, may provide a more holistic understanding as to how discourses are initially established and socialised within the performance environment.

Denison (2007) adopted a case study approach to interpret an athlete's poor performance during a 10k race from a Foucauldian perspective. As the athlete's coach, Denison (2007) reflected upon his potential contribution to 'Brian's' (a university distance runner) poor performance and tried to 'make sense' of what may have occurred. Denison (2007) proposed that by constantly deciding the athlete's running spaces during training it may have begun to "function like a learning machine...a machine for supervising, hierarchizing, rewarding" (Foucault, 1979, p.147). Moreover, he proposed that his position as a "uniquely knowledgeable speaker", who dictated the content of training, may have also had a negative effect on his athlete as it afforded the athlete no autonomy or control within his own training (Shogan, 1999, p.41).

Denison (2007) also critically challenged the coaching discourse that he had developed. He examined how his instructions and 'guidance' may have represented disciplinary power (Foucault, 1979) throughout his athlete's pre-race preparation. In response, his athlete 'Brian' may have become a "docile runner subject" in order to avoid punishment and align himself with his coach's demands (Denison, 2007, p. 381). By using Foucault, Denison (2007) was able to critically reflect on his own practice and question elements of his approach that would have otherwise gone unchallenged. By undertaking this process he was able to consider his practice from a social perspective and highlight future strategies that may enhance the experiences of his athletes. This reflexive piece of research should be credited for developing our understanding of how training regimes may be deemed as controlling or restrictive from an athlete's perspective. Moreover, the bravery of the author to critically question his own practice in a public forum should also be praised. While the study was primarily reflexive, an interview with 'Brian' and/or future observations of his training may have brought added context to Denison's (2007) own interpretations of why his performance was so poor. As a result, future research may consider gaining the perspectives of all key stakeholders (both athletes *and* coaches) through interviews, coupled with observations of the training environment, to address the current lack of knowledge surrounding coach-athlete interactions within potentially disciplinary environments.

The previous study undoubtedly influenced Denison and Mills' (2014) position paper in which they proposed that distance running coaches may wish to "think with Foucault" (p. 2). It is proposed that the highly structured

nature of much distance running training, in order to physically prepare athletes to a high level, is inherently linked with Foucault's (1991a) notion of anatomo-politics and disciplinary power. Denison and Mills (2014) suggested that such prescriptive and detailed training plans can act as a "polyphony of exercises [workouts] analytical and meticulous in its detail" (Foucault, 1991a, p.159), which in turn can result in docile athletes. Given the transient, unstructured and constantly evolving nature of distance races, it was proposed that the decision-making that athletes are exposed to during competitive races should be replicated within the decision-making process relating to training content and structure (Denison & Mills, 2014).

The authors proposed techniques such as varying the training location and venue (to avoid the controlling effect that 'the track' can have on athletes) and varying the responsibilities of athletes with different respective rankings during training in order to discourage docility. Similarly, Denison and Mills (2014) proposed that instead of using 'taken for granted' and familiar distances and/or sets of repetitions within training sessions, coaches may allow athletes to continue training until they decide that they can no longer keep running. In doing so, athletes are actively involved in the process of making relevant decisions that are needed to be successful within races and are less likely to become docile (Foucault, 1991a).

In considering the consequences of varying 'taken for granted' approaches to coaching distance running from a Foucauldian perspective, Denison and Mills (2014) have provided a number of practical implications for coaches to consider within their practice. Emphasis is placed on reducing the techniques that are commonly used that encourage athlete docility (Foucault,

1991a). Future research underpinned by empirical data is required to examine the manner in which athletes competing in other sports may be rendered docile through similar coaching practice. Coaches' uses of accompanying forms of surveillance to ensure the docility of athletes may also be considered within future research to critically examining how coaches try to ensure that athletes conduct themselves in accordance with coach-directed norms.

One study that focussed specifically on surveillance was Lang (2010), who investigated the experiences of young swimmers. An ethnographic study, which considered the experiences of swimmers at three competitive swimming clubs in England, examined how surveillance operated as a technique of power. Observations "lasted between seven and nine weeks at each club" (p. 24) and were complimented by semi-structured interviews with eleven coaches and the poolside helper. Participants were between 22 and 60 years old and interviews last between 50 minutes and two hours. Lang (2010) found that discourse relating to the importance of discipline in elite swimmers ensured conformity. Multiple forms of surveillance supplemented this where swimmers conformity could be assessed. For example, the coach stayed poolside throughout sessions in order to provide a normalising gaze over swimmers' performances (Foucault, 1991b). Weaker swimmers were located in the nearest lane so that the coach's gaze was magnified and the pressure on weak swimmers to conform to coach expectations was amplified.

A similar gaze was achieved by underwater cameras which enabled constant surveillance of performance where deemed necessary. In short, it

was concluded that a culture of surveillance, similar to surveillance dominated environments found within University athletics programs (Foster, 2003), was prevalent within all the swimming clubs to ensure compliance from young swimmers. The use of Foucault in this instance allowed for accepted, everyday coaching practices to be critically challenged from a theoretical perspective (Foucault, 1979, 1991a, 1991b). Given the methodological approach that was adopted however, the formation of discourse and its subsequent disciplinary effects were only gained from the coaches' and poolside helpers' perspectives. The perspectives of the swimmers, who appeared to embody the discourse through their conformity, were not directly considered. As a result, the context surrounding how young swimmers socially reproduced discourses remains unknown.

Whilst not investigating coaches' use of surveillance, Mills and Denison (2013) found that male endurance coaches' practice within training sessions had disciplinary consequences. Following two interviews with each coach, conducted either side of a period of observation, it was found that coaches' discourse and practice was influenced by "the control of space and time, and the body's position within a larger analytical plan or training group, was primarily a way to be efficient" (p. 143). Moreover, discourse relating to the social dynamic of the coach-athlete relationship underpinned their willingness to dictate athletes' training programs as one coach described "athletes may have their own opinions, but I'm in charge. They might voice their opinion because they want to take some ownership over their training and racing but, well, it is me who knows best" (Mills & Denison, 2013, p. 144). It was

concluded that while the training and preparation of endurance runners understandably requires elements of formal training and structure, coaches could be better equipped by coach development programmes that are aimed at highlighting how their practice may be interpreted by their athletes as being restricting (Mills & Denison, 2013).

One of the few football related adaptations of Foucault is Manley et al. (2012), who examined the disciplinary and surveillant culture within both elite football and rugby youth Academies. An ethnographic approach that lasted 11 months was undertaken that included participant observation and semi-structured interviews. Twenty-one interviews with staff and players from a Premier League football club's Academy were complemented by nine interviews with players and staff from a Premiership rugby football union club's Academy. It was found that data collected during varying forms of sports science testing was used as a form of surveillance that allowed for players' attitudes and overall conformity to be assessed. This surveillance afforded coaches with the opportunities to categorise players and directly compare them to players of a similar age/standard. Data from testing such as "body weights, fats...speed tests, agility tests, they do weights, they do upper body weights, they do leg eights" (Manley et al., 2012, p. 308-309), were disseminated to decision-making stakeholders at the club so that decisions could be made on whether players were retained or released. Other less intrusive forms of surveillance involved asking the perspectives of teachers who came into contact with the young players and their parents, which



provided a vital contribution to the 'all encompassing eye' that monitored players' development (Manley et al., 2012, p.311).

The use of video analysis at the respective Academies was also underpinned by its surveillant qualities. It was found that "Video analysis, as a tool for surveillance, was able to capture the actions of the athletes subjecting them to maximum 'exposure'" (Manley et al., 2012, p. 307). This contributed to a level of "oligopticon" surveillance being possible at the clubs where multiple, surveillance-related data contributed to one overarching "perspective of the whole" (Latour, 2005, p.181). It was suggested that this occurred within a rhizomatic structure, due to the interconnectedness of the sources of data and the relationships between the key stakeholders within the respective Academies (Deleuz & Guattari, 2003). This level of surveillance that was implemented within the Academy structures allowed for the control and normalisation of young players' behaviour and subsequent performances (Foucault, 1979).

Manley et al. (2012) demonstrated the surveillant capabilities of sports science provision in the context of both coaches' and players' experiences within their respective Academies. To enhance our understanding further, future research may wish to consider the underlying discourses that influence the social environment within a sports club and also the manner in which discourse is socialised between players and coaches. This would provide much needed context regarding both players' and coaches' acceptance of surveillant cultures. Moreover, research may wish to examine the experiences of senior elite athletes in order to compare their experiences to

their younger counterparts who are arguably more reliant on their coaches due to their roles in deciding players' immediate professional futures.

This section has considered much sport research that has benefitted from using Foucault (e.g. Johns & Johns, 2000; Foster, 2003; Denison, 2007; Lang, 2010; Manley et al., 2012; Mills & Denison, 2013; Denison & Mills, 2014). His concepts relating to power, discipline and surveillance provide a theoretical framework with which academics and coaches alike are able to understand and potentially question the impact of their own coaching practice. Moreover, it allows athletes' experiences to be critically examined within a wider social context and the impact of disciplinary techniques to be realised (Manley et al., 2012). Future research that adopts immersive approaches similar to those used by Foster (2003), Lang (2010) and Manley et al. (2012) are encouraged whilst also considering the perspectives of both coaches and athletes in order to examine how discourse is socially constructed within a given sporting environment. By examining how discourse is socially created and 'played out' within potentially elite environments, the current gaps in knowledge relating to how surveillant and disciplinary cultures are initially made possible and accepted would be addressed.

## **2.5 Review Conclusion**

This review of literature has discussed research in the fields of reflection and experience-based learning, coaching, PA and social theory. Within each of the respective research landscapes, there are inconsistencies with either the theoretical approach that has been employed, or the methods that have been

adopted to collect and analyse data. In doing so, a number of common assumptions have remained unchallenged as research continues to investigate similar issues with different approaches. As a result, the transferability of research findings is questionable, even when investigating the same or similar topics.

One common assumption is related to the lack of consideration for the social environment within either data collection or the influence that it may have had on a study's results. The methodological approaches underpinning much research appear to assume that reflection, learning, coaching and the use of video-based PA are apolitical activities that occur in a social vacuum. As a result our understanding of the extent to which social factors influence reflection, learning, coaching and the use of video-based PA in sport is arguably limited. Moreover the links that exist between reflection and coaching, reflection and video-based PA, and video-based PA and coaching have been largely neglected within the research despite their evident connectedness. Therefore, research within the disciplines that have dominated this review may benefit from in-situ, case study approaches that incorporate ethnography and participant observation to complement the use of interviews, and in doing so generate new knowledge and understanding relating to the influence of the social environment on participants' experiences.

Finally, the review has revealed that sport research regarding reflection, learning, coaching and PA typically examines the perspectives of either coaches or athletes but rarely considers the influence that their respective actions may have on each other. As a by-product there has been

a distinct lack of research that has adopted social theory to critically examine the influence that social factors and the interactions that occur between key stakeholders may have on an reflection, learning, coaching and the use of video-based PA.

### Chapter 3. Methodology

Coaching and video-based PA research is underpinned by a positivist ontology (Smith, 1989; Brustad, 1997; Cushion, 2007); that is the belief that there is an objective truth that can be established as a result of experimental study (Cresswell, 1994). As a result, research investigating video-based PA has traditionally investigated the influence of performance variables on match outcome (see *Review of Literature*, p. 55) as opposed to investigating social factors that may influence the dissemination of video-based PA. Therefore, methodologies that acknowledge the influence of social and cultural factors have not largely been used (for exceptions see Groom et al., 2011, 2012). The direction and content of much video-based PA research has reflected the notion that knowledge and understanding can be generated from traditional experimental approaches to scientific inquiry (Guba, 1990). This has remained largely consistent irrespective of the fact that the use and dissemination of video-based PA can be considered a social activity (e.g. Groom et al., 2011, 2012; Mackenzie & Cushion, 2013).

Research concerning reflection and reflective practice in sport, however, has tended to implement qualitative research methodologies to comprehensively investigate participants' experiences (see Gilbert & Trudel, 2001; Knowles et al., 2001; Gilbert & Trudel, 2004a, 2005; Knowles et al., 2006). However, much reflection research appears to be concerned with modelling and representing what is a fluid and emotion driven process with relatively simplistic schematics (e.g. Gibbs, 1988; Knowles et al., 2006; Lane et al., 2013). Reflection research has also attempted to categorise and hierarchise different types of reflection (e.g. Knowles et al., 2001), and in doing so has sought to further simplify and reduce the inherent complexity associated with the process. This research activity aligns itself with reductionism, which is a core

concept of the positivist paradigm (Smith, 1989; Brustad, 1997; Cushion, 2007), as researchers have attempted to understand the functioning of the whole through an analysis of its individual parts. As a result, reflection has often been portrayed as measurable, causally driven and both predictable and controllable (Smith, 1989).

Despite the interdependency that seemingly exists between reflection and video-based PA as a valuable feedback mechanism (e.g. Stratton et al., 2004; Carling et al., 2005; Groom et al., 2011), little research has considered their respective roles in combination. Within the current research I have attempted to address this by investigating the topic as socially grounded, with a methodology that allows for the pertinent factors to be fully investigated (i.e. social influences). Therefore, my research design has provided an alternative and novel approach to investigating the reflection and experience-based learning of professional football players and coaches. In doing so, this research provides a unique contribution to the current reflection and video-based PA research landscapes.

Holt and Tamminen (2010) suggest that the approach a researcher adopts to conducting research should be in alignment with their view of the nature of reality and how knowledge is created; there should be “congruence between your epistemological and ontological viewpoint, your theoretical position/perspective, your research question, and so on” (Mayan, 2009, p.19). With this in mind, it is important for me to make my philosophy known as it is also suggested that a ‘researchers’ philosophical preferences may shape the types of issues she or he wishes to research, which will influence some later research decisions and the manner in which the grounded theory is created and presented” (Holt & Tamminen, 2010, p. 420).

As a researcher my assumptions align with those held by critical social theorists (Kincheloe & McLaren, 2003), as “critical social theory rejects the separation of value and inquiry, knowledge and action, and challenges the unity of the scientific method with regard to social affairs.” (Ngwenyama, 1991, p. 268). Therefore, while the methodology underpinning this research relies on interpretive methods such as interviews, ethnography and participant observation, it is informed by critical social theorists’ understanding that in order to represent individual’s experiences effectively “the inquirer must focus on both process and context from an individual as well as an institutional perspective” (Ngwenyama, 1991, p.271). Subsequently, individuals are influenced by social and cultural practices that they are confronted with or involved in.

Critical theorists share interpretivist assumptions such as the researcher being not merely another individual, but instead the main focal point of the research process (Avramidis & Smith, 1999). The researcher adopts a position as the interpreter, the writer and ultimately the creator and constructor of the research world in which the data were collected (Avramidis & Smith, 1999). As a result, positivist driven “falsifiable statements” or “strict hypotheses” are not applicable to critical social theory (Ballsun-Stanton, 2010, p.123). Critical theory and interpretivism can be differentiated by understanding that critical theorists believe everything is fundamentally mediated by power relations, and that these are both social in nature and historically constituted (Kincheloe & McLaren, 2003). Moreover, issues of power, domination, and oppression are central to critical theory: who has power, who does not, and why (Kincheloe & McLaren, 2003). Thus, by using critical theory to examine individuals’ experiences from a social perspective, knowledge relating to how power, politics and historical discourse may influence individuals’ existence

within a certain social environment can be generated.

In the current research, the central research question was; “*How do players and coaches learn within the culture of professional football, and how do they affect each other?*”. I therefore sought a methodology that would allow me to investigate the subjective interpretations of both players and coaches. However, at face value the two theoretical approaches that were adopted hold different underlying assumptions about the construction of knowledge. Schön’s (1983) theory of experience-based learning and reflective practice is based on the assumption that meaning and knowledge are created by the individual whereas Foucault (1972, 1977a, 1979, 1988, 1991, 1999) suggested that knowledge is socially constructed through the reproduction of discourse (Foucault, 1972).

In this context, however, discourses of reflection and the proposed purpose of reflection have already been socialised and established over a number of years, which has resulted in the significant amount of research surrounding reflection (see *Review of Literature*, p. 25). Therefore, Schön (1983) was used as an organising framework to represent existing discourse rather than being used to establish entirely new phenomena. Marx argues that theoretical tasks can be solved in practice and conceptual problems can be resolved through setting in motion critique (Rockmore, 2002), though critiquing and 'abolishing something' cannot be achieved without initially realising it. Therefore it was important to ‘realise’ and represent discourses of reflection held by players and coaches prior to critically examining them. Using Schön (1983) allowed for players’ and coaches’ reflective practice and experiences of reflection to be specifically located on an individual level prior to being critically examined with Foucault (1972, 1977a, 1979, 1988, 1991, 1999). This



approach allowed for previously un-researched interactivity between key stakeholders and the construction of their environment to be investigated, whilst also highlighting patterns in players' and coaches' reflective practice and experience-based learning.

This approach, which acknowledges existing discourse prior to critically examining its formation and reproduction, is supported in the context of Lyotard (1989) who proposed that postmodernist/poststructuralist (critical social theory) research should be concerned with questioning 'grand narratives' that are held within society, i.e. reflection being accepted as a self-fulfilling activity (e.g. Lynch, 2000; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002). As a result, research methodologies that "search for better means of understanding these ways of talking and thinking" (Mills & Denison, 2013, p. 218) are encouraged in order to "deepen our understanding of what goes on in language, to critique the vapid idea of information, to reveal an irremediable opacity at the very core of the language" (Lyotard, 1989, p. 218). Therefore, whilst it is important to acknowledge that contrasting ontological and epistemological assumptions underpin both Schön's (1983) and Foucault's (1972, 1977a, 1979, 1988, 1991, 1999) theoretical standpoints, the manner in which they are used together in this research is justified in the quest to "deepen our understanding of what goes on in language" (Lyotard, 1989, p. 218). Only by acknowledging that a 'language' of reflection exists initially, can it then be critically examined and challenged (Rockmore, 2002).

It is also accepted that "structures of language speak through the person" (Kvale, 1996, p.52) and as a result no single method can grasp the subtle variations that occur within human experience (Denzin & Lincoln, 2008). Therefore diverse, novel and complementary approaches, as used within this research, should be

encouraged in order to try and critically challenge previously accepted perspectives and discourse that may not actually lead to the emancipation that it implies (Lyotard, 1989). By implementing Schön's (1983) theory of experience-based learning and reflective practice to represent the discourse of reflection held by both players and coaches it was felt that an articulable form of Foucauldian discourse analysis was not necessarily applicable (Foucault, 1994; Liao & Markula, 2009; Mills & Denison, 2013). While scholars such as Markula and Silk (2011) have provided guidelines and proposed procedures to enhance the transparency of future discourse analyses, it was decided that because discourses of reflection are well established, and sequential/cyclical representations of reflective practice already exist, using an approach (i.e. articulable form of Foucauldian discourse analysis) that did not acknowledge this pre-existing 'knowledge' would undermine the discursive understanding currently held within academia relating to reflection (e.g. Saylor, 1990; Borrie & Knowles, 2004; Irwin et al., 2004; Ghaye, 2010). Instead, by acknowledging domain specific language and locating it within a pre-existing schematic representation of reflective practice (i.e. Schön, 1983), the formation of this discourse has been able to be located prior to it being critically examined. Thus the application of Foucauldian concepts (1972, 1977a, 1979, 1988, 1991, 1999) within this research, without explicitly conducting a traditional Foucauldian discourse analysis (Markula & Silk, 2011), is supported in the context of other research that has adopted a similar approach (e.g. Lang, 2010; Manley et al., 2012; Mills & Denison, 2013).

By locating myself within the research setting, a visible form of Foucauldian analysis in relation to the construction of the coaching environment, as proposed by Mills and Denison (2014), was made possible. This approach allowed me to identify

and critically examine the “system of light” (Delueze, 1988, p. 32), or practical formation of an environment, and the associated technologies of domination that were implemented in order for imbalances in power relations to be established between the club’s key stakeholders (Foucault, 1980). Since “Foucault gave researchers the license to dip in and out of his theoretical tool-box” (Mills & Denison, 2014, p. 225) I believe that this novel approach to analysing data and examining the formation of discourse remained true to Foucault’s “paradigmatic logic and his major theoretical concepts” (p.225). It is important to acknowledge that by using two ontologically contrasting theoretical concepts within this unique research, albeit in different ways, it is difficult to align myself exclusively with any one previously established and strictly defined ontological and epistemological approach (Denzin & Lincoln, 2000). Therefore, while I make reference to the ontological and epistemological assumptions that I hold as a researcher later in the chapter during the “*Demonstrating Reflexivity and Ensuring Quality Within the PhD Research Process*” section, the lack of uniform conformity to any one specific approach alone reflects the uniqueness of the research. The specific research questions that guided the current research were:

- (1) How are discourses of reflection and coaching defined and to what extent do they influence player and coach learning?
- (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches?
- (3) What effect does video-based PA have on players’ and coaches’ reflective practice and experience-based learning?

- (4) To what extent is the use of video-based PA influenced by the culture in which it is implemented?

### **3.1 A Case Study Approach**

There is reluctance from professional football clubs to allow researchers into their environment to conduct research (Roderick, 2006a; Potrac & Jones, 2009). Despite this, there is a significant volume of research that has investigated the performances of professional football teams using data provided by external third party companies (especially in the field of PA - e.g. Jones, James & Mellalieu, 2004; Scoulding, James & Taylor, 2004; Redwood-Brown, 2008). Previous restrictions on data availability and direct access to the environment has often resulted in a predominantly basic science approach being adopted which is concerned with investigating professional football match statistics without understanding the dissemination or relevancy of such statistics in an applied context (for an exception see Groom et al., 2011). Using a case study approach (Pensgaard & Duda, 2002; Collinson, 2003; Yin, 2003) in the current research enabled me to witness how individuals occupying different positions within the research setting responded to a variety of situations, interactions and challenges. As a result, I was able to establish what was deemed to be important by individuals within the cultural fabric of the club and also what was deemed to be insignificant. A case study approach allowed me to examine the actions of individuals in isolation whilst also comparing their respective experiences to those of other individuals within the organisation. In doing so, I gained a valuable insight into the social and cultural factors that influenced reflection

and experience-based learning within a professional football club. Moreover, having been located in the research setting throughout the process, I was also able to align my research questions with topics that were deemed worthy of consideration by industry professionals (Bishop, 2008).

It has been proposed that much sports science research is driven by the research interests of academics as opposed to considering the interests of practitioners situated within the applied setting (Bishop, 2008; Mackenzie & Cushion, 2013; Verhagen, Voogt, Bruinsma & Finch, 2013). This has contributed to the current lack of understanding relating to video-based PA in the applied context. A case study which “investigate(s) a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2003, p.13), was therefore deemed the most applicable research approach to adopt. In doing so, the longitudinal data collected allowed for the in-depth examination of key stakeholders’ perspectives (Yin, 2003). Case study approaches have been adopted in sport to formulate new knowledge and understanding about research topics or novel environments that have previously been neglected (see Westbury, 2009; Tracey, 2011; Wagg, 2011). In the context of the current research, the social interaction involved when reflecting in the presence of others (Foucault, 1998; Fendler, 2003; Fejes, 2008) and in the dissemination of video-based PA has largely been ignored. It is acknowledged that video-based PA is located in the social process of coaching (Hodges & Franks, 2002; Lyle, 2002; Stratton et al., 2004; Carling et al., 2005; Groom et al., 2011) and as such needs to be considered. A case study approach provided social immersion and allowed for the social interaction occurring between players and coaches to be investigated.

Despite the fact that case study research allows researchers to holistically and thoroughly investigate a given environment, criticism has been aimed at the lack of generalisability associated with their findings (Stake, 1995). While it is acknowledged that the present research only represents the practices at one professional football club, similar ethnographic research has provided valuable insights into the social dynamic of coaching within the culture of professional football (e.g. Potrac, Jones & Armour, 2002; Cushion & Jones, 2006, 2014). In examples such as Cushion and Jones (2006), an immersive and longitudinal approach, similar to the methods used in this research, allowed for the generation of new knowledge that may have otherwise not occurred (Brustad, 1997). Given the level of social immersion achieved across a one-year period in this research, the approach adopted enabled me to extensively investigate players' and coaches' reflection and experience-based learning at a professional football club. Having also worked under different managers during the data analysis process I witnessed other managers' approaches. As a result, I may be in a better position than other researchers to offer suggestions as to how other clubs may also operate (Yin, 2003).

Importantly, however, case study research does not study a case primarily to understand other cases. Instead researchers strive to investigate and understand one case to such an extent that they can fully comprehend the case in question (Pensgaard & Duda, 2002; Collinson, 2003; Yin, 2003; Collinson, 2005; Vergeer, 2006; Carson & Polman, 2008). If a researcher conducts a case study successfully, however, they *may* offer suggestions as to how similar cases may operate (Carson & Polman, 2008). Thus, a case study approach has a "goodness of fit" in relation to generating new knowledge and understanding within the fields of reflection and video-based PA. The combination of qualitative methods used throughout the data

collection process; ethnography (e.g. Atencio, 2006; Kay, 2006; Light, 2008; Atencio & Wright, 2009; Macdonald, Abbott, Knez & Nelson, 2009; Knez, 2010; Burrows & McCormack, 2011), interviews (e.g. Light & Curry, 2009; Tracey, 2011) and audio/video recording of video sessions (Dufon, 2002) allowed for a holistic understanding of players' and coaches' reflection to be generated. Furthermore, it allowed for the underlying functions of reflection and video-based PA to be located within the wider culture at the club. This novel approach provided a unique contribution to the current reflection and video-based PA related research.

### **3.2 Participants & Context**

The chapters in this research draw on different data to focus on the experiences of varying individuals at the club but the participants and context under investigation remained constant throughout. The First Team squad constituted an average of twenty-two professional players but the individuals who made up the squad changed throughout the research process as a result of transfers and loan signings/departures. Pseudonyms have been given to the three senior members of the coaching team who were interviewed (*Steven, John and Peter*) along with the eight first team players who were also formally interviewed; *Rory Thomson, Jordan van Helden, Sean Smart, Robert Stoker, Mark Hall, Peter Evans, Simon Wootton and Shaun Hughes*.

#### **3.2.1 The Club**

In order to maintain anonymity throughout the research process the club where the research was conducted was also given a pseudonym, *East United FC*. The club

was an English professional football club who played in the English Championship: English Professional Football's second tier. The Club was ambitious and keen to gain promotion to the 'English Premier League' and had invested in facilities and staffing. The club's backroom staff was made up of a Manager, two Assistant Managers, a First Team Development Coach, Reserve Team Manager, Goalkeeping Coach, Performance Analyst, Strength and Power Coach, Sports Scientist and two Senior Physiotherapists. These individuals were observed throughout the period of one full season within the context of the research environment. The club had made significant investment in players over recent seasons, and provided structured training and preparation for a competitive season containing 46 league games and additional games in cup competitions. East United FC had a structured Academy that had contributed to the development of two of the club's current First Team Squad.

### 3.2.2 *The Players*

Apart from *Pete*, who had recently joined the coaching staff (see *The Coaches* section, p. 103), *Rory Thomson* was the club's most senior professional player. He was 34 and in his 17<sup>th</sup> season as a professional player. As a striker he had played approximately 600 first team games across a number of clubs and at different levels. He had played both in the third tier of English professional football and also in the English Premier League. When the research started *Rory* had been at the club for 1 ½ seasons having been transferred to the club for approximately £1.5 million. *Rory Thomson* was a character whose responses were often spontaneous and very much to the point. He was renowned for being no-nonsense and "telling you like it is".



*Jordan Van Helden* was another senior player within the club's First Team squad. *Jordan* was 32 and had played at the highest level in one of the top 5 European leagues. Despite the latter stages of his career being plagued with injuries he had managed to make 180 appearances and had represented his country. This was his 12<sup>th</sup> season as a professional footballer. As a defender, he was in his 2<sup>nd</sup> season at the club. *Jordan van Helden* was commonly known as "*Jord*" around the club's training ground. He was a disciplined and philosophical player who thought carefully before answering to questions asked of him, as though conscious that he was being judged intellectually on his response.

*Sean Smart* had only recently joined the club on a free transfer following the expiry of his contract at his previous club. *Sean* was 28 and had been a professional footballer for 8 previous seasons in which he had made 143 appearances. Like *Jordan van Helden*, *Sean* had suffered a number of injuries that had prevented him from playing on a consistent and regular basis. He was a goalkeeper and had been signed to provide competition with *Robert Stoker* for the position. Known as *Smarty*, within the confines of the club's training ground, he adopted a very analytical approach to preparation and performance. He believed in order for him to play regularly and be a successful player, it was his responsibility to maximise the opportunity he had been given by preparing with meticulous precision on a consistent basis.

*Robert Stoker* had graduated from the club's Academy having signed schoolboy forms at the age of 12. He was now 24 and had managed 95 first team games, with many of them having been played when he spent time out on loan at lower league clubs. He was in his 5<sup>th</sup> season as a professional footballer and had aspirations of being the club's number one goalkeeper. He had represented his

country previously at youth international level. He was known as “*Robbie*” at the club and he maintained a strong belief that he should be playing regular football as a number one goalkeeper and that is what he aspired to become.

*Mark Hall* was another player who had made the successful transition from the club’s Academy following his release from another club at the age of 16. At 22, he was in his 3<sup>rd</sup> full season at the club where had already played 56 first team games. As a promising young player who had managed to establish himself within the team’s central midfield he had just broken into his country’s senior international team. “*Hally*” as he was affectionately known around the club’s training ground was one of the club’s best Academy products and as such was a popular figure in the eyes of many of the club’s staff.

*Peter Evans* was another young player in the club’s First Team but as opposed to coming through the youth ranks at the club, he had been recently signed from a non-league club. Despite being only 22 he had already played 145 first team games and had established himself in the club’s defence. This was his 2<sup>nd</sup> season at the club having played in the English Conference for 3 seasons prior to his transfer. “*Evo*” described that he had experienced newfound pressure and responsibility as an elite professional footballer playing in the second tier of English football for the first time compared to how he saw himself as a non-league footballer.

*Simon Wootton* was another recent signing, having only signed for the club two weeks before the research began. At the age of 21 *Simon* had played 56 first team games for a club in the league below and was now in his 4<sup>th</sup> season as a professional footballer. He had represented his country at youth international level when selected to play central midfield. He, like *Mark Hall*, felt that he had to be

perceived as being a role model in the public domain, despite not necessarily seeing himself as such. He also felt his family had been key to his relative success.

*Shaun Hughes* had been at the club for one season prior to the research commencing. He had enjoyed a successful loan spell at the club, which resulted in a permanent transfer from an English Premier League club. Despite being only 22 and playing in central defence, *Shaun* had made 55 first team appearances and was in his 5<sup>th</sup> season as a professional footballer. This represented the early promise that he had shown in the early stages of his career and had resulted in a transfer to a top club at 17. “*Hughesy*” was renowned for being philosophical and a deep thinker, too much so in some of the staff’s eyes. A well spoken and intelligent individual, he was known for being a “super pro” due to his diligent and disciplined approach to maintaining his physical and mental conditioning.

### 3.2.3 *The Coaches*

#### *Steven (The Gaffer)*

*Steven*, 47, was the club’s manager and had been for the last two seasons. He held the UEFA Pro License coaching qualification<sup>1</sup> (gained in 2003) and appeared to understand the needs of his staff and his players; evidenced in his regular reference to the “needs of the group”. He was known to the players as “*The Gaffer*” but insisted on his staff calling him “*Steve*” when not in the presence of players. *Steve* was different from other managers that members of the backroom team had worked with before, as the club’s lead sport scientist described; “*He’s just got an aura about him hasn’t he the gaffer?*” *Steve* was an advocate of sports science and surrounded himself with staff who were there on merit as opposed to

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<sup>1</sup> The UEFA Pro License coaching qualification is currently the highest coaching award that can be attained from the National Governing Body (The FA) by professional coaches in England

being appointed through traditional nepotistic approaches to staff recruitment common in professional football (Waddington, 2002; Potrac & Jones, 2009); *“You can’t be surrounded by pals and we all have a good time and be shit at what they do. They have got to be good at what they do first and foremost”*.

He described himself as being *“stubborn and quite abrasive at times”* and *“very unforgiving to a point of I’ve fallen on my sword a few times because I’m bloody minded. That’s how I am”*. At the same time, he demonstrated excellent empathy and placed an emphasis on the role of his family in his life and ensured that players and staff had time to spend with theirs; *“Football is a job and I enjoy my job and I get lots of satisfaction from it but it’s not my life and you know I hear a lot of people talking about it being you know, the most important it’s not really to me. My family are very important to me and I understand, having been a player myself that time with them is also very important”*.

The role of manager at *East United FC* was Steve’s 3<sup>rd</sup> managerial position having held a number of Assistant Manager and 1<sup>st</sup> Team Coach roles at English Professional football clubs prior to becoming a manager. He had also worked for the National Governing Body (Football Association, FA), with the specific responsibility of assisting in the development of youth players. He experienced a successful career as a professional player spanning 17 years despite not initially thinking he would make the transition into management. He was now in his eleventh year as a professional football coach/manager:

*“I think it’s more to do with managing people and I happen to work in football but you know, the process of managing is one that I enjoy. I didn’t think I was going to manage if I’m honest. I saw myself as a coach first but the longer I’ve been in it I*

*suppose the biggest change is I'm happier to take more of a back seat and do certain things on the field. I think it's still important that the manager coaches. I'm also a believer in letting the players have different voices so I'm happy to observe as much as do."*

*John (Assistant Manager)*

*John* was the Assistant Manager responsible for the bulk of the coaching at *East United FC* and was brought to the club by *Steve* who had worked with him previously at a different club, albeit in different roles at the time. He was known as "*Widds*" throughout the club and referred to himself as the "Good Cop" in the management team dynamic with the manager fulfilling the almost inevitable role of the "Bad Cop":

*"I think different players will see it as different roles. Some will see it as good cop, bad cop. I think some will see it as I'm there for them as a shoulder to cry on if they don't."*

*Widds* was also 47 and held the UEFA A License coaching qualification<sup>2</sup>. He was a warm and friendly man who ensured that new people to the club were immediately made welcome and often adopted a "Dad" like figure to younger members of staff; typically interns or students, in looking out for them during their initial exchanges with the club's culture:

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<sup>2</sup> The UEFA A License coaching qualification is the second highest coaching award that can be attained from the National Governing Body (The FA) by professional coaches

*“I’d like to think by treating people properly, having a laugh and a joke is important to enjoy going into work is important but also you want to be successful so you want to make sure that everybody is doing their job to the best of their abilities as well.”*

*(Widds)*

Simultaneously, however, he was known famously at the club for his practical jokes, sense of humour and quick wit when trying to “stitch people up”:

**Researcher:** *“Can you give me an example of when you maybe made the wrong decision?”*

**John:** *“Fucking inviting you round and fucking staying this long! [He smiles] That’s proven a fucking wrong decision. Fucking hell...it’s ten past seven now! [Laughs]”*

The role that *John* currently held at *East United FC* was his first Assistant Manager’s role having held a number of coaching roles prior to joining the club. His background was predominantly in youth coaching having been U18 coach at a Premier League club and having previously worked in youth recruitment. He had been coaching professionally for five years. *John* had also been a professional footballer, having played approximately 500 games during a career that spanned 19 years.

*Peter (First Team Development Coach)*

*Peter* or “*Greavesy*” as he was known to players and staff alike, joined the club in a coaching capacity at the beginning of the season alongside his role as a professional player at the club. The professional manner in which he approached training and off the pitch aspects of the game such as nutrition, recovery and maintaining high levels of fitness, earned him the respect of both players and coaches alike. One of the club’s defenders described his respect for how long

Greavesy had managed to prolong his playing career:

*“Since I’ve been in the game really, just looking at people that sort of look up to me and sort of looking at them, what they’ve done, like for example, Greavesy, do you know what I mean, he’s ... he looks after himself probably better than anyone. He’s still in amazing shape at what, 41, 42?”*

(Player)

His main role was to act as a buffer between the players and the management team in order to provide an accurate players’ perspective on things to the manager. Simultaneously, he was responsible for emphasising key messages from the manager to the players. For example, it was common for *Greavesy* to take part in sessions during the early part of the week and then spend time with the team’s defenders discussing themes such as positioning, attacking the ball and covering angles, which were deemed relevant following their last competitive game. At 41, this was his first “full-time” coaching role and he was completing his UEFA A License coaching qualification.

Another aspect of his role was to take ‘small group’ training sessions with the defenders with the aim of improving their positioning and collective shape given he was a defender himself as a player. *Greavesy* felt almost a duty to look out for some of the younger players at the club, especially the ones whom he had highlighted “as *having a bad time of it*”. He made sure that he had a cup of tea and a catch up with them in the club canteen whenever the opportunity presented itself. He was hard but fair with the players as he knew how ruthless the professional game can be and believed there “*is no point hiding them away from it – they’ve got to hit it head on*”. He was also keen to highlight the positive in people, acknowledging when people

had done well and “*tried to look out for people*”. His professional football career, which included international honours, had lasted 22 years and had only recently showed signs of coming to an end, hence his transition into coaching.

### **3.3 Data Collection**

#### *3.3.1 Ethnography (Participant Observation, Informal Interviews & Audio/Video Recording)*

In order to fully appreciate the nuances and subtleties relating to players and coaches behaviour within the club’s wider culture it was important to accumulate as much data from the research environment as possible. Ethnography is a data collection method (e.g. Fetterman, 1998; Delamont, 2004; Burrows & McCormack, 2011) that allows encounters, events and understandings to be placed in a fuller and more meaningful context (Tedlock, 2000). Holloway (1997) suggested that ethnography is the “direct description of a culture or subculture” (p. 59), while Cresswell (1998) proposed it is a “description and interpretation of a cultural or social group or system” (p.58). Similarly, it is suggested that “the researcher studies the meanings of behaviour, language and interactions of the culture-sharing group” (Cresswell, 1998, p.58). This held added importance in the context of my research as the culture of professional football has been found to exhibit unique characteristics (e.g. Potrac et al., 2002; Cushion & Jones, 2006; Roderick, 2006b; Cushion & Jones, 2014). Therefore, it was important to ensure that my data were situated within the club’s culture.



An ethnographic approach allowed for the culture and context in which players and coaches reflected on their practice to be investigated. It also allowed for the context surrounding the use of video-based PA at the club to be critically examined in relation to the overarching culture. In order to achieve a significant understanding of this culture, however, it was important that I situated myself in the research environment for a prolonged period of time (Hammersley & Atkinson, 2007). As a result, I spent a full season at the club working four days a week and operating as a First Team Performance Analyst whilst collecting the data. This period of time allowed me to observe players and coaches whilst effectively sharing their way of life. Prolonged periods of engagement such as this have yielded rich and insightful data in recent years when conducting ethnography at sports clubs (e.g. Holt & Sparkes, 2001; Macphail, 2004; Cushion & Jones, 2006).

Within ethnography, the direction of the research relies heavily upon the interpretations and assumptions of the researcher (Foley, 1992; Hammersley, 1992). Individuals drive the research process, yet may be influenced by the process itself (Denzin & Lincoln, 2000). As a result, this raises issues relating to bias and objectivity in observations. Declercq (2000) proposed that the quality of the data collected in ethnographic research largely depends on the nature of the relationships that researchers are able to build up with informants. Consequently, I ensured that I built trusting relationships with the key stakeholders in the environment, enabling me to ask meaningful questions throughout my data collection and receive honest responses. The language used by *Rory Thomson* and the manner in which he openly answered questions about the club's manager and analyst in the following vignette indicated that he felt comfortable during the interview process:

**Researcher:** *“But if a manager is telling you something compared to say an analyst or [analysts name] or whoever... does it matter to you who is doing the talking?”*

**Rory:** *“Aye, it does aye...yeah. I mean maybe, maybe its erm...(pause) better coming from him [manager]...”*

**Researcher:** *“But you’re not...”*

**Rory:** *“It probably is better coming from the manager, not having anything against [analysts name] and that, but I think ‘cos everybody...I mean it’s the manager innit? There was a thing in the paper saying that erm...if a manager wears a tracksuit versus a suit, and then wears a suit on a match day they get more respect.”*

**Researcher:** *“What do you think to that?”*

**Rory:** *“I think its bollocks. I think the manager’s the manager, so I think its bollocks. But anyway, I think its erm (laughter), but I think it would be better coming from the manager without doubt.”*

Relationships were forged with players, members of the training ground staff and coaching staff alike. I gained the trust and respect of one player when I spent some time with him when he was injured: a notoriously lonely place in football (Roderick, 2006a, 2006b). Another example was when I, unprompted, compiled a DVD of one player’s goals and highlights of the season just prior to his return to the side from suspension; a subtle indication that people on the backroom team had not forgotten what he could contribute to the team despite being out of the side. This approach within the professional football club environment resulted in those operating around me feeling comfortable enough to be themselves and act in a genuine fashion. It was common for coaching staff to give their opinions on players and discuss

confidential information in my presence, along with openly discussing the role of video-based PA and match related statistics, despite know that I was actively conducting research on the topic.

Sands (2002) suggested that given a researcher's level of involvement in the physical environment, it is nearly impossible to stay detached and objective from those you are studying. Moreover, for researchers who have experienced similar environments before and/or are familiar with the setting, the suspension of preconceptions are often difficult (Hammersley & Atkinson, 2007). Having experienced similar environments before (e.g. professional football Academy), both as a researcher and a practitioner, it was important for me to remain aware of how those experiences may have influenced my interpretation of situations occurring in this environment. In order to gain credibility and maintain transparency in my research it was important that I kept a reflexive journal (Richardson, 2000; Finlay, 2003) throughout so that interpretations of situations and/or events could be put into the context. This process sought to address some of the concerns that are often held in relation to ethnography, such as role clarity, potential biases and the extent to which the researcher becomes socialised in the research setting (Stake, 1995).

### *3.3.2 Participant Observation*

Delamont (2004) suggested that “participant observation, ethnography and fieldwork are all used interchangeably in the literature; and are therefore synonymous” (p. 218). It is therefore common for much ethnographic research to be underpinned by participant observation (Suter, 2000). Participant observation refers to spending prolonged periods of time watching people in their environment coupled with investigating what they are doing, thinking and saying in order to understand

their World (Delamont, 2004). It is a methodological tool that can yield rich and contextual data that allows for the investigation of cultures and practices within society (Holt & Sparkes, 2001; Yin, 2003; Delamont, 2004). More specifically, participant observation refers to a mixture of *observing* individuals and *interviewing* them in order to understand how the cultures in which they are placed 'work', and how such a World is perceived by those inhabiting it. Patton (2002) placed significant value on the contribution of participant observation in research as there is simply no substitute for the direct experience it provides. According to Yin (2003), however, participant observation also yields difficulties as "the participant's role may require too much attention relative to the observer's role" (p.96), in that "the participant-observer may not have sufficient time to take notes or to raise questions about events from different perspectives, as a good observer might" (p.96).

To represent the environment accurately and to maximise the direct experience that I encountered, the way in which I recorded participant observation data was critical. While undertaking the role, interactions and spontaneous presentations including the use of video-based PA occurred that I was either involved in or observed. This spontaneity revealed the often-unstructured use of video-based PA at the club and was of significant importance to me as a researcher. In order to establish data that accurately reflected the situation(s) that I experienced, I immediately documented my field notes on my laptop if the situation allowed, and if not I wrote my field notes in the evening when I got home to supplement the brief notes I made immediately post-event. This approach was adopted in line with the quality of data attained by ethnographers who utilised similar strategies (e.g. Atencio, 2006; Cushion & Jones, 2006; Kay, 2006; Light, 2008; Atencio & Wright, 2009; Macdonald et al., 2009; Knez, 2010; Burrows & McCormack, 2011). Additionally, I recorded a number of formal

team meetings and ad-hoc player meetings with a video recording device in order to ascertain both verbal and non-verbal communication and interaction. In total, I attended approximately 65 formal team meetings during the season and 5 ad-hoc player meetings. The recordings of these meetings were transcribed as near to the time as possible and where possible, notes were also documented in relation to both player and coach reaction and interaction outside of the official meeting scenario.

Delamont (2004) suggests that researchers engaging in participant observation do not actually usually truly participate to the same extent as those who are constants in the culture and instead researchers only “help occasionally” (p. 218). It is further proposed that the researcher cannot spend the whole time engaging in cultural practices as this would prevent “both studying other members of the social world and, perhaps more vitally, time spent writing the field notes, thinking about the fieldwork, writing down those thoughts, and systematically testing the initial insights in the setting” (p.218). Such an attitude towards participant observation is common within the literature (e.g. Armstrong & Hognestad, 2003; Mynard, Howie & Collister, 2008). However, it is important to note that such an explicitly disassociating stance may lead to the researcher perhaps appearing distant and not being deemed ‘a part of it’ by those within the environment which in turn could affect the richness of the data collected and the willingness of those within the setting to engage in interviews (Goffman, 1989; Allan, 2006).

This is especially applicable to the environment of a professional football club in that individuals situated within the club are often expected to contribute “meaningfully” as part of a team and engage in cultural practices such as “banter” (Parker, 2006; Roderick, 2006a; Millward, 2008). For example, traditionally it is not uncommon for new members within the group to effectively have to “prove their worth” or gain

initiation into the group by completing a set task, such as singing a song in public (Schacht, 1996). Given the value placed on ceremonial acts such as these within football, it could be argued that choosing to abstain from taking part would impact on the forming of relationships and generating trust in future encounters. Members of staff within football clubs often have very close-knit relationships with each other due to the insecure nature of the industry (Roderick, 2006a, 2006b). As a result, if a researcher was unable to form a positive relationship with club staff then they may be reluctant to be honest with them and would have direct implications for the quality of the data collected. In order to try and ensure positive relationships with members of the coaching staff at the club I ensured that I was prompt and diligent with any video-based PA tasks that were asked of me.

In contrast to the suggestions of Delamont (2004) many studies have successfully involved researchers occupying multiple roles within the applied setting (e.g. Holt & Sparkes, 2001; Macphail, 2004). Thus, it could be argued that immersive approaches actually lend themselves to developing deeper understandings of individuals' 'life worlds' and beliefs in the environment (Lyle, 2002). In doing so they fulfil the need of ethnography to represent stories as those of the subjects, rather than those of the ethnographer (Gubrium & Holstein, 1997). Such a stance supports the decision to place myself as a researcher at the club and fulfil both roles of First Team Performance Analyst and Researcher. Moreover, it contributed to the development of significant and trusting relationships with people at the club (players, coaches etc.).

Whilst acknowledging the strengths of participant observation as a research methodology, scholars have challenged the emphasis placed upon the researcher as the main source of data collection. Like ethnography more broadly, Yin's (2003)

main concern with participant observation is its exposure to potential biases. In this research because of the dual role that I occupied and the significant amount of time that I spent at the club, I developed both professional and social relationships with members of club staff. Scholars may be sceptical in situations such as this that the relationships formed with members of the research environment may have contributed to biases and/or favouritism when representing the data (e.g. Bulmer, 2001; Hammersley, 2005). In order to prevent this I made it publicly known within the club that my research would adopt a critical stance in order to try and enhance future practice. In doing so, members of the research setting were aware that I may critically challenge their practice irrespective of the relationship that I had established with them. This process allowed me to minimise any potential biases that may have influenced the manner in which the data was analysed and represented.

Another reservation in relation to participation observation is that researchers are likely to become active supporters of the group or organization that they are studying (Yin, 2003; Hammersley, 2005). Such a criticism may appear warranted in the context of this research given that professional football clubs are exclusive and enclosed environments (Roderick, 2006a) that require unified support from those within the environment to achieve success. With this in mind, it was important for me to acknowledge the potential for this to occur prior to engaging in cultural practices and to maintain as removed as possible when questioning the culture through a scientific lens. I achieved this by conducting all of my analysis away from the club environment and regularly engaged in discussions with my PhD supervisor as to what I had experienced and potential concepts or theoretical models that may explain what had occurred.

Forms of social research such as participant observation, interviews and ethnography are not without ethical issues (Bulmer, 2001). The nature of the researchers position itself can contribute to, or deviate away from, traditional ethical procedures. For example, Bulmer (2001) made reference to covert participant observation in which the researcher's identity as an observer is unknown to those within the culture that is being investigated and subsequently raises ethical concerns. In this research I made my role as an observer known to all those operating in the environment from the outset. This was done irrespective of suggestions that participants cannot be expected to give consent prior to knowing what they are agreeing to, as the event has yet to occur (Etherington, 2007). Throughout the process I followed institutional ethical guidelines and made my position clear so that everyone operating in the environment was aware of my research involvement.

In order to align myself with proposed guidelines for best practice when conducting social research (Pensgaard & Duda, 2002; Collinson, 2003; Etherington, 2007), I adopted a number of strategies throughout my participant observation data collection. In order to avoid any potential imbalances that may have occurred between researcher and participants, I made frequent reference to my research so that individuals operating in the environment were aware that what they said was used as data. Moreover, I expressed my own thoughts and feelings on a variety of topics with players and coaches not only to gauge whether they shared a similar belief on the situation but also to make them aware of the types of conclusions I was drawing so that they had an opportunity to challenge my perspective. On one occasion I challenged the lack of input that players had in the analysis feedback process at the club. The First Team Development Coach had asked me to compile



some clips of a player's performance so that he could talk the player through his responses. When I questioned the lack of direct input that the player had in this process, given that it was his performance that would be examined, I was told that the player would not want to see too many negative situations from the game. In further questioning whether it should be the player who makes that decision as opposed to the coach, I was able to make my stance known to members of the coaching staff.

It is suggested by Etherington (2007) that researchers should make information readily available when it is recorded, even if this requires judicious researcher self-disclosure and that any research dilemma should be documented in writing and research representations (including how the situation was resolved). With this in mind, as soon as data were recorded/transcribed, both players and coaches were informed that they were able to see the data if they so wished, along with my notes relating to what had been discussed in the interview/conversation etc. Throughout the process I negotiated decisions with participants and respected situations of confidentiality in order to maintain the mutual respect that I had established. This also allowed me to honour principles of justice, and beneficence, and maintain interpersonal integrity (Hammersley, 2005; Etherington, 2007).

Despite its inherent strengths however, it is also important to acknowledge criticism aimed at the demands placed upon the individual who is engaging in the participant observation process (Yin, 2003; Hammersley, 2005). In response to this, I engaged in processes such as documenting a reflexive diary and maintaining neutrality whilst engaging in cultural practices in order to achieve rich and contextual data that accurately represented the experiences of those occupying the research setting. Similarly, I have provided transparency regarding how my interpretations and

thoughts on the research topic evolved throughout the research process (see *Demonstrating Reflexivity and Ensuring Quality Within the PhD Research Process*, p. 137).

Due to the combination of my location within the 'Coach's Office' at the club's training ground and my applied role as a Performance Analyst, there were constant opportunities to collect ethnographical data and observe discussions to gain people's perspectives. Conversations and ideas relating to how players received and interpreted information and the role of video-based PA in facilitating this process were commonplace. I was located at the training ground from 1<sup>st</sup> July until 16<sup>th</sup> May the following year. In that period I spent four working days a week (and a home match day on alternate weeks) within the research environment, totalling approximately 1500 hours across 49 weeks. As a result, I documented 99 A4 pages of single line typed field notes relating to varying situations that occurred at the club.

### *3.3.3 Interviews*

#### *3.3.3.1 Informal Interviews*

One facet of participant observation that I employed in order to gain multiple perspectives was informal interviewing. Informal interviews provide an opportunity to gain the perspectives of those who co-exist in the environment that is being investigated (e.g. Schouten & McAlexander, 1995; Wimpenny & Gass, 2000; Patton, 2002). Given Hammersley and Atkinson's (2007) claim that "the expressive power of language provides the most important resource for accounts" (p. 107), the emphasis placed on dialogue between researcher and participant cannot be underestimated. Similarly, the same authors suggest that ethnographers commonly engage in informal discussion with participants during the process of undertaking

ethnographic research. Some researchers have reported that in extreme cases (e.g. Agar, 1980; Okely, 1983) questioning may not be appropriate as it may actually marginalise the researcher from the population he/her is investigating. In the context of this research, however, asking questions in the professional football environment did not marginalise me as it was done in a culturally acceptable manner whilst engaging in “shop talk” to gain respect (Cushion & Jones, 2006).

Jorgensen (1989) likened informal interviews to casual conversations; however he suggested that the biggest differentiation is that informal interviews revolve more around a question and answer format in comparison to casual conversations. The author further proposed that informal interviews are often guided by a set of issues that the researcher wants to talk about but there are generally no pre-planned questions and questions are not asked in exactly the same way each time. Hammersley and Atkinson (2007) suggested that in contrast to much formal interview practice, both non-directive (open-ended) and directive questions can be used by the researcher when engaging in informal interviews. It is proposed that using directive questions can allow researchers to test out hypotheses that they have generated following their exposure to the environment and gain the perspectives of those who are being investigated (Hammersley, 2005). For example, I was able to ask a player about how applicable he thought a video session was, that I had observed him be a part of, given none of the video clips involved him directly. Based on the time that I spent at the club informal interviews and conversations including both directive and non-directive questions proved a vital source of data collection. This is because it allowed me to compare and develop my understanding and interpretation of the environment, with the interpretations of the club’s key stakeholders, i.e. players and coaches.

Concerns have been raised, however, surrounding the validity of ethnographer driven conversation, as Hammersley and Atkinson (2007) suggested that ethnographers may “regard solicited accounts as ‘less valid’ than those produced among participants in ‘naturally occurring situations’” (p.110). Moreover, researchers have questioned the importance attributed to responses that are provided by participants in such situations given that they are in response to researcher driven questions (Becker & Geer, 1960) as “one can never be sure that the presence of the researcher was not an important influence” (Hammersley & Atkinson, 2007, p. 111). Having said this, it is also proposed by the same authors that even if the influence of the researcher was eliminated by adopting a ‘complete observer’ or ‘complete participant’ role, there is no guarantee that such an approach would yield ‘valid data’ and what is more it could restrict the data collection process. In essence, the issue of “reactivity” (p. 112), i.e. responding to a certain question, is one that cannot be eradicated given the inherent nature of human conversation and reliance on individuals responding to questions posed at them.

If we apply these generic ethnography related concerns specifically to my position at the club, I would argue that given the time I was there and the immersion I achieved as part of the role, whilst people were aware of my role as a researcher, I was not primarily seen as an ethnographer. With this in mind, when I asked questions of those around me in the environment, it was not perceived as a researcher asking the question but more a work colleague; creating “naturally occurring situations” (Hammersley & Atkinson, 2007, p. 110) as opposed to artificially manufactured interactions. The informal interviews/conversations that I engaged in with players were either immediately transcribed post interview from memory, or were recorded for transcription later on. These interviews were spontaneous and not pre-planned

to the extent of an interview schedule. During the data collection process, 25 informal interviews were conducted with players and 20 were conducted with different members of staff. These varied from very short and brief encounters to more prolonged discussions surrounding learning or PA related topics. They typically occurred before or after official meetings, over lunch, or in the corridor or gymnasium at the club's training ground.

### *3.3.3.2 Formal Interviews*

The other main source of data collection was through conducting semi-structured interviews (Denzin & Lincoln, 2000) with both players and coaches. This was done under the premise that research interviews seek to describe the meanings of central themes in the life World of the subject(s) (Kvale, 1996). Moreover McNamara (1999) proposed that interviews are particularly useful for getting the story behind a participant's experiences as they provide an opportunity for researchers to pursue relevant information and gain an in-depth perspective on their interpretation of certain situation(s). Given the individual nature of learning and the relevancy and meaning that certain situations will have to certain individuals, it was deemed important to use semi-structured interviews in order retain points of orientation that could be compared between participants whilst also maintaining sufficient flexibility for the interviewee to elaborate on meaningful experiences (Denzin & Lincoln, 2000; Patton, 2002).

The formal interviews that were carried out were formally organised: a time and a place were pre-determined and an interview schedule was used to guide the process (Patton, 2002; Seidman, 2006; Babbie, 2007). The orienting questions used in the interview schedules were informed by experience-based learning theory (Schön,

1983). In alignment with proposed guidelines for best practice when interviewing (Seidman, 2006), I conducted two pilot interviews with one of the players prior to finalising the interview schedule that would then be used with the other players. Post interview I listened to the interview over again and altered/removed some of the questions that would not be used in the final version. For example, questions such as “Has there been a time when you have changed the way you tried to learn from the game compared to normal? How did this affect your experience?” were deemed not suitable or applicable to the population under investigation and were deleted from the interview schedule. Below are questions taken from the player interview schedule that were used to ask players how important they believed ‘learning’ to be as a professional football player:

### **Learning as part of being a Football Player**

- How important do you see learning new skills/tactics in your role as a footballer?
- Could you give me an example of a time in your career, that you can remember, where you learnt something that was really important to you?
- What happened? Was anybody else involved?
- Can you tell me about the things you tried to do, which may be physical or mental to try & make sure that you learnt from that experience?
- In your mind what made this hard/easy as a process?
- On the other hand then, could you maybe give me an example of a time where you were asked/needed to learn something but you maybe found it difficult or frustrating to do so?
- Why do you maybe think that was? What were the circumstances that surrounded this experience?

- How/when do you decide/accept yourself that you have “learnt” something?

This process also allowed me to confirm that a two-phase interview approach was a relevant approach. Since learning from experience is an individualised process (Dewey, 1933; Schön, 1983), focussing the initial interview around the participant's experiences and subsequent role frame (Schön, 1983) allowed for the interviewee to talk at length about their perspective and meaningful learning experiences. The second interview was then focussed specifically around their experiences of video and PA in-situ at the club. Such an approach allowed for participants to maintain concentration and focus on the topic in hand whilst making the time they had to give up on each occasion more manageable and appealing.

A two-phase interviewing process was successfully achieved with four players. Given contractual commitments and the busy lifestyle of professional football players it was not possible to adopt this process with all players but in four further cases one prolonged interview was instead conducted with a break in between the two topics (experience-based learning and experiences of video/PA) in order to maintain focused discussion. Regardless of the approach, participants were given equal opportunity to discuss pertinent issues in both the two-phase and one-phase interviews. Interviews were recorded with the researcher's iPhone® in a variety of locations that varied from the video analysis suite at the club to players' homes. All of the interviews were conducted at a location decided by the participant. The twelve different interviews that were conducted across the eight players totalled ten hours and 52 minutes. The longest single interview lasted 88 minutes and the shortest lasted 26 minutes. Player interviews were transcribed verbatim and yielded 287 pages of single spaced A4 paper.

In relation to the semi-structured interviews that were conducted with members of the coaching staff, following a pilot interview with the First Team Development Coach, (Patton, 2002; van Teijlingen & Hundle, 2002) a single-phase interview approach was adopted. Following this, both the Assistant Manager and First Team Manager were interviewed at a location determined by them. The interview schedule was similar to the one used with the players but questions regarding their own respective uses of video-based PA and their perceptions of video-based PA as a coaching resource were also included. Below are questions from the coach interview schedule relating to their use and perceptions of video-based PA:

### **Performance Analysis Sessions at The Club**

- From your perspective, what is the reason behind having video sessions at the club?
- Can you explain why you present the video sessions in the way that you do please?
- What importance do you place on the feedback sessions as part of the coaching process? Have there been any examples of things that you've looked at with the videos & then "followed up"?
- Which sessions do you think are most beneficial (if either) – pre match or debrief? Could you explain to me why you think that is?
- Which do you think are most beneficial for the players? Why?
- How do you decide on the content of the video? (i.e. weaknesses in own play & opponents strengths)
- Could you explain the decision behind you (*John*) presenting the set plays and *Steve* delivering the main body of the presentation?



- Do you think it is important for the manager to present the information as opposed to an analyst or another coach?
- How much impact do you think this type of information has on players' performance? Can you give me an example of something that has been highlighted that you yourself as a coach have used & learnt from?
- From the video sessions you have experienced, which format do you think is the most beneficial? (i.e. group, 1 to 1) Why?
- To summarize, how much of a difference would it make to the processes you go through when coaching if the performance analysis & video was taken away?

The interviews that were conducted with the three members of the coaching team at East United FC totalled three hours and 35 minutes. The longest interview amongst the coaches lasted 81 minutes with the shortest having lasted 52 minutes. The interviews with the coaching staff were transcribed verbatim and yielded 70 single spaced A4 pages. Throughout the interview process, participants were reminded that they were entitled to withdraw at any time and anything that they disclosed as part of the interview would be kept confidential and they would remain anonymous (Patton, 2002; Seidman, 2006). In summary, research interviews were a method that allowed me to explore the learning experiences of both professional footballers and coaches/managers within a professional football context.

### *3.3.4 Audio/Video Recording*

An additional data collection method was through audio and video recordings of team meetings and video-based PA sessions. This decision was made as "video (as well as audio) recording also provides us with denser linguistic information than does

field note taking” (Dufon, 2002, p. 44). Therefore recording sessions enabled me to reflect on and analyse the way in which the PA sessions at the club were delivered (i.e. discourse, presenters, set-up) in far greater detail than if I was to have merely documented from memory what was said. Similarly, Grimshaw (1982) made reference to the permanence of recordings in that it allows the researcher to experience an event repeatedly by playing it back. Erickson (1982, 1992) and Fetterman (1998) suggested that given this opportunity we, as researchers, are able to change the focus of what we are looking for and subsequently see things that were perhaps missed at the event. By adopting this approach I have been able to observe and compare sessions over time that examine similar threads/themes that would not have been able to be investigated if the sessions had not been recorded.

It was agreed with the First Team Manager of the club (*Steve*) that each video session would be either recorded by a Spy Camera Pen so that the source of recording the sessions remained unknown (as per the manager’s request), or by an Olympus Digital Voice Recorder or an iPod®. All of the team meetings on a match day, where applicable, were recorded in the changing room at the stadium either by me (pre match presentation) or by a sports scientist who was in the changing room at half time and post match. Due to the impromptu nature of a number of these meetings throughout the season, on occasion there was insufficient time to get the recording device prior to the meeting starting. As a result ensuring that every bit of information relating to a specific game was recorded proved difficult. I was able to record data that spanned 15 games and yielded full “analysis units” that included the “pre-match” presentation, tactical instruction prior to the game, half time team-talk, full time evaluation and the “debrief” presentation that was typically presented on

Monday after a Saturday match. A number of other games where analysis units had been only partially recorded were discarded.

Due to the confidential information that was presented in these meetings, members of the coaching staff tended to be quite guarded and vigilant towards people gaining access to this information. As a result, when I recorded the sessions I had to ensure that I was in the meeting room at least ten minutes prior to the meeting starting so I could press record on my recording device and not draw any attention to myself. In doing so, a number of the audio files are significantly longer than the actual content of the meeting or team talk itself. In total, the audio recordings of team meetings totalled 11 hours and 11 minutes. "Pre-match" meetings averaged a length of 13 minutes and 21 seconds with the longest having lasted 22 minutes and 6 seconds in duration. The shortest "pre-match" meeting lasted only seven minutes and 19 seconds. Debrief meetings, on the other hand, were slightly longer than their pre-match alternatives and lasted on average 15 minutes. The longest debrief, which continued amongst the staff after the players had left the room, lasted 30 minutes and 36 seconds. The shortest debrief presentation lasted four minutes and 29 seconds. Each presentation and team meeting was recorded and stored securely on an encrypted external hard drive prior to being transcribed verbatim. Due to the added time at the beginning of many of these recordings in order to remain undetected, they yielded only 77 ½ pages of single spaced A4. Another reason for this was the didactic manner in which the manager delivered monologues to his players during meetings as opposed to actively involving them through shared dialogue (Groom, 2012). It was common for players to be "delivered to" (Groom, 2012, p. 233) and thus the turn taking between participant and researcher that often occur in an interview or conversation did not occur. As a result, continued narrative

without a break was common and in doing so took up less of the page. The recordings were grouped into data analysis units that were relevant to the game that the preparation and post match analysis were designed for. In line with Etherington's (1997) suggestion that researchers should make information readily available when it is recorded, the transcribed narrative of team meetings were made available for the manager to read if he so wished. He declined the opportunity to read the transcriptions and suggested that he would be interested in the findings of the research as opposed to the process that was undertaken.

### **3.4 Data Analysis**

Arguably, when undertaking qualitative research the most important part of the research process is the data analysis and the subsequent way that the data is represented (Malterud, 2001). One approach that has been utilised to analyse similar data sets successfully in recent publications is to implement coding processes often used as part of a Grounded Theory methodology (Holt & Dunn, 2004; Weed, 2009; Holt & Tamminen, 2010). It is proposed that the transparency involved in such a process is justified as a way of successfully managing large quantities of data and generating new knowledge (Strauss & Corbin, 1998). Although it is important to note that I have not engaged in Grounded Theory per se, I have used techniques taken from Grounded Theory; open, axial and selective coding (e.g. Holt & Dunn, 2004; Groom et al., 2011).

Following the evolution of Grounded Theory as a methodology, arguably its main contributors Strauss (1987) and Glaser (1978) have offered different interpretations on the role that literature plays in Grounded Theory. Such interpretations have

influenced the way in which both Strauss (1987) and Glaser (1978) perceive the coding aspect of Grounded Theory. Although I have not engaged in Grounded Theory, it is important to acknowledge the ontological implications of both approaches from a coding perspective. In locating the differences, Glaser (1978) suggested that a researcher engaging in Grounded Theory research has prior understandings of a problem area but that they should be sensitive to a wide range of possibilities. Strauss (1987) on the other hand placed more emphasis on the understanding of an environment or concept that a researcher had gained from prior experience. While this should not guide the research to the detriment of core scientific principles (Lincoln & Guba, 1985), he proposed that past experiences along with the influence of literature may “stimulate theoretical sensitivity and generate hypotheses” (Heath & Cowley, 2004, p. 143).

As both a researcher and a professional, I have spent relatively significant amounts of time in the professional football environment whether at senior or Academy level. Subsequently, it is perhaps naive to suggest that my understanding of the culture and environment would not have influenced my interpretations of behaviour and practice that I witnessed in the field. Therefore, my philosophy towards coding lends itself to adopting Strauss (1987) and more recent adaptations of the techniques used within Grounded Theory (Strauss & Corbin, 1998). Given that I was situated at the club for a full season and my ethnographic reflections are an important aspect of the data collection, emphasis is once again placed on the accumulation of experience (Strauss & Corbin, 1998).

In qualitative research, the issue of assessing the credibility of social research has remained constant (Sparkes, 2001). Providing information relating to transparency and replicability is one suggested way that researchers can achieve credibility and

accountability (Sparkes, 2001; Bringer, Johnston & Brackenbridge, 2004; Richards, 2005). Subsequently, having acknowledged the decision making process relating to adopting Strauss and Corbin's (1998) approach to Grounded Theory and analysing data, it is equally important to provide a replicable template of how the coding process was actually conducted. Throughout the analysis process, both Holt and Tamminen's (2010) adapted version of Mayan's (2009) heuristic for planning Grounded Theory research and Strauss and Corbin's (1998) definitions of Grounded Theory terminology were used as a guide in order to achieve transparency both in my approach to coding and managing the data I collected (see Mayan, 2009; Holt & Tamminen, 2010; Groom et al., 2011 for tables).

Understandably, specific attention was paid to the *Planning for interaction of data collection and analysis, data collection methods and data analysis methods* sections, being those most applicable to the management and analysis of data. In accordance with these sections (see Holt & Tamminen, 2010), the analysis framework proposed by Strauss and Corbin (1998) involves "progressive coding techniques that move the analysis from description, through conceptual ordering, to theorising" (Holt & Dunn, 2004, p.202). Whilst I used this framework as a foundation to inform the coding techniques used, Mayan (2009) suggests that "theory generating techniques" (p.14) should also be implemented. I did not implement these with my data, as I synthesised themes and concepts to current literature rather than generating my own theories.

Recent sport related research has successfully adopted Strauss and Corbin's (1998) approach to grounded theory (e.g. Holt & Dunn, 2004; Groom et al., 2011). Subsequently I replicated the data analysis aspects of the methodology that were used in their research in order to fulfil the *data analysis methods* section outlined by

Holt and Tamminen (2010) and achieve similar transparency throughout the process. Such a process of data analysis was underpinned by the precursor of theoretical sampling in which “initial data are analyzed, responses to some question become saturated, some new questions arise, certain categories require more saturation, and more data is collected” (Holt & Dunn, 2004, p. 202-203). In replicating the management and analysis of data used by Groom et al. (2011), Strauss and Corbin’s (1998) definitions of Grounded Theory terminology were used to guide the coding process; namely to provide transparency to Open, Axial and Selective coding procedures.

#### *3.4.1 Open Coding*

Strauss and Corbin (1998) describe *open coding* as an analytic process through which concepts are identified and their properties and dimensions are discovered. In essence, through engaging in open coding data is inductively broken down, examined and compared to other data for similarities and differences so that broad concepts are created (Holt & Dunn, 2004). Within the open coding phase it is advocated that data should not be forced into existing categories. Instead, if a new concept represents a “fundamentally different concept, a new concept will be created” (Groom et al., 2011, p. 20). Similarly, it is suggested that the concepts that are identified should occur as a result of constant comparative analysis (Holt & Dunn, 2004), and from this more abstract concepts, categories and sub categories can be created which will allow for a more efficient axial coding process.

In the current research, immediately after I documented ethnographic field notes and observations, I began to examine and compare data, identifying broad concepts that were both common and unique within my data. Data were immediately divided into

three areas: Performance Analysis, Reflection/Learning and Culture, in order to establish categories and sub categories that related to the same theme within the same area under investigation. I engaged in a similar process with player and coach interview transcripts as soon as the interviews had been completed and I followed the same principles of open coding when initially analysing transcribed audio/video performance analysis sessions. In practical terms, when undertaking this process I began to copy and paste specific narrative that represented a specific concept and created a number of documents that stored narratives that shared the same common characteristics. It is suggested that such an approach is in alignment with the principle of open coding (Strauss & Corbin, 1998; Holt & Dunn, 2004; Groom et al., 2011) – see Figure 6.

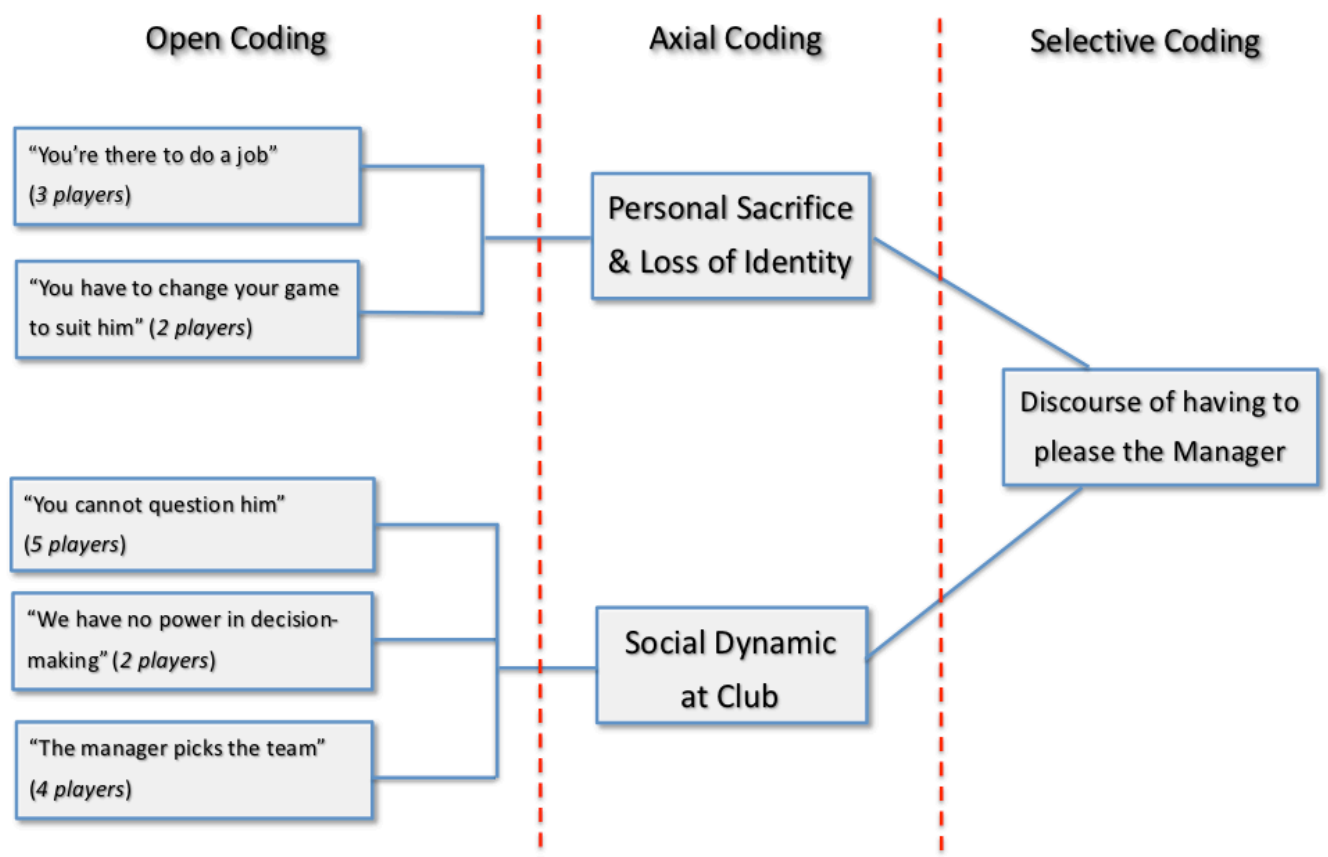


Figure 6. Example of Coding Process and Data Taken from Themes Relating to Cultural Discourses Described by Players



### 3.4.2 Axial Coding

*Axial coding* is concerned with the process of relating categories to their subcategories and is the second integral part of the analysis process in Strauss and Corbin's (1998) approach. In short, its primary concern is to "reassemble the data that are broken down during open coding" (Holt & Dunn, 2004, p. 203), in that more specific questions are asked of the categories and subcategories that have emerged from open coding so that more precise explanations about the most pertinent data can be provided. Within this precise explanation the potential for interactions between categories are considered and often "relational statements" (Holt & Dunn, 2004, p. 203) are developed that link categories, subcategories and broader concepts. Holt and Dunn (2004) make explicit reference that within axial coding, data should not be forced into existing concepts if they do not fulfil the necessary characteristics and instead that new concepts should be created. One way that the authors ensured this in their research on the psychosocial competencies of footballers was to examine data sets separately; linking data that fitted with existing concepts but creating new concepts for data which did not, before finally collapsing the two data sets together (see Figures 6., 7. and 8.).

In order to achieve data of similar quality, when analysing my own data I axially coded my ethnography field notes prior to engaging in the same process with the footballers' narrative, and then subsequently the coaches' interview narrative. Such an approach was adopted in order to prevent data from being forced into specific categories (see Figure 6.). It is suggested that by axially coding my sources of data collection individually before eventually collapsing them together ensured that my research was not artificially forced into categories that do not fully represent them. Moreover, in terms of ensuring transparency throughout the process, this process

replicated the detailed approach advocated by Holt and Dunn (2004) and addresses any methodological concerns relating to the trustworthiness of my research (Lincoln & Guba, 1985).

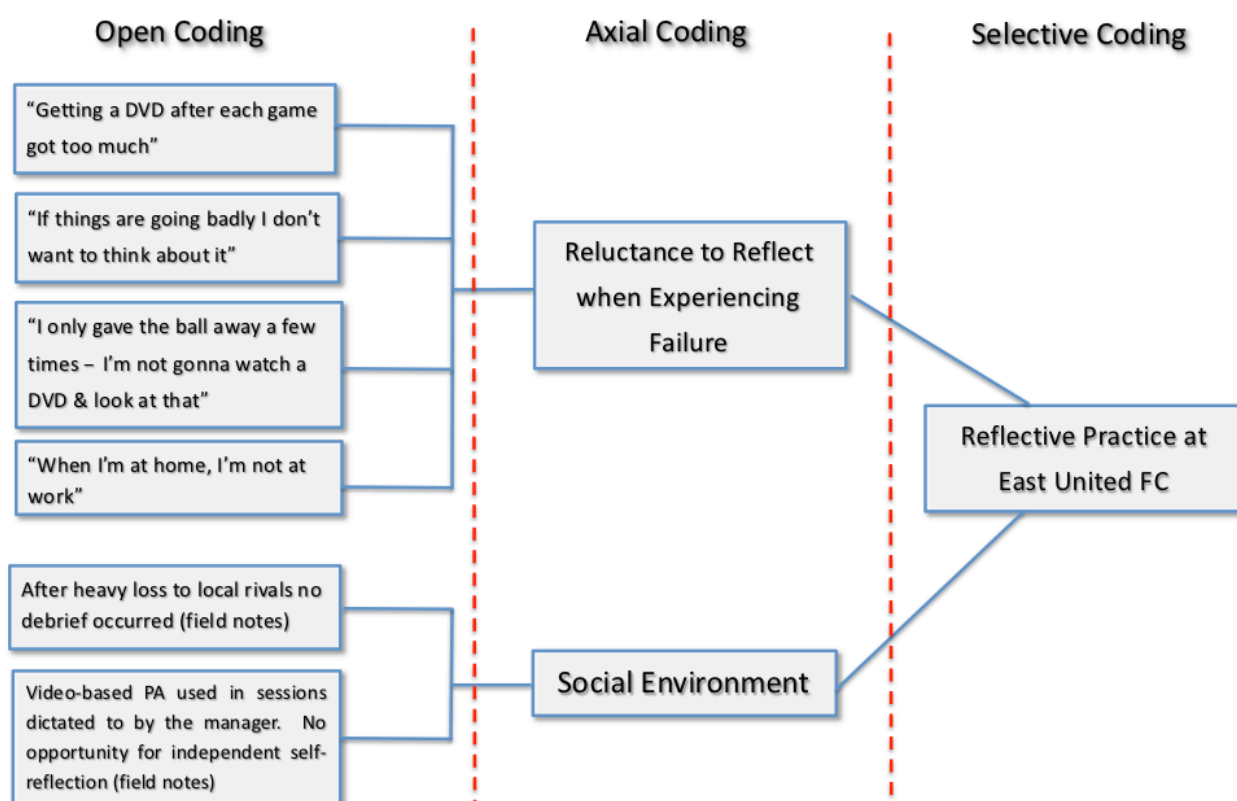


Figure 7. Example of Coding Process and Data Taken from Themes Relating to Attitudes Towards Reflection

### 3.4.3 Selective Coding

The final coding process suggested by Strauss and Corbin (1998) is *selective coding* and this method aligns itself with the *final product* phase of the grounded theory process suggested by Holt and Tamminen (2010), in that references to existing literature are made and the development of new theory is initiated. However, given that I used the coding techniques often deployed within Grounded Theory in relation to my data, the selective coding process involved the synthesis of data to existing literature as opposed to generating new theory. The purpose of selective coding is to

“integrate and refine categories to form a larger theoretical scheme” (Holt & Dunn, 2004, p.204). In the context of my research, selective coding allowed me to integrate and refine categories in relation to existing literary explanations rather than initiating novel theoretical alternatives. For example, Figure 6. demonstrates that data concerning players’ experiences and the social dynamic at the club represented discourses (Foucault, 1972) such as “having to please the manager”, which influenced both player and coach behaviour.

The selective coding process occurred following the open and axial coding of my ethnographic field notes, player and coach interview narrative and audio/video recordings of performance analysis video sessions (see Figure 7.). As part of this process I made explicit references to memos that were created throughout the coding process; making reference to links between concepts and categories. Moreover, I ensured that I continually posed conceptual questions (Groom et al., 2011) of my data and the relationships that existed between the different categories and subcategories in order to refine the categories in line with selected academic literature. For example, it was found that video-based PA was used as a technology of power by the club’s coaching staff in order to normalise behaviour (Foucault, 1988). This then led me to critically question and compare the underlying function surrounding other sports science provision that was used at the club to see whether their function was fundamentally the same. As a result, despite them being related to different aspects of performance, I was able to group them as “technologies of power” as they all served the same fundamental social purpose. In order to ensure credible data (Lincoln & Guba, 1985) the process of selective coding was one that my supervisor and I engaged in, to subject the data to further scrutiny and allow the

data to not be merely influenced by my own interpretations (examples of the coding process can be seen in Figures, 6., 7. and 8.).

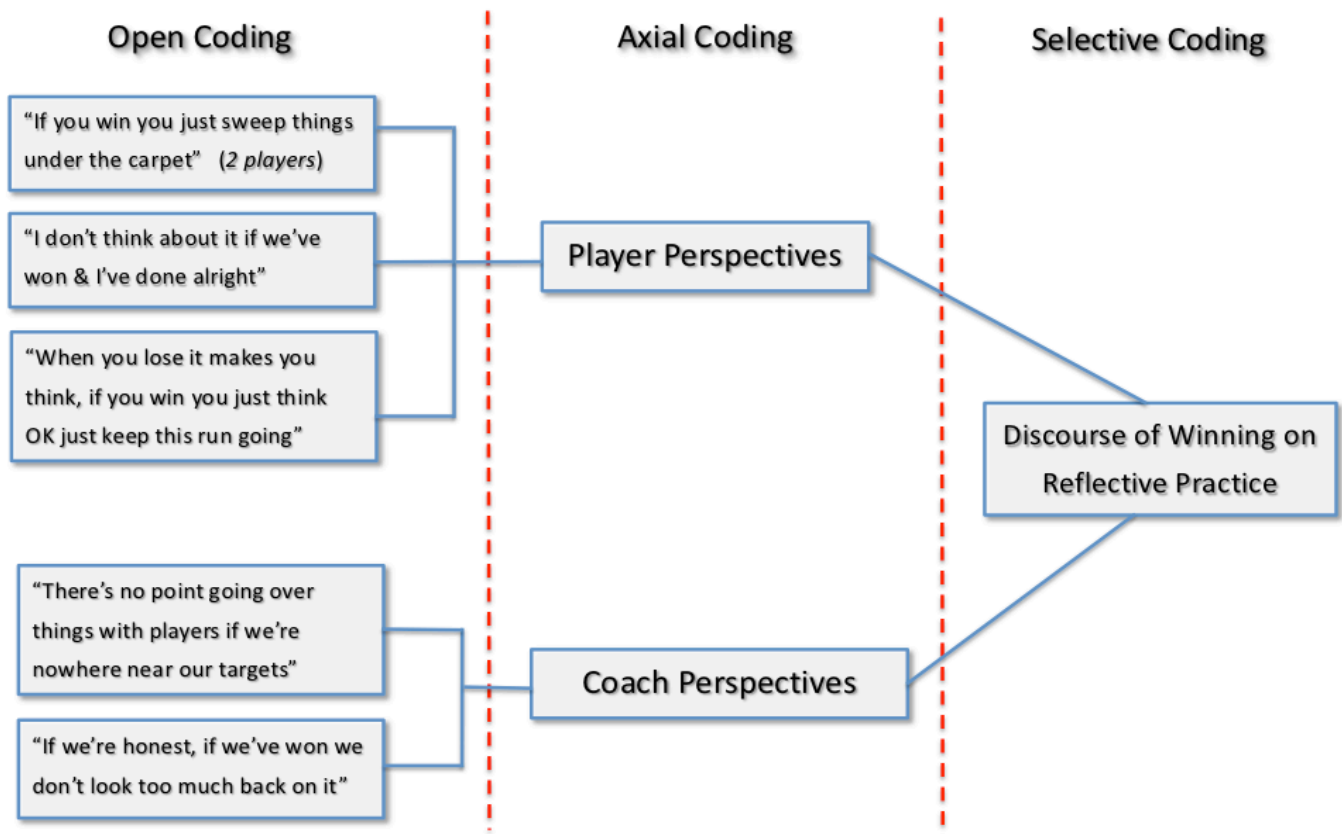


Figure 8. Example of Coding Process and Data Taken from Themes Relating to Conditions Surrounding Reflection

#### 3.4.4 Analytical Tools

Holt and Dunn (2004) suggested that there are a number of analytical tools that can be adopted throughout the coding process which are proposed to “enable the analyst to make theoretical interpretations and form statements of relationship between concepts” (p. 204). One such analytical tool is to create a story line in order to provide a reference point for what is apparently going on. Similarly, Holt and Dunn (2004) proposed that diagrams should be provided throughout the analysis to provide a visual representation of the relationships between categories. With this in

mind, I implemented both of these approaches throughout the coding process in order for me to document and examine my data in the most appropriate way(s). Moreover, as is common practice in the coding aspect of Grounded Theory (Strauss & Corbin, 1998; Holt & Dunn, 2004; Groom et al., 2011), memos and notes were produced in order to constantly document emerging categories within the data so that comparisons between data that was examined during different analysis sessions could be investigated.

### **3.5 Demonstrating Reflexivity and Ensuring Quality Within the PhD Research Process**

In order to ensure the quality of qualitative research, a number of guidelines have been established that qualitative researchers should endeavour to satisfy. If these guidelines are successfully satisfied, data collection and analysis procedures are deemed “acceptable” and in line with sound scientific principles (Locke, 1989; Silverman, 2001; Shenton, 2004). The published recommendations (i.e. referential adequacy, reflexivity, triangulation, peer examination etc.) have tended to focus on gaining “trustworthiness” (Guba, 1981; Lincoln & Guba, 1985; Krefting, 1991). This is a concept that aligns itself to the traditional values of reliability and validity when conducting quantitative research (Guba & Lincoln, 1989). However, discussion and debate has continued about why qualitative researchers need to justify their research given the inherent epistemological differences between quantitative and qualitative research (Sandelowski, 1993; Biddle et al., 2001; Rolfe, 2006). Qualitative researchers should, however, provide a ‘paper trail’ of evidence and substantial description of the research process that they engaged in to demonstrate transparency within their work (Malterud, 2001), using the universally accepted

'markers' associated with sound scientific research that have been discussed within research methods literature (Elliott, Fischer & Rennie, 1999; Patton, 2002; Shenton, 2004).

In this research the main theory that was applied to analyse the data that were collected and presented was Foucault (Foucault, 1972, 1979, 1988, 1991a). Therefore it is important to acknowledge here the poststructuralist origins of his ontological and epistemological stance and what steps were taken within my research to gain credibility and ensure that quality was achieved within my Foucauldian project (e.g. Avner, Jones & Denison, 2014; Mills & Denison, 2014). By using Foucault, it was important to implement a research approach that placed emphasis on and allowed for the deep investigation of his key theoretical concepts. As a poststructuralist, Foucault held the belief that truth is subjective and multiple in nature and as a result its formation is invariably influenced by social and contextual factors (Avner et al., 2014). He believed that "knowledge, reality, and truth are produced through 'discourses' rather than found" (Avner et al., 2014, p. 43), and that these discourses were socially reproduced and occurred within power relations (Foucault, 1980). As a result, it is suggested that any Foucauldian project should be designed around understanding and investigating these fundamental concepts (Mills & Denison, 2014). In this research, by interviewing both players and coaches whilst concurrently examining the social environment, I was able to directly question the manner in which discourses were produced. I was also able to critically investigate the power relations that existed at the club by locating myself in the research setting, thus conducting a visible form of Foucauldian analysis as advocated by Mills and Denison (2014) and ensuring that I achieved an acceptable level of quality within my research.

Markula and Silk (2011) proposed that poststructuralist research projects should be underpinned by an understanding of three fundamental values (Avner et al., 2014, p. 46):

- (1) To understand/map the discourses which shape our understandings of the social world and our individual and social practices
- (2) To critique the problematic effects resulting from dominant discourses
- (3) To develop theoretically driven pragmatic interventions to foster more ethical practices

By aligning my research with these judgement criteria, I have been able to generate proposals as to how coaches may change their practice from an ethical perspective in order to enhance players' experiences. It has also been suggested that poststructuralist research should be concerned with its theoretical contribution and the associated impact that it may have on society (Avner et al., 2014). As a result, a "more in-depth, theoretically driven, yet practically applicable, socially situated knowledge production process" (Markula & Silk, 2011, p. 220) is advocated when conducting research. Therefore, in order to align my research with the prominent understanding of what acceptable poststructuralist research should constitute, by using ethnography I was able to understand how knowledge was socially reproduced at the club whilst generating practically applicable interventions based on my first hand experience of what may be suitable.

Richardson (2000b) believed that postmodern/post structural research should "make a substantive contribution to understanding social life and to advancing academic knowledge" (Markula & Silk, 2011, p. 222). By adopting a novel approach

to examining previously unchallenged emancipatory discourses of reflection, coaching and how to best implement video-based PA, my research has generated new knowledge and understanding surrounding social life within a professional football club. In doing so it aligned itself with the guidelines proposed for ‘best practice’. Richardson (2000b) established further guidelines that postmodern/post structural research should adhere to; *have a substantive contribution to social science, have aesthetic merit, demonstrate reflexivity, impactfulness, express a reality, take the logic of the research process and its written account into consideration whilst also acknowledging the research paradigm*. In the context of my research, by implementing a novel and in-situ approach to the topic under investigation I have been able to make a significant contribution to the current research landscape by generating new knowledge and understanding relating to discourses of reflection. Such an approach also created a level of ‘impactfulness’ due to its unique nature and commitment to key Foucauldian concepts (as seen above). Moreover, throughout the research process I maintained a reflexive diary (Malterud, 2001; Dowling, 2006; Alvesson & Skoldberg, 2009; Sparkes & Smith, 2013) and acknowledged the importance and impact of various events that occurred in order to maintain transparency and high levels of reflexivity (Seale, Gobo, Gubrium & Silverman, 2004; Hiles, 2008).

In summary, the design of this research and the manner in which it was conducted aligned itself with acceptable standards and the necessary content that have been referred to as being essential within any poststructuralist research project (e.g. Richardson, 2000b; Markula & Silk, 2011; Avner et al., 2014). Moreover, the in-situ nature of the research allowed for the investigation of how discourses were formulated and the influence of power relations within their production to occur.



Therefore, the research design and execution of the research process directly aligns itself and 'stays true' to fundamental aspects of Foucauldian theory (Avner et al., 2014; Mills & Denison, 2014). By locating myself in the research setting throughout data collection I was able to critically examine at first hand how discourse and power relations influenced individuals' practice. This is further evidence that I designed and carried out my research project in a manner that was underpinned by key Foucauldian theoretical concepts (Mills & Denison, 2014). This authentic approach ensured that my research is positioned as a credible and novel Foucauldian project.

To further enhance the credibility of my research I aim to provide transparency regarding how my own thoughts and perceptions have changed throughout the research process (Richardson, 2000b). I believe that this is especially important given that I have spent a substantial amount of time within the research environment, which has provided me with the opportunity to assess the relevancy of my research questions on a regular basis. Moreover, I have also conducted my data analysis and written up the present thesis over a prolonged period of time, during which my thoughts and ideas have been challenged and developed. Contemporary research that has been published since the initiation of my thesis has also understandably influenced my own understanding and interpretation of the research topic. Therefore, I will describe how the focus of the thesis has evolved and developed since it began five years ago.

The research began with a focus predominantly on the use of video-based PA. Literature within the video-based PA research landscape revealed an emphasis on investigating key performance indicators in relation to match outcome (e.g. James et al., 2004; Redwood-Brown, 2008; Tenga et al., 2010 – see *Review of Literature* p. 55). However, relatively little is known about the use of video-based PA within the

applied setting (Groom et al., 2011, 2012). Situated at a professional football club, I was keen to try and address this issue within the research. Moreover, the research examining the dissemination of video-based PA has represented it as being quite a simple and unproblematic process (e.g. Hughes & Franks, 2004; Carling et al., 2005; O'Donoghue, 2006 – see *Review of Literature*, p. 58). However, these models were idealistic and rarely underpinned by research conducted in the applied setting. Therefore, the focus of the research shifted toward understanding the effectiveness of the PA provision at the club. As a result, I began interviewing players after analysis sessions and testing their recall in relation to the content and theme of the sessions that they had experienced. Moreover, the links between what coaches had described as being 'critical' incidents during matches were examined in the context of what was delivered to the players during video-based PA sessions. How much influence did the critical incidents have on the focus of coaches future interactions with video-based PA?

During the relatively initial stages of data collection, however, I realised that video-based PA was used as a largely peripheral resource that complimented aspects of the coaching process where it was deemed applicable. As a result, I decided that focussing the research solely on the use of video-based PA would have been misrepresentative of what was occurring at the club. Moreover, I became increasingly aware of the extent to which social and cultural factors influenced why video-based PA was perceived in this way and subsequently contradicted much research. With that in mind it was decided that the research would still consider the use of video-based PA, however the primary focus would no longer be on its application in isolation. From a personal perspective this provided me with a challenge, as I was initially eager to critically challenge how the use of video-based

PA had been portrayed in the literature compared to what I witnessed on a daily basis. As time progressed, however, I became aware that coaches' use of video-based PA was reflective of the wider culture and social environment. As a result, whilst I was still keen to try and challenge how the use of video-based PA had been conceptualised in the literature, I had to place the role of video-based PA into context both at the club and also within my research. This meant that I had to understand that the focus on video-based PA within my research would be much less than I had initially anticipated.

The use of video-based PA, did however, still provide an insight into the wider social dynamic that existed at the club and as a result I continued to collect data where possible. I recorded video-based PA sessions that were delivered by the manager (*Steve*) both 90 minutes before games, to supplement his team talk, and also on Monday mornings when it was used to debrief the players. Recording the sessions provided me with direct access and narrative to the language that was used by the manager (*Steve*) and his assistant (*Widds*). Whilst I was initially quite hesitant to collect this data due to the importance of these meetings and the consequences should anything go wrong on my behalf, I managed to adopt a non-invasive approach (Spy pen) to collecting the data, which proved to be successful. Maintaining discretion when collecting this data was in truth very difficult as it was in high-pressure situations where people were more cautious and vigilant than normal given the confidential nature of what was being discussed. I did, however, manage to continue to collect the data where possible, as I was aware of the role that it would play in illustrating the 'video-based PA' loop that existed at the club.

On reflection, it did feel very strange collecting data in this way as despite the consent that I had been granted, as well as receiving the blessing of the club's

manager (*Steve*), using a spy-pen and recording the analysis sessions with such secrecy meant that I almost felt like I was “spying” on people at the club. This feeling initiated a whole host of internal responses regarding how the data might finally be presented and the type of critical tone that the research may be written in. I had been accepted by people and welcomed into the club and I was keen to not betray their trust by portraying them in a poor light. I discussed these feelings with my supervisor and I was able to take a step back and remind myself that my primary role was as a researcher and that everyone was aware of my role within the club. Moreover, to fulfil my role properly as a researcher it was vital that I continued to collect data and critically challenge the practices that were going on the club with a theoretical lens.

After approximately two thirds of the season and constant regular exposure to the research environment, the focus of the research shifted towards trying to locate the role of video-based PA within players’ experience-based learning and reflection. In doing so, the perceived importance of video-based PA could be gauged and as a result the PA provision at the club could be directly assessed – did it have an impact on the players and coaches? With this research agenda in mind, it was proposed that Gilbert and Trudel’s (2001) reflective conversation interpretation of Schön’s (1983) experience-based theory of learning and reflective practice could be used to locate how players reflected on their performances. Thus, the influence of video-based PA could be identified within the varying stages of the reflective conversation. Having read their work on how youth sport coaches framed their roles I was satisfied that the reflective conversation was a straightforward schematic representation of reflection that I could use to locate players’ and coaches’ respective experiences. At this stage of the research process I was uncertain of how the final studies/chapters would look and I was therefore quite keen to use the reflective conversation

framework as it provided me with some guidance and structure as to how the data may be represented in the future.

Following this period I developed research questions and devised a semi-structured interview schedule that was underpinned by different sections relating to how players and coaches reflected on their experience (e.g. Longhurst, 2003; Bull, Shambrook, James & Brooks, 2005; Thelwell, Weston & Greenless, 2005; Connaughton, Wadey, Hanton & Jones, 2008). This process was conducted with a convenience sample of players at the club (Patton, 2002). The main focus of the interviews revolved around asking them to provide examples of times when they had reflected upon their experiences and what they had attempted to change as a result. Initially the opportunity for the players themselves to cite video-based PA as having influenced their own experience-based learning was provided before then asking them directly about their perceptions and experiences of video-based PA explicitly. By adopting this approach, players were able to articulate and expand on learning experiences that were meaningful to them without having a “video-based PA agenda” enforced upon them.

Having established relatively good relationships with the players at the club both on a professional and social level I was able to probe their responses more actively than if I had no prior relationship with them. Given the media interest and exposure given to professional footballers they are often given media training to try to avoid saying anything that may be deemed at all controversial. Even during my interviews, based on my exposure to the environment I felt that players were not necessarily being as forthcoming or as honest as they could have been in certain situations given the potential ramifications if the manager (*Steve*) became aware of what they had said. When I reminded them of their anonymity throughout the process and because of the

trust that I had established as being a member of staff at the club, I was able to challenge and question some of their responses without feeling that I had overstepped the mark as an interviewer. In doing so, I was able to gain an insight into some really valuable and often 'raw' experiences from the players. Had I not been situated at the club and/or had no prior relationship with the players I do not believe that this would have been possible due to their scepticism towards 'outsiders' (Roderick, 2006a).

After the interviews with the players, I interviewed the coaches using a similar interview schedule. However, I was now in a position to draw on players' experiences to challenge some of the assumptions and responses of the coaches. Given I had fully integrated myself as a member of the backroom team I felt in a position to challenge the coaches about some of their responses in relation to how players interpret the same situation. Moreover, I was able to ask questions about things I had seen myself first hand and what their rationale was for doing things in a certain way. Whilst this prompted some of the coaches to ask for the specific names of players who had raised the things that I had relayed to them as 'themes that players discussed', I was able to prompt and probe their responses with a critical perspective. Similar to the interviews with the players, based on the relationship that I had developed with the coaches I felt comfortable in actively challenging coaches' responses if their experiences were incongruent with what I had observed regularly. This further confirmed to me the value of combining participant observation and ethnography with interviewing key stakeholders from the environment as it allows the researcher to cross compare data and test hypothesis when interviewing (Hammersley & Atkinson, 2007). I believe that this holistic approach provides

assurances that the data is fully representative of what is occurring in the research setting.

Having had the interviews and video-based PA sessions transcribed verbatim (McLellan, MacQueen & Neidig, 2003) to complement my own field notes and observations from my time at the club I began the data analysis process. It became clear that players' and coaches' learning experiences aligned themselves with the reflective conversation interpretation of experience-based learning and reflective practice (Schön, 1983; Gilbert & Trudel, 2001). What also became apparent, however, was the influence of the culture and social environment on both players' and coaches' learning behaviour. Given my exposure to the research environment this was also something that I had begun to acknowledge in my field notes. Whilst interrogating the data I became more and more aware of the limitations relating to the reflective conversation framework. Initially I had been happy with the structure and guidance that the framework provided me with during data collection and analysis but it began to appear more and more restricting and potentially misrepresentative given that the data were highlighting social and cultural factors that the model largely neglected. As a result, I had to make a decision as to the function that the reflective framework would now serve in the research. Following discussions with my supervisor it was decided that the reflective conversation would provide a framework with which players' and coaches' reflection could be identified, but that a social theory was required in order to fully articulate and explain what was happening at the club (Dale, 1996; Cresswell, 1998; Patton, 2002).

As a result I began to read more social science literature in reference to the influence that an environment or culture can have on an individual's behaviour. As a result of this process I became aware of the work of Michel Foucault (1972, 1979, 1988,

1991a, 1991b, 2003) and his ideas relating to discourse, discipline and surveillance (Foucault, 1979; 1991a). I found that a number of his concepts were very applicable and represented the experiences and social dynamics that were occurring at East United FC. Initially I found the translations of his original texts quite challenging to read and interpret so I read modern adaptations of his concepts to establish a basic level of knowledge and understanding. After that I began to read his original texts and I was able to gauge significant meaning from his original work that was applicable to both the data that I had collected and also other modern sport related Foucault research. Whilst still quite conceptually challenging I felt that it was important to try and adopt a theoretical framework, such as Foucault, that had an excellent 'goodness of fit' with the data that I had collected. As I began to apply his theoretical concepts to the data, I was still keen to acknowledge how video-based PA had influenced players' and coaches' experiences. My perceptions of the role and function that video-based PA served at the club had changed significantly, in the context of the club's wider culture. It became apparent from the experience of both players and coaches that it had an underlying social purpose associated with both how it was delivered and also the context in which it was used.

As the breadth of my reading expanded, however, I began to question whether maintaining a focus on video-based PA was now representing the reflection and experience based learning of the participants in the most applicable manner. For example, how representative of other cultural undertones was the way in which video-based PA was used at the club? If video-based PA was used as a form of surveillance, were other accepted forms of practice doing the same? Were any of those more prominent than the use of video-based PA? (Foucault, 1988; Manley et al., 2012). When further interrogating the data and asking critical questions of my



experiences as well as the experiences of both players and coaches, the more I understood that I needed to re-evaluate how I was going to represent the data. I felt that the way in which I had initially envisaged representing the data did not represent the social influences at the club accurately enough. I was at a point in the data analysis process where I knew how I did not want the data to look, but I was less sure as to how it *should* look!

In order to seek direction I re-visited Foucault's fundamental concept of discourse; What discourses/truths had been established at the club? How had they become accepted as being true? This process allowed me to critically question both players' and coaches' experiences comprehensively, irrespective of the influence of video-based PA. In undertaking this process, I shifted my focus from different aspects of their learning and reflection to the actual fundamental discourses that underpinned how both reflection and coaching were understood at the club. As a result, I began to critically question the underlying function of both reflection and coaching within the environment. Through reconsidering the fundamental discourses that existed at the club I was able to place the role of reflection as a disciplinary mechanism into context and understand how it had been established and reconfirmed.

After reading Foucault (1988), Fejes (2008) and Manley et al. (2012) it became clear that technologies of power may have informed and underpinned imbalances in power that existed between players and coaches at the club. It was at this point, following multiple attempts to analyse and categorise my data that I finally felt that I could do the data justice and that I knew the actual take home messages of my own research. This generated a strange feeling as whilst it was empowering to understand what your data is representing, it also felt disappointing that I had been unable to get to this level of understanding for so long. Despite numerous attempts

to fully understand the experiences of both players and coaches at the club, I had until now been unsuccessful in refining how their experiences had been influenced. This obviously resulted in a significant amount of work that I had written (predominantly video-based PA related) becoming redundant, as it did not align itself with the salient points of the research.

A constant challenging of the data within the analysis process allowed me to critically question the social construction of discourses relating to reflection and coaching and how they influenced player and coach behaviour. It became clear that it was the fundamental understanding of reflection held by both players and coaches that governed their reflective behaviour. Thus, their interaction with video-based PA occurred as a by-product of their belief that reflection was an important precursor to improved performance. Discourses relating to the result of matches and the involvement of individuals in powerful positions all contributed to an understanding of when and how to reflect. This revealed that players' and coaches' understanding of reflection were both socially constructed and also influenced by their social environment. If I had maintained the initial focus of the research on video-based PA, the complexity of the interactions between both the environment and key stakeholders' perceptions would have remained unexamined. Therefore, I have learnt some valuable lessons such as maintaining patience during the process of challenging and re-challenging the assumptions that underpin how you have categorised your data. Moreover, I am now more sensitive to ensuring that you do not establish expectations of your data prior to data analysis.

My awareness of the ontological assumptions that I have as a researcher has also increased as a result of engaging in the PhD research process. By using predominantly interpretivist methods to collect data (i.e. interviews, ethnography,

participant observation) I had initially believed (naively) that I held only interpretivist assumptions. Given the critical tone of my research and how I perceive the World and how knowledge is constructed, however, I became aware that while I used interpretivist methods, it did not necessarily make me an interpretivist. For example as a critical social theorist I investigated the role of power and politics in both players' and coaches' experiences whilst using methods that are predominantly associated with the interpretivist paradigm. Moreover my assumptions that knowledge is not value free and bias should be acknowledged within research also aligned themselves with the critical theory paradigm (Kincheloe & McLaren, 2003). Therefore, as a result of the research process I have become far more aware of what my own assumptions actually are and how they are embodied by the research that I have conducted. While the process of establishing my ontological and epistemological assumptions was initially a relatively daunting process, as I was unsure where I 'sat' within varying paradigms, I have also found it quite enlightening and fulfilling to understand that they align themselves with the critical theory paradigm (Kincheloe & McLaren, 2003).

As a result of engaging in the PhD research process I have also learnt to examine the *underlying* factors that may influence an individual's experience as opposed to focussing on potentially *peripheral* or *complementary* factors. At the beginning of the process I attempted to critically question the role of video-based PA within players' and coaches' reflection and experience-based learning using a simplistic theoretical framework. It became apparent, however, that the data I had collected and the depth of understanding that was generated as a result of that data surpassed the confines of a sequential framework. Given my relative inexperience as a researcher at the beginning of the PhD process I was happy to use the

reflective conversation framework in order to bring structure to my data collection and analysis. Having gone through this process, however, as a researcher I would now conduct my data analysis very differently. I would try to avoid the use of simplistic frameworks (such as the reflective conversation), which may attempt to desensitise data and hinder a constant evolution of the data analysis process. Moreover it may seek to categorise data in isolation that, when coupled with other data, contributes to more overarching and encompassing themes.

In summary, the data analysis process in this thesis was extensive, ever evolving and conceptually challenging at times for myself as a researcher. The focus and stance with which the data were interrogated has changed throughout the process in alignment with my increased reading and understanding of the data and research environment. I feel that I have done everything possible as a researcher to accurately represent the experiences of the participants involved in the research (Dale, 1996; Cresswell, 1998; Patton, 2002). Furthermore, I feel that my understanding and appreciation of what constitutes sound research practice has improved significantly. For example, whilst recording the content of confidential team meetings at a professional football club may be a unique research opportunity, the emphasis placed on that data within my overall PhD thesis has now been diminished in line with the emphasis placed on understanding reflection. When I started the research process five years ago I felt that the exclusivity of my data would be what made my thesis unique and 'stand out' from others'. However, I hope that it is now not only the thoroughness of my data analysis but also the conceptualisation and critical assessment of commonly held assumptions relating to reflection and experience-based learning that contributes to the originality of the research.

### **3.6 Theoretical Frameworks**

#### *3.6.1 Donald Schön*

Schön's (1983) experience-based theory of learning and reflective practice was used as a framework with which to locate the experience-based learning of both professional football players and coaches. Integral to the theory is the concept that "reflection is the process that mediates experience and knowledge, and therefore is at the heart of all experience-based learning theories" (Gilbert & Trudel, 2001, p.17). Schön (1983) was concerned with how applied practitioners reflected upon their own practice, interpreted their experiences, and changed their future behaviour as a result. His theory was constructed following the observation of practitioners within six professional domains: (a) architecture, (b) psychotherapy, (c) engineering, (d) scientific research, (e) town planning and (f) business management (Schön, 1983, 1987). It was concluded that learning is best conceived as a process rather than an outcome, it is a continuous process grounded in experience and it requires the resolution of conflicts (Gilbert, 1999). Moreover, Gilbert (1999) proposed that Schön's (1983) experience-based theory of learning and reflective practice portrays learning as a holistic process of adaptation to the World, which involves constant transactions between the person and the environment. Finally his model is grounded by the concept that learning is the process of creating knowledge (Schön, 1983).

With this in mind, adaptations of Schön, (1983) have proposed that individuals engage in a reflective conversation; a process that is undertaken in response to an unpredicted or unexpected outcome. This adaptation suggests that strategies are devised to alleviate the current concern(s) associated with the dilemma, followed by

a period of experimentation as to their potential suitability prior to implementing them directly (Gilbert, 1999; Gilbert & Trudel, 2001). It is proposed that this cycle may occur multiple times until an expected or acceptable outcome is achieved as a result of the strategies that an individual implemented. With specific reference to sport, Gilbert and Trudel (2001) successfully adopted this reflective conversation framework when investigating how youth sport coaches learned from their experience. Refer to *Review of Literature*, p. 41, for a schematic representation of the reflective conversation and further detail surrounding the assumptions that underpin experience-based theory of learning and reflective practice and the varying stages that an individual engages in.

### 3.6.2 Michel Foucault

In order to critically examine the context surrounding players' experience-based learning and provide explanations for their learning preferences, Foucault's concepts relating to discourse, discipline and punishment were used as a theoretical framework (Foucault, 1972, 1979, 1980, 1991a, 1991b, 1999). Previous sport research has successfully adopted Foucauldian notions of discourse (Johns & Johns, 2000), disciplinary power (Denison, 2007), surveillance (Foster, 2003; Lang, 2010), technologies of power (Manley et al., 2012) and technologies of the self (Johns & Johns, 2000) to interpret varying athletes' experiences. In doing so, alternative perspectives on potentially otherwise un-investigated situations have been generated. His proposal that knowledge is socially constructed through the formation and reproduction of discourse, as opposed to the presence of universal and/or factual truths, has provided a critical framework with which to investigate

wider social contexts. Moreover, it has been used as a vehicle with which to examine how individuals are governed by overarching organisations or governments.

Foucault suggested that the disciplinary institution “compares, differentiates, hierarchises, homogenises, excludes. In short, it normalises” (Foucault, 1991a, p. 183). He proposed that power is fluid and interchangeable (see *Review of Literature*, p. 73) as opposed to being rigid and/or hierarchical in nature (Foucault, 1980). As a result, it is the construction and reproduction of discourse (socially constructed truths - see *Review of Literature*, p. 73-74) that govern an individual’s actions. In short if individuals believe something to be true then they will behave accordingly. Therefore, if an organisation or individual wishes to exert disciplinary power over their workers, for example, underlying discourse relating to their respective roles, expected behaviours and their positions within the organisation are initially required (Foucault, 1972, 1991b). Through constant surveillance and comparisons to encouraged social norms, discourse can be confirmed and re-affirmed which in turn reinforces imbalances in power relations (Foucault, 1979, 1980). As a result, individuals’ behaviour can be manipulated and normalised in line with the expectations of those individuals who initially established the imbalances in power relations (Foucault, 1979, 1980) – see *Review of Literature*, p. 73-74 for definitions and research applications of Foucault’s concepts relating to discourse and disciplinary power.

Other Foucauldian concepts, such as technologies of power and of the self, relate to the techniques that can be implemented in order to maintain imbalances in power and normalise behaviour (Foucault, 1988, 2003). He proposed that the skilful manipulation of situations, which often include the deprivation of ownership or autonomy, can result in a willingness to remain docile and avoid punishment

(Foucault, 1979). Scenarios such as these are often underpinned by existing discourse and power relations, which are then played out and reinforced. Moreover, individuals may become self-surveillant and autonomously subject themselves to certain forms of disciplinary practice in order to enhance their chances of achieving relative success or avoiding punishment (technology of the self – Foucault, 1988). See *Review of Literature*, p. 75 for literary adaptations of Foucault’s technologies of power and the self.

Foucault believed “subjects are constituted through a number of rules, styles and interventions to be found in the cultural environment” (Foucault, 1972, p.24). Given that previous research has established a number of distinctive cultural “unwritten rules” and rituals that exist within professional football (e.g. Parker, 1996; Cushion & Jones, 2006; Roderick, 2006a, 2006b; Cushion & Jones, 2014). Foucault’s (1979) portrayal of the disciplinary institution is almost synonymous with the workings of a professional football club. As a result, the use of Foucault (1972, 1979, 1980, 1991a, 1991b, 1999) as social theory to critically examine the reflection and experience-based learning of both professional football players and coaches has allowed for an alternative interpretation of their experiences to be ascertained.



## **Chapter 4. A Critical Examination of Professional Football Players'**

### **Reflection and Experience-Based Learning at East United FC**

#### **4.1 Introduction**

Reflection has been traditionally conceptualised as “an active persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads” (Dewey, 1933, p.9), and this definition has informed subsequent interpretations of reflective practice. It is proposed that “through reflection, he [an individual] can surface and criticise the tacit understandings that have grown up around the repetitive experiences of a specialised practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience” (Schön, 1983, p, 61). However, despite the considerable research that has investigated reflective practice in sport (see *Review of Literature*, p. 35), the conceptual lens with which it has been investigated has remained largely consistent (Fendler, 2003). Moreover, current conceptualisations and models of reflection appear to portray it as a relatively simplistic and sequential process that is largely uninfluenced by social context (see Cotton, 2001; Fendler, 2003).

Research relating to coaching within the professional football environment (e.g. Potrac et al., 2002; Cushion & Jones, 2006, 2014 – see *Review of Literature*, p. 52) has indicated that players are often subjected to the demands of autocratic and dictatorial coaches. Given the imbalances in power that exist within the coach-player relationship and coaches' roles as gatekeepers to future success, players commonly comply with what is asked

of them. In the context of reflection and experience-based learning, this disciplinary and performance driven environment may influence the manner in which players interpret and reflect upon their experiences. Previously, however, no research has examined social factors that may influence the reflection and experience-based learning of professional football players.

Lang (2010) and Manley et al. (2012) found that the culture surrounding an athlete's performance can dictate the quality of their experience. These authors found that within swimming and elite youth football and rugby respectively, disciplinary mechanism and constant forms of surveillance were implemented in order to maintain control over athletes and normalise their behavior in line with social norms (that had been initiated by the coach). It follows then that as a result, athletes' reflection and experience-based learning may also be governed or normalized within a performance culture such as this (Lang, 2010; Manley et al., 2012). While not in sport, Fejes (2008) found that reflection itself, especially in the presence of more 'powerful others', can also have disciplinary and controlling effects as attempts are made by individuals to normalise interpretations and future actions (Foucault, 1998). Therefore the imbalances in power that exist within the coach-player relationship, coupled with the overarching disciplinary and performance culture that is associated with professional football, have added significance in the context of how players' reflection and experience-based learning may be influenced (e.g. Cushion & Jones, 2006, 2014).

It is common for video-based PA to be used within professional football clubs (e.g. Guadagnoli et al., 2002; Groom et al., 2011, 2012 – see *Review of Literature*, p. 64), given its underlying purpose of enhancing performance

through augmented feedback. Importantly, however, the assumption that it does contribute to performance enhancement and is an effective resource for learning has remained largely unchallenged within the literature. This is irrespective of research suggesting that athletes are not actively involved in the process of constructing or delivering video-based PA, nor are they in its application (e.g. Bampouras et al., 2012; Nelson et al., 2014). Instead coaches act as “gatekeepers” (p. 473) where the process of formulating the content for analysis is hidden in a “black box” in which coaches’ prior experience drives decisions (p. 476). Moreover, Groom (2012) reported that a professional youth football coach delivered video-based PA through monologues as opposed to involving players through genuine dialogue.

Even within situations (such as using video-based PA) where player learning is the focus of attention, coaches have been found to maintain control and the overarching culture still dictates the structure and disciplinary outcome of sessions. As a result, it appears that players may be prevented from accessing the conditions required for genuine learning to occur (Moon, 2004), even in scenarios where their learning is deemed to be the primary concern. Manley et al. (2012) found that video-based PA provided regular surveillance over players’ performances and in doing so helped normalise their behaviour. Subsequently, this learning resource appears to have the capacity to reflect and complement overarching disciplinary cultures that may be prevalent within an organisation, instead of fulfilling its primary function.

The focus of this chapter is to investigate the reflection and experience-based learning of professional football players at East United FC and the extent to which the culture at the club influenced their reflective practice. The

influence of video-based PA within players' learning is also specifically considered given the current discrepancy between its role as a valuable feedback tool (Drust, 2010), and a disciplinary mechanism (Manley et al., 2012). Gilbert and Trudel's (2001) 'reflective conversation' interpretation of Schön's (1983) experience-based theory of learning and reflective practice was used as a theoretical framework to locate players' learning experiences prior to critically analysing them from a Foucauldian perspective (Foucault, 1972, 1979, 1988, 1991a). This allowed for social influences to be acknowledged and in doing so is the first study to examine the learning experiences of professional football players from a social perspective. This study specifically addresses three of the four overarching research questions that guided the current thesis (see *Methodology*, p. 95-96):

- (1) How are discourses of reflection and coaching defined and to what extent do they influence player and coach learning?
- (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches?
- (3) What effect does video-based PA have on players' and coaches' reflective practice and experience-based learning?

## **4.2 Methodology** (refer to *Methodology*, pages 89-156, for specific details)

The methodology that underpinned the current research is comprehensively outlined in the *Methodology* chapter of the thesis. The methods of data collection and also the manner in which the data were analysed remained consistent throughout the process. A case study approach was adopted in which data were collected through ethnography (participant observation, informal interviews and audio/video recordings – see p. 108) and formal interviews (see p. 121) following a period of one season at East United FC. These data were subjected to data analysis involving coding techniques taken from grounded theory methodology (open, axial and selective coding – see p. 131 - 137).

In the present study, data were taken primarily from 12 formal interviews that were conducted with eight players from the first team squad and also 25 informal interviews that were conducted with them and other members of the first team squad. Interviews were conducted at a location decided by the participant and totalled ten hours and 52 minutes. The longest single interview lasted 88 minutes and the shortest lasted 26 minutes (see *Methodology*, p. 123). Full details of the participants' backgrounds and experience level can be found in *Methodology*, p. 100 - 107. The eight players; *Peter Evans, Mark Hall, Shaun Hughes, Robert Stoker, Sean Smart, Rory Thomson, Jordan van Helden* and *Simon Wootton* had an average age of 26 and had been at the club for an average of 1.3 seasons prior to data collection.

Field notes that were documented as a result of participant observation were also used as data within this chapter. While coaches invariably referred to the players and their respective experiences during their formal and informal interviews, the data presented in this chapter is predominantly taken from formal player interviews. The generic themes that developed as a result of compiling and grouping raw data in the first instance were in relation to *definitions (discourse) of reflection, memorable learning experiences, conditions surrounding reflection, cultural influences on reflection, coaches' influence on players' reflection, the role of others in players' reflection, players' reflective behaviour, different football issues reflected upon and the role of video-based PA delivery within reflection.*

During open coding, data were further analysed and ordered into more manageable and theoretically underpinned groups. For example, raw data and explicit narrative that had initially constituted a broad understanding of *coaches' influence on players' reflection* was then considered within *Strategy Generation* and more specifically *Advice Seeking*. This was also undertaken across other applicable phases (e.g. *Issue Setting, Evaluation*) of the reflective conversation process (see Figure 9.). This approach allowed for the specific location and constitution of data within players' experiences to be ascertained.

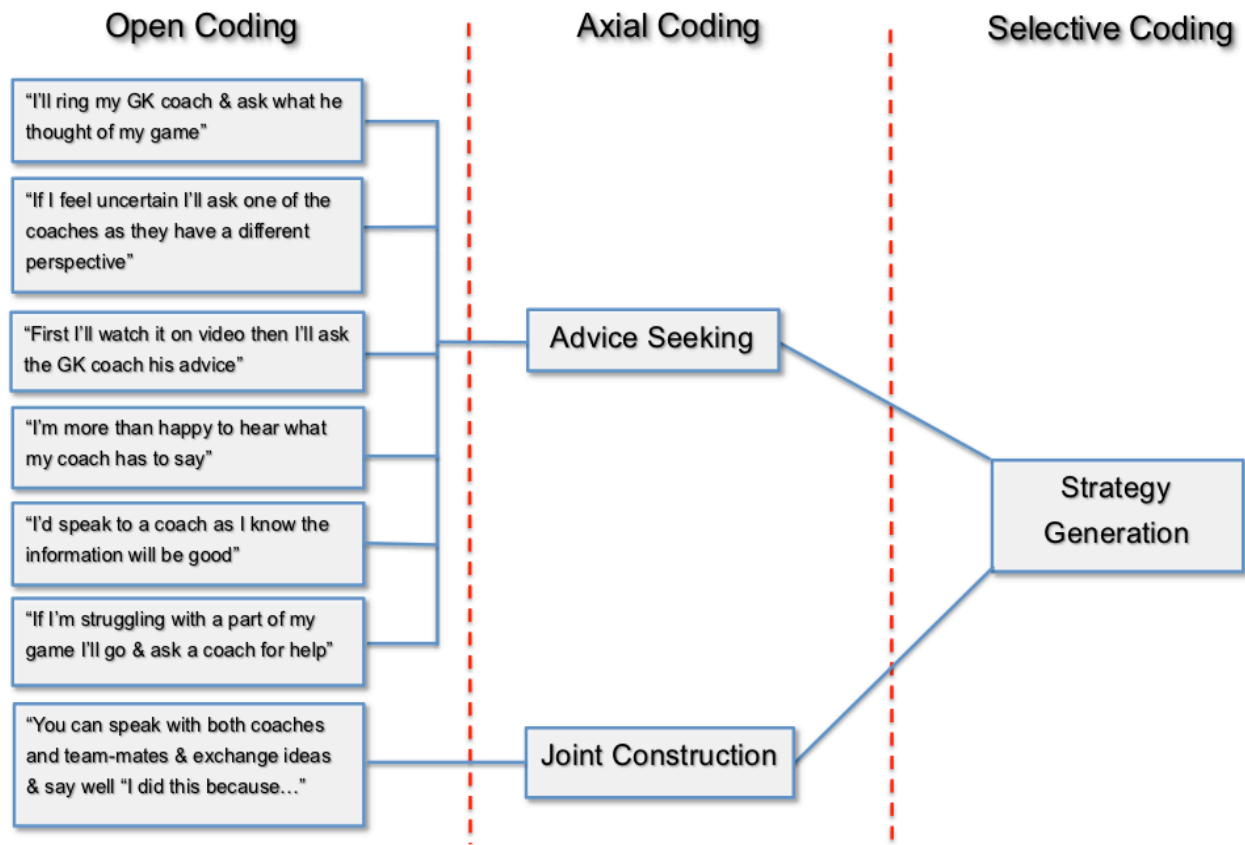


Figure 9. Example of Coding Process and Data Taken from Themes Relating to Strategy Generation

*Selective coding* produced themes that aligned themselves with the different stages of the reflective conversation (e.g. *football issues, conditions, issue setting, strategy generation, experimentation and evaluation*). When also considering the content and meaning attributed to players' experiences within these phases, overarching Foucauldian themes such as "*Imbalances in Power Relations at the Club*", "*Disciplinary Environment*", "*Discourses of Reflection*" and "*Reflection as a Technology of Power*" (amongst many others) were developed to represent the initial raw data relating to reflection and learning from a social perspective.

### 4.3 Results & Analysis

Fundamental to the interpretation of Schön's (1983) experience-based theory of learning and reflective practice as a reflective conversation is the notion that an individual engages in 5 stages when reflecting on their experience, *(Coaching) Issues, Issue Setting, Strategy Generation, Experimentation and Evaluation* (Gilbert & Trudel, 2001). These stages were framed by both environmental conditions and an individuals understanding of their own role *(Role Frame)*. Figure 10. locates players' experience-based learning within the reflective conversation framework. In doing so the context surrounding *Issue Setting* (i.e. coach, self or joint led) and the specific strategies that players used during *Strategy Generation; Advice Seeking, Physical Practice, Reflective Transformation, Creative Thought, Football Repertoire and Join Construction* are presented. The numbers in brackets within these sections refer to the number of players who cited that strategy or manner in which issues were highlighted. Unlike previous research the present study was able to gain insight into the conditions and environment that frame the "reflective conversation" (Gilbert & Trudel, 2001, p.17). See *Review of Literature* page 39 for the original reflective conversation framework used by Gilbert and Trudel (2001).



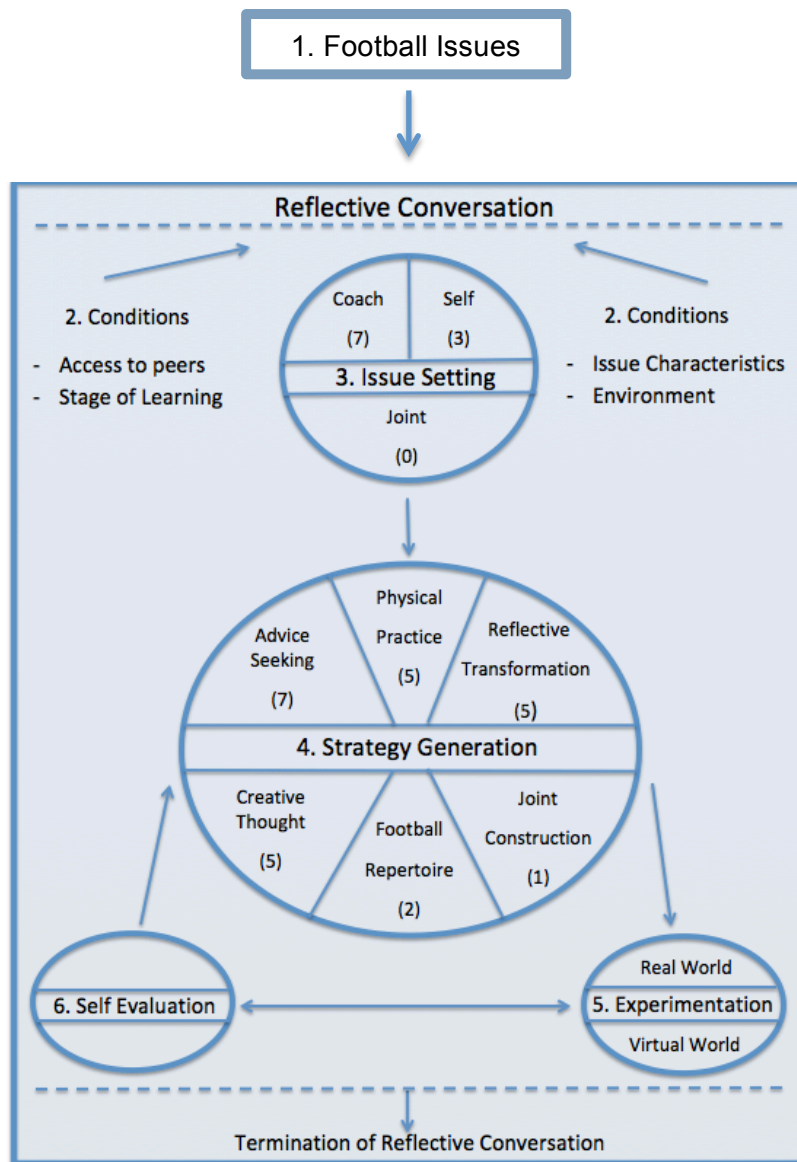


Figure 10. An overview of players' reflection as a "Reflective Conversation"

Player responses about experiences they reflected on aligned with the core foundation and cyclical nature of the reflective conversation (Schön, 1983; Gilbert & Trudel, 2001) thus supporting its use as a framework in this study. In reflecting upon previous experiences and engaging in steps of the reflective conversation, the data showed a constructed discourse of reflection (Foucault, 1972). Discourses are described as practices that "systematically form the objects of which they speak" (Foucault, 1972, p.182) and subsequently govern our actions relating to the concept in question. Foucault argues that there is no 'transcendental subject of knowledge' who invents

discourse. Rather, discourse emerges from “an anonymous and polymorphous will to knowledge, capable of transformations and caught up in an identifiable play of dependence” (Foucault, 1994, p. 12). In this instance, players embodied a discourse of reflection as a perceived precursor to making better-informed decisions in the future, and as a result engaged in periods of reflection (Scanlan & Chernomas, 1997):

*“Well...you have to reflect on the decisions you made and why you made those decisions at that time and what state of mind were you in. Were you in the right state of mind? If you continually do that then you are able to continually learn and make better decisions and make better saves and then generally be more happy”*

(Sean Smart)

By embodying positive discourses of reflection through a willingness to reflect on their own practice, players demonstrated how constitutive discourse is within the formulation of knowledge (Edwards, 2008). In accepting this discourse, players have “drawn boundaries” and “omitted alternatives” as to how reflection may be interpreted or understood (Mills & Denison, 2014, p. 219). This process has “fashioned representations and shaped actions” and players’ roles as “objects of knowledge” have been confirmed (Edwards, 2008, p.22-23). Such a process of socialising and embodying discourse reveals that discourse underpins the formation of knowledge and dominant understanding relating to reflection and learning.

Nineteen football issues, relating primarily to match specific situations, were identified as “triggers for reflection” (Gilbert & Trudel, 2001, p.25). The

issues highlighted included: *Crossing from wide areas, managing the disappointment of losing a league title, getting tight to an opponent when defending, playing out of position, marking an opponent incorrectly, missing a penalty, stepping out to intercept the ball, turning into trouble, getting pinned, not moving the ball quickly enough, creating space, using the ball positively, improving kicking technique, improving handling, fulfilling a list of things to focus on, weight issues, dealing with rejection, passing the ball out from the back when playing in goal and receiving the ball on the half turn.* Only two players made reference to generic and philosophical triggers such as dealing with disappointment and lifestyle management as opposed to more commonly reported “technical deficiencies” or “frequent mistakes” experienced in matches.

The focus of reflection on performance rather than wider issues may provide an insight into a lack of lifestyle support at the club (Gilbourne & Richardson, 2006). It may also reflect the presence of an overarching performance discourse similar to the one described by Cushion and Jones (2014) at a professional football club’s Academy. A ‘hidden curriculum’ underpinned coaching practice, where “the concept of ‘winning’ and being ‘winners’ emerged as the most pervasive and consistent of the socialisation ‘legitimacies’” (p. 291). In attending the club and partaking in coaching sessions on a regular basis, young players confirmed and reproduced this discourse. As a result, they socially constructed a ‘win at all costs’ lens with which to interpret and evaluate their own performances. If we consider that the players in this study progressed from respective youth Academies, their reflective focus on different aspects of performance is perhaps unsurprising.

Their responses also began to illustrate the prominence of the coach in players' lives. The club's players commonly cited *The Gaffer* (Steve) when explaining how performance issues resulted in reflection. *The Gaffer* (Steve) likened his role in "encouraging" players to reflect to that of a parent with the best interests of his children (the players) at heart. He also acknowledged, however, that he could only make inferences as to what a player may reflect on:

*"I think it's a case of as always, it's like being a parent you can only advise and try and help the kids but ultimately, as we've all done, we all make our own mistakes. We either learn from them or we don't so it will be the same for me."*

(The Gaffer)

Similarly, he proposed that the lack of variability in the football issues discussed by players reflected the extent to which the performance discourse had been reproduced:

*"I think that, you learn from reflecting on what you do basically and trying to... it's like players you ask them to be...some players never reflect and couldn't give a shit and it's never their fault and they have never had a bad game. Some are the other way. Some are too hard on themselves and dwell on mistakes that they make and can't perform because of it. In between the two is the player or the manager or the coach who reflects on what they've done. Goes through a process of working out what happened, why it happened and what you could do differently and you only learn if you actually then put into action a different action the next time it comes round."*

These data revealed that a discourse of reflection held at the club was driven by *The Gaffer* (Steve) and reproduced by the players, where learning as a result of reflection was deemed important (Foucault, 1972; Greenwood, 1993; Moon, 1999a; Knowles et al., 2005; Wethner & Trudel, 2006). In this way, both coaches and players replicated the 'regime of truth' commonly held within wider coaching discourse that reflection should be engaged in (Borrie & Knowles, 2004). This positive discourse of reflection directly influenced both players' and coaches' understanding of what the learning and reflection process resembled and how they should attempt to 'reflect' and 'learn' from their experiences. Given the emphasis placed on how important it is to reflect within much coach education (Cushion et al., 2010; Cropley et al. 2012), it is perhaps unsurprising that coaches embodied the discourse within their own practice.

Based on their social roles within the club and the level of control exerted over their players' schedules, actions and training (Cushion & Jones, 2006, 2014), the coaches were able to enforce this positive discourse of reflection onto the players. The legitimacy associated with coaches' opinions and actions based on the positions of power that they had established at the club was significant and as a result players attempted to embody their discourse wherever possible to try to enhance their chances of being successful under their stewardship. This continuous process of replicating discourse provides a valuable insight into how the socialisation of discourse underpins the formation of knowledge and understanding and the

interdependent relationship that exists between power and knowledge (Foucault, 1991a).

Foucault made reference to how these 'regimes of truth' are played out through varying 'games of truth' (Foucault, 1984, 2000a). A game of truth was referred to as a "set of procedures that lead to a certain result, which on the basis of its principles and rules of procedure, may be considered valid or invalid, winning or losing" (Foucault, 2000a, p. 297). Within games of truth, discourses are played out and individuals are not necessarily concerned with discovering new things but instead are exposed to the rules that govern when a subject can say something and about which particular things. In this instance, coaches manipulated many variables, such as the controlling and strict management of players' timetables and coaching sessions whilst also maintaining a presence during players' reflective practice in order to reaffirm their own beliefs that reflection was important to their players. Within this 'game of truth', coaches' dictatorial actions coupled with the use of varying forms of surveillance and the threat of punishment in order to normalise players' behaviour, supported a positive discourse of reflection (regime of truth) that was then also adopted by the clubs' players. This positive discourse of reflection directly underpinned an overarching knowledge and understanding of what constituted learning and reflection at the club.

This understanding was directly informed by, and located within, a wider performance discourse at the club where players were encouraged to do everything in their power to be successful (Cushion & Jones, 2014). Players' constant complicity helped reproduce the social belief that reflection may result in enhanced future results. *The Gaffer* (Steve) revealed a

discursive understanding of players' underlying inability to reflect alone as they may do so inappropriately and be *"too hard on themselves and dwell on mistakes that they make and can't perform because of it"*. Alternatively some players *"couldn't give a shit and it's never their fault and they have never had a bad game"*. This, in turn, resulted in a lack of trust in players to reflect both independently and 'objectively'. *The Gaffer* (Steve), therefore, created a discourse which supported the notion that reflection is most effective when occurring in the presence of a "powerful other" (Foucault, 1998) as "reflection always needs to be guided because it is profoundly difficult for practitioners to see beyond self" (Johns, 1997, p.198)<sup>1</sup>.

Moreover, both he and his coaches ensured that they maintained a prominent presence within their players' reflection in order to directly reinforce and advocate the discourse that players should not reflect alone. Within this 'game of truth', the 'regime of truth' that players should not reflect alone was socially reinforced by the constant structure provided by coaches. This structure resembled the rules and procedures that players used to interpret their experience (Foucault, 1991a, 2000a). While Foucault (2000a) proposed that within every 'game of truth' there is an opportunity to change the principles and rules of the game, given the control held by coaches throughout the process, the end result in this case was the embodiment of coach discourse by the players (Foucault, 1972). The social reproduction of this discourse underpinned the formation of knowledge and dominant

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<sup>1</sup> Other examples of socially constructed discourses are discussed in Chapter Five in line with the coaches' own reflective practice and the underlying cultural discourse of the club is investigated throughout Chapter Six.

understanding at the club that learning and reflection should be done in the presence of others. Consequently, players' reflections were directed to issues raised by *The Gaffer* (Steve) or coaches rather than by themselves. Specifically, seven of the eight players reported situations where the coach or manager instigated the reflective conversation, as they had determined an issue was deemed worthy of addressing (or not) (see Figure 10.). Only three of the players (*Jordan van Helden*, *Sean Smart* and *Shaun Hughes*) could describe situations where they had identified the issue for reflection.

Furthermore, none of the players highlighted issues through informal discussions with coaches and/or peers and instead 'relied' on the manager and his coaches throughout the entire process (Gilbert & Trudel, 2001) – see Figure 10. *Rory Thomson* explained what his experience and expectations of the manager were during the *Issue Setting* phase of the reflective conversation (Schön, 1983; Gilbert & Trudel, 2001):

*"When I made a mistake I was like "Oh fuck me, shit". And they [the manager] used to come in & go you know "What the fuck were you doing there?" and you'd be like "oh shit, I won't do that again, I'll not, I'll not do that again"....its just fucking like sweeping it under the carpet [referring to modern football]. And I've just never been, I've just never been like that. If I've made a mistake I want someone to tell me I've made a mistake or have a go at us at least. So if I miss a penalty, if I miss a penalty like I missed a penalty at [team name]...(pause) the football culture now is like "oh unlucky lad, unlucky" but I've never played football like that. I'm thinking what the fuck are you saying, what the fuck..."*



(Rory Thomson)

More specifically, *Mark Hall* described an experience whilst he was still a youth team player at the club, where the coach had decided that his inability to “turn out” required attention:

*“When I was seventeen years old, my youth team manager used to shout at me because I couldn’t take the ball on the turn. And he used to be “back foot turn, back foot turn”. He’d make a big thing of it in front of everyone. It was just the way the manager was and he still does it now and went in my head that I just take the ball on the back foot turn and if I got smashed doing it then I’d just be “ That’s what you wanted me to do” and if I didn’t then he would be pleased and then over a short space of time two to three weeks, may be not even that long, I can’t really remember where the transition started but from then on, I have been able to take it on the turn like it’s nothing. I think it’s because he singled it out that much in front of everyone. I was like, “right I’m going to show you that I can do it”*

(Mark Hall)

Considering the narratives of both *Mark Hall* and *Rory Thomson* from a Foucauldian perspective (1972, 1977a, 1979, 1988, 1991) shows a disciplinary agenda underpinning the use of reflection at the club. Coaches sought to affect players’ future conduct by initiating periods of reflection. Foucault (1988) described these approaches as technologies of power as they seek to “determine the conduct of the individuals and submit them to certain ends or domination and objectivising of the subject” (Foucault, 1988, p.18). As one of the club’s most experienced players *Rory Thomson* had been

exposed to dictatorial management styles throughout his career. This, in turn, created an expectation that this would occur again and forced him to reflect on his own practice. As such, through a process of socialisation, the coaches' role in instigating the reflective response had become not only acceptable and unchallenged, but also deemed a necessity. If a manager did not fulfil his expectations with regards to being critical and dictating what he should reflect on, *Rory* was unsure as to how to respond:

*"...I think a lot of managers think you know...(pause)...I think a lot managers think well the players can work it out for themselves but that's not always the case...for me."*

(Rory Thomson)

Throughout this process, reflection occupied a disciplinary role as the manager tried to initiate a change in *Rory's* performance that was controlled by the manager. By maintaining control over players' bodies and actions through the dictatorial delivery of training sessions (Foucault, 1991a; Cushion & Jones, 2006; Mills & Denison, 2013), *The Gaffer* was able to directly assess *Rory's* complicity. In this context, the 'game of truth' experienced by *Rory* allowed him little freedom or opportunity to challenge the 'regime of truth' placed upon him by *The Gaffer* as his response would be directly scrutinised in line with the expected norm (Foucault, 1984). As a result, the 'rules' of the game dictated that complicity was the preferred response. By engaging in reflection, *Rory* attempted to normalise his own behaviour in relation to the manager's demands. This response illustrates how the socialisation and acceptance of discourse had contributed to *Rory's* own knowledge and

understanding of what constitutes learning and reflection (Foucault, 1972). In short, he believed that by changing his behaviour in line with the manager's demands he had "learnt" something. Such an approach challenges current conceptualisations of reflection as a positive and politically neutral process (see Cotton, 2001; Fendler, 2003).

In the case of *Mark Hall* similar disciplinary outcomes associated with reflection are exposed. The coach, through criticising him in front of all the other players, 'encouraged' him to reflect on his practice and change his behaviour. Within this one sided 'game of truth' (Foucault, 2000a), by preventing the player from having any control or autonomy within the session, and providing a level of surveillance to assess his response, the rules and procedures established by the coach meant *Hally* became compliant in the fear of further punishment or humiliation. In doing so he embodied the 'regime of truth' proposed by the coach (Foucault, 1991a) and changed his future behaviour to the extent that it sometimes was not the right situation in which to "turn out". His willingness to do what the coach requested however, not only revealed a disciplinary and controlling consequence of engaging in reflection, but also demonstrated the significant imbalance in power relations between coaches and players. *Hally* showed compliance by initiating a period of reflection and trying to "turn out" more frequently, while not questioning the applicability or credibility of what the coach was demanding of him. In this instance, *Hally's* experience of reflection demonstrated the role of reflection as a technology of power and disciplinary mechanism aimed not at empowering the individual (Carr & Kemmis, 1986; Mulligan & Griffin, 1992; Ghaye, 2001) but normalising their behaviour in line with the expectations of

more “powerful others” (Foucault, 1998). This level of control held within the ‘games of truth’ that occurred between coaches and players contributed to how discourse was accepted and embodied. This process of acceptance constituted an overarching understanding at the club that players’ reflection should be conducted in the presence of coaches (Foucault, 1984, 1998).

*Peter Evans* also demonstrated his compliance with the discourse and illustrated the role of reflection as a technology of power (Foucault, 1988, 2003) by explaining that if the manager specifically highlighted an aspect of his performance, he would re-visit the incident and reflect on it automatically:

*“There was a goal that we conceded at the weekend that I was kind of involved in and I need to see that to clear my mind on it. Erm, the manager said to me at half time “I think you didn’t move the ball quick enough” and I think there was one specific time in it that I think he was on about, and he just said it in his team talks. That happened just before half time, so I’ll just probably watch the first half and see if I could’ve moved the ball a bit quicker. And then he said me and the centre half were getting caught too, too flat, so I’ll probably ... I’ll probably watch the first half of the game, especially if I’m on the train.”*

(Peter Evans)

Analysis also revealed that for six of the eight players (*Sean Smart* and *Simon Wootton* were the two exceptions) the outcome of games, particularly a loss, had a significant influence on whether they felt that reflection was necessary or not. This confirmed the presence of a performance discourse at the club, in which the importance of “winning” and being “winners” was

understood to define what it meant to be a professional player (Cushion & Jones, 2014, p.291). Having initially achieved professional status earlier in their careers, the players in this study arguably reproduced and embodied this fundamental discourse more successfully than their team-mates who did not get professional contracts. Therefore, it is perhaps unsurprising that they have continued to confirm and reproduce a “discourse of winning” as part of the club’s wider culture (Cushion & Jones, 2014, p. 292).

Given that discourse “influences how ideas are put into practice and used to regulate conduct” (Edwards, 2008, p.23), both players and coaches directly assessed their own performances in relation to the results of match play to gauge whether they had been successful or not in their respective roles. By reproducing dictatorial coaching sessions within a controlled environment where the importance of winning was emphasised and embodied within every action, coaches dominated the ‘games of truth’ that existed between themselves and players. In doing so their discourse of winning became accepted and translated into a dominant understanding that to be successful was “meaningful”, and could be used as a point of reference (Edwards, 2008, p.23).

As a result, triggers for reflection were not initiated by personal meaning attributed to the event itself, but the negative consequences associated with the team losing (Gilbert & Trudel, 2001). Thus, players did not engage independently in reflection but instead aligned themselves with expectations of how players should behave. Consequently, hierarchical discourses at the club were reinforced and governed reflective behaviour

where the “manager is always right” and the “result is all that matters” (Foucault, 1972):

*“Now I know exactly it’s all about the team. Even if I have a bad game and the team wins it should be alright.”*

(Jordan van Helden)

*Peter Evans* suggested that even if he had made individual errors in a match, if the team had won the game and *The Gaffer* (Steve) had not highlighted it as something that was deemed important he would not reflect on his own personal contribution:

*“I mean sometimes you play well and you win ... you know “Oh I give the ball away a couple of times.” I’m not gonna watch a DVD to look at that, do you know what I mean?*

(Peter Evans)

This discourse was created and reaffirmed by *The Gaffer* (Steve) and his coaches at the club. The extract below from a post-match debrief following a 3-0 win against local rivals demonstrates the emphasis placed on the result by the manager and its influence on reflection, which is reduced due to the success:

*“...Alright lads lets just get through this quickly. Well done from Saturday. [Powerpoint slide advances to a slide with match statistics on] Didn’t cross it*

*very much. There we are. Listen it was a good result and it was...stats fucking tell you one thing. The bottom line is it was a big game for us and a very good result and a good performance and the important thing is we now move on to the next game. So it's a well done but let's get our heads back on to what we're trying to achieve alright..."*

(Beginning of Post-Match Debrief Session after 3-0 win vs. local rivals)

These link to Chapter Five (p. 219), where *The Gaffer* (Steve) and his coaches explained a discourse that viewed positive results as imperative. Reflection then was associated with trying to correct negative results and normalising behaviour. Hence reflection that is described as an “academic virtue and source of privileged knowledge” (Lynch, 2000, p.26) and a key component of professionalism (van Manen, 1977) appears to be potentially misleading.

The fourth aspect of the reflective conversation framework is *Strategy Generation* in which the learner adopts a strategy or approach to try and manage the issue that was initially set – see Figure 10. (Schön, 1983; Gilbert & Trudel, 2001). Players relied on six strategies to manage a variety of situations. Of these strategies, *Advice Seeking*, where an individual asks, “peers or expert coaches for suggested strategies” (Gilbert & Trudel, 2001, p.24), was the most cited as seven of the eight players described this one-way relationship as a process that they engaged in. All seven players (*Peter Evans, Mark Hall, Shaun Hughes, Sean Smart, Robert Stoker, Jordan van Helden & Simon Wootton*) described occasions when they had approached a

coach or manager to ask for advice relating to a specific football issue. In addition, four players explained that they had sought the opinion of family members, senior players or qualified experts independent of the club (*Sean Smart, Jordan van Helden, Simon Wootton and Peter Evans*). *Rory Thomson* was the only player not to refer to *Advice Seeking* during the formulation of his strategies or “mental models” (Côté et al., 1995). As one of the most experienced players at the club his lack of reliance on seeking the advice of “powerful others” (Foucault, 1998) is significant. His learning preferences may reflect the comprehensive knowledge that he had accumulated throughout his career, but it may also reveal a reluctance to involve others in an otherwise largely controlled process (Cotton, 2001; Fendler, 2003). This will be considered in the context of *Rory’s* role frame in the discussion section of this chapter.

One example of a player who was keen to seek the advice of his coaches was *Shaun Hughes*, who explained the importance he placed on the club’s First Team Development Coach’s opinion:

*“Erm, if it kept happening...and I couldn’t change it I’d speak to more experienced ... I’d speak to a coach first, er, personally I’d go to [1<sup>st</sup> Team Development Coach], er, and ask him just because erm, I find him easy to speak to, erm, I know he’s willing to help, erm, and I know the information I get from him will be good. So I’d speak to him personally, “[name of coach], I keep trying to do this, it’s not happening, what can I do?” And I know he’d help me.”*



(Shaun Hughes)

*Sean Smart*, who placed an importance on the input of his goalkeeping coach, described a similar level of reliance:

*“So if I’ve got a problem after the game I might just give my goalkeeping coach a ring and say look this happened today what do you think? And he’ll say right I’ll have a look or just reinforce things to me.”*

(Sean Smart)

These data demonstrate situations where players sought the expert advice of their coach(s) when reflecting on their performance (Dewey, 1933; Schön, 1983; Gilbert & Trudel, 2001, 2005; Werthner & Trudel, 2006). This preference for accessing “expert knowledge” may be a completely understandable approach to accumulating alternative solutions for a given scenario. At the same time, however, the preference for *Advice Seeking* may have been socially constructed. The reflective conversation process, thus far, has been significantly influenced by social, political and cultural factors including numerous controlling discourses (Foucault, 1972). Therefore, players may have attempted to explicitly demonstrate their compliance (Foucault, 1991a) and “willingness to improve” by making it known to the coach that they wanted their advice. By seeking the advice of the “gatekeepers”, however, players have merely confirmed the disciplinary potential of supervised reflective practice (Bampouras et al., 2012, p.473).

*The Gaffer (Steve)* and coaching staff structured training sessions to include disciplinary techniques, which sought to “define(s) how one may have

a hold over others' bodies, not only so that they may do as one wishes, but so that they may operate as one wishes, with the techniques, the speed, and the efficiency that one determines" (Foucault, 1991b, p.182). In this context, players were not only docile and compliant (Foucault, 1991a), but they appeared to have become reliant on their coaches' 'guidance' which they believed would enhance their chances of being successful. Players' docility and willingness to immediately align themselves with the expectations of their coaches revealed the lack of resistance to social influences and the imbalance in power relations between players and coaches at the club (Foucault, 1988, 1991a). The social construction of *Advice Seeking* as the most cited strategy will be discussed in more detail later in this chapter (see also Chapter Six).

Unsurprisingly given the nature of the context, the second most cited learning strategy was *Physical Practice*. Five players preferred physical practices on the training field to manage a learning dilemma (*Jordan van Helden, Sean Smart, Shaun Hughes, Robert Stoker and Peter Evans*). Evidence for this was demonstrated in *Jordan van Helden's* willingness to repeat physical exercises as a strategy to overcome a "trigger for reflection" (Gilbert & Trudel, 2001, p.25). In this instance, he made reference to the need for regular repetitive practice and drew similarities between his role as a professional footballer and that of a 'Tibetan monk':

*"Tibetan monks, you know, in China, these monks, these kind of martial arts experts, whatever, it's incredible, err, how many times they do repeat their skills until they do it perfectly, and perfection means also they work with energy and the other kind of ... They, they are working in another dimension.*

*They work, you know, meditation and stuff like that. This is ...we talk about discipline but it's the same for us. If I keep repeating crossing all the time during my career, more likely I'm going to have a good cross, you know, in a game because I'm not thinking about it. I just do it because I did it in the past, so our brain knows that but we don't have to tell our brain all the time, okay, now I have to cross because ...I'm just doing it"*

(Jordan van Helden)

As an experienced player this revealed a well-established disciplinary discourse of repetition to be successful. This provided an insight into how regular exposure to structured and timetabled training sessions may influence discourse (Denison, 2007; Lang, 2010), that is, internalised training as an acceptable way of improving technical skills. This discourse, held and distributed by coaches as to the importance of training and 'time spent on the grass' in the pursuit of winning, was directly supported by the constant delivery of training sessions that provided players with no freedom whatsoever (Mills & Denison, 2014). By maintaining spatial and temporal control over sessions and using surveillance techniques to ensure that rules were adhered to throughout, the coaches regularly dominated 'games of truth' in which their discourse was accepted by players (Foucault, 2000a). Given that the discourse introduced was directly supported by associated action (i.e. training sessions), which players had no influence on and were unable to challenge, *Jordan van Helden's* response is also the result of the effective use of disciplinary power by *The Gaffer* (Foucault, 1991a). In this instance, the player accepted the discourse that training is important which in turn constituted a dominant understanding and knowledge that in order to improve

as a footballer he must engage in repetitious training practices. This compliance resulted in him becoming a docile and self-surveillant player (Foucault, 1991a; Lang, 2010) likening training to religious beliefs and dedication to a deity. In this context, *Physical Practice* also functioned as a technology of power (Foucault, 1988, 2003).

*Reflective Transformation*, was described as a player-led strategy. This strategy involved “learning from the observation of others engaged in similar situations to the dilemma experienced by the learner” (Gilbert & Trudel, 2001, p.24). It was cited by five different players (*Mark Hall, Sean Smart, Shaun Hughes, Simon Wootton* and *Robert Stoker*), with its primary function being to consider others’ behaviour prior to managing their own similar learning dilemma(s). *Mark Hall’s* experience, however, revealed a disciplinary and controlling undertone to *Reflective Transformation*:

*“His assistant guy said to me “look at Paul Scholes, he’s always facing the right way” and I think subconsciously I probably did and he was right, he is always facing the goal and that was obviously the prime example of who is obviously a great player. I’m never going to be like that but that was where you need to try and get to, you know if you can turn like that then you’re always going to be a step ahead or a second ahead of everyone else, and that was the icon he used, so to speak”*

(Mark Hall)

While it is clear that *Hally* observed a fellow professional in order to inform his own decision-making it is also evident that the process was once more coach driven. Although *Hally* used video evidence as a learning

resource to try and visualise the body position that Paul Scholes adopted when offering himself for the ball in games, it could be suggested that this process had a disciplinary foundation (Foucault, 1991a). The coach not only initiated the reflective process but he also established what the desired outcome of the process should be; behaviour that is similar to Paul Scholes'. Therefore the coach attempted to normalise *Hally's* behaviour by encouraging him to observe 'acceptable' behaviour by a respected professional and replicate it without questioning its relevance. By designing, controlling and delivering training sessions that were directly linked to the theme under consideration, the coach was able to assess and observe *Hally's* response following the incident. In doing so he was able to use "the rather shameful art of surveillance" as a by-product of disciplinary power within a controlled environment. This process ensured that his expectations were embodied by the players' actions (Foucault, 1977, p. 172). This is even acknowledged by *Hally* who proposed that "*I'm never going to be like that*", yet he still engaged in the process and attempted to meet his coach's expectations (Foucault, 1991a), confirming reflective practice's role as a technology of power (Foucault, 1988; Fejes, 2013).

*Creative Thought* is concerned with the formulation of novel approaches in order to manage specific situations that individuals encounter. Five players made reference to devising such strategies in order to manage specific situations that they were aware they would encounter again (*Jordan van Helden, Sean Smart, Shaun Hughes, Robert Stoker and Peter Evans*). Video-based PA complemented players' *Creative Thought* strategies, having been disregarded for much of the reflective conversation process. Video-

based PA was used to stimulate players' *Creative Thought* and informed strategies both pre and post match. *Shaun Hughes* explained how videos of the opposition, which were presented to the players as a group before a match, stimulated initial cognitions as to how to manage that situation should it arise in the game:

*"I've just seen him on the video and he just, you know, he didn't seem to be running but he can hold it up." So I think, right, when we playing tomorrow? I can get tight as I like, you know, try and win it"*

(Shaun Hughes)

More commonly video-based PA provided an opportunity to re-observe critical incidents from games:

*"I like to, if I've done something I like to watch the game back and see the mistake, 'cos it's different when you play it and then when you watch it and you realise, oh, I shouldn't have done that."*

(Peter Evans)

In these instances, video-based PA was a checking mechanism for experiences that players had already encountered and were re-examining. *Robert Stoker* explained that by looking at the video he was able to evaluate his initial reaction(s) during the game:

*"I mean a lot of the time straight away you've got an idea of why you know when you make a mistake or something happens you think, I've not got my body behind it, I've not moved my feet, I've not whatever you know and I think the video and that just sort of sometimes confirms what you thought because*

*you have a good enough knowledge of the game of what you should have done and what you didn't do"*

(Robert Stoker)

The following vignette demonstrates *Sean Smart's* willingness to use video-based PA as a checking mechanism to re-evaluate every time he had kicked the ball from his hands during a game. The extent to which he had 'trained' himself to adopt this approach was epitomised by the fact that he did it irrespective of the reserve team manager (*Chris Stordley*) thinking that it was unnecessary:

*12<sup>th</sup> April 2010 – Approximately 12:00 pm*

*I sit in front of my laptop in the Coach's Office at the training ground, beginning to evaluate the game that had finished only 48 hours before. As I started to compile a list of clips that consisted of the team's goalkeeper's distribution, the club's reserve team manager entered the room. He sat down and turned on his computer. As it began to load, he rotated around on his chair to face me.*

**Chris Stordley:** *"Alright Son. Dya' have a good weekend pal?"*

**Researcher:** *"Yeah it was alright cheers Stords, how about yourself?"*

**Chris Stordley:** *"Aye not bad lad, always better with a win eh?"*

**Researcher:** *"Yeah I guess so."*

**Chris Stordley:** *"What you on with there then lad?"*

**Researcher:** *"I got a text off Smartie yesterday so I'm just getting all the times that he kicked the ball out of his hands as he wants to see them again"*

**Chris Stordley:** *"You don't need a fucking video to tell him his kicking was shite, 'ya know when you come off the field that it was bad – it's just one of those days ya know, you don't need to fucking see it again"*

**Researcher:** .....

**Chris Stordley:** *"He's not right in the head (he smiles), he's a top lad but he's not fucking right in the head!"*

In situations such as this, novel learning experiences were not reported, as players did not watch full games or a selection of clips of themselves in order to re-evaluate previous un-highlighted aspects of their performance. Instead, players used match footage from previous games to watch and re-assess only critical incidents, which, in turn, informed future strategies. This lack of inquisitiveness about their own performances reflected the social environment at the club and the approach that coaches adopted towards video-based PA (see Chapter Five). It appears that this remained unchallenged partly due to the effects of confessional power arising from the regular use of video-based PA within a controlled environment. This resulted in players feeling obligated to 'confess' and highlight their own weaknesses (Foucault, 1979). This constant exposure to video-based PA appears to have influenced the players who "gained a conscience that prevents deviation from whatever is perceived as normal" (Mills & Denison,



2014, p.223). In short, players operated in a strict disciplinary environment where they were socialised into relying on others and had to align themselves with social norms (Foucault, 1979; Rabinow & Rose, 2006). Therefore, when the opportunity arose to not be subjected, or subject themselves to further examples of criticism, it is perhaps unsurprising that players avoided using video-based PA.

Since coaches dominated the reflective process, the manner in which they perceived the game influenced how players perceived their own performances. Coaches' expectations of players were used as a reference point or 'regime of truth' (Foucault, 1991a), which informed players' views. Thus players re-confirmed and constantly tried to align themselves to socially accepted behaviour and attitudes to performance (Foucault, 1979; Rabinow & Rose, 2006). The increased use of video evidence (Mackenzie & Cushion, 2013) meant that players assessed their performance with a socially constructed lens where coaches' expectations acted as the norm (Foucault, 1979, 1991a; Tsang, 2000; Fejes, 2013). Therefore, whilst a lack of interest in observing full matches can be interpreted as a form of resistance, players' willingness to re-observe critical incidents from the coach's perspective further demonstrated their compliance and docility (Foucault, 1979). Players' behaviour in this context revealed the underlying disciplinary and controlling function of reflection at the club. Due to the fact that from the outset the use of reflection resembled positive discourses and 'guidelines' for the way in which an individual should reflect, the disciplinary undertones that were associated with reflection remained undetected and unchallenged.

It is understood that “after one or more strategies were generated, an experiment was conducted”, which occurs in either a virtual or real world scenario (Gilbert & Trudel, 2001, p.28). The findings in this study support the notion that players attempted to implement or experiment with their chosen strategy (see previous section), but it was not necessarily following the generation of more than one strategy. Instead, experiments were often conducted either virtually or in a real life scenario when the learner was relying on one strategy alone. This may be a reflection of the often limited time between matches implying that there may not be time to source alternative strategies in between performances. However, it may also reflect the lack of autonomy experienced by players and their subsequent lack of knowledge and awareness of alternative approaches in the absence of coach ‘guidance’. As a result, players often relied on trusted strategies to make performance adjustments.

Following *Experimentation* the effectiveness of strategies implemented were evaluated (Gilbert & Trudel, 2001). Interestingly, although issues were set by *The Gaffer* (Steve) or his coaches, players described their role in the *Evaluation* phase as less prominent. Therefore, it was the players who internalised whether the process had been successful, and whether they had “learned” something:

*“I’d say. For instance, say like I know for a fact from when I was two years ago I’ve improved in heading the ball from like off a goal kick, for instance, like it’s ... you know, you’ll get some strikers that will drop on your shoulder and some strikers that will pin you. Like, I used to get pinned easier than what I do now,*

*so I know I've ... I know now in myself I feel confident if someone was doing that that I've got strategies that I can use to, to, you know, to stop that being like ... to stop that happening, and rather than it being like I've learnt something, it's more like you feel like you've improved on your skills."*

(Peter Evans)

Limited coach presence within the *Evaluation* phase revealed the disjointed nature of players' reflective conversations. Although following the different stages of the reflection process, player autonomy during each stage varied significantly. While prominent in every other stage of the process, the coaches' absence from the *Evaluation* stage is worthy of consideration. By leaving the reflective "loop" open, coaches left players in a state of flux with only their own interpretation as a guide to whether or not they had been successful. This may appear unimportant, but given that players tried to meet the manager's demands, uncertainty created a situation where players continued to re-evaluate similar situations. Having players constantly question themselves and continually engage in reflection, *The Gaffer* (Steve) had created a situation where players were self-surveillant in normalising their own behaviour. Indeed, Lyon (1994) argued that uncertainty, in the context of surveillance, can also function as a form of social control. The effects of both disciplinary and confessional power resulted in players proactively trying to meet the demands of their coaches through the embodiment of discourses relating to the identity of being a professional football player (Foucault, 1979). In this context coaches' roles were concerned with providing "constant

coercion, supervising the processes of activity rather than its result end” (Foucault, 1991a, p.137).

#### **4.4 Discussion**

The players described learning situations and strategies that aligned with the phases of a “reflective conversation” (Gilbert & Trudel, 2001, p. 23). The data suggested that the reflective conversation was an effective framework for understanding experience-based learning (Dewey, 1933; Moon, 2004). The present study demonstrated that social and cultural factors impacted this process and questioned the existing simple and cyclical representations of experience-based learning and reflection while supporting the suggestion that “institutional structures, the significance of power differentials and what might be termed micro-politics of the work place” (Hodkinson et al., 2008, p.32) can influence learning opportunities (Billet, 2001; Engestrom, 2001; Billet, 2002). In the present study every aspect of the reflective conversation was influenced by the cultural undercurrent of a performance environment (Lang, 2010; Manley et al., 2012). This environment acted counter to genuine learning experiences and instead promoted compliance, replication and normalisation (Foucault, 1979, 1991a). The results challenge idealistic representations of experience-based learning and reflection (e.g. Lynch, 2000; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002) and instead portray reflection as a technology of power where behaviour is aligned either by a ‘powerful other’ or through self-surveillance (Foucault, 1998; Cotton, 2001; Fendler, 2003; Fejes, 2008, 2013).

Players' willingness to engage in reflection showed a discourse of reflection but also revealed imbalances in power relations (Dreyfus & Rabinow, 1983; Foucault, 1991b; Rabinow & Rose, 2006). Fundamental to their understanding and triggering of reflection was the underlying discourse that it was a worthy endeavour resulting in performance benefits (e.g. Knowles et al., 2006; Knowles & Gilbourne, 2010). While this study was concerned with how discourses were specifically initiated and translated into players' and coaches' knowledge and understanding at East United FC, it is also clear that the social reproduction of discourse extended beyond the club. Although players embodied coaches' positive discourses of reflection, the coaches themselves adopted and embodied discourses of reflection that exist within a wider coaching discourse. For example, it is commonly proposed during coach education events that reflection should be incorporated within coaches' practice (Cushion, 2007). The process of embodying discourse held by previous managers (who coaches had worked with) and accepting wider coaching discourse delivered within coach education, reveals the reproduction of knowledge through a 'capillary-like' network of power (Foucault, 1980). The legitimacy associated with both previous managers' knowledge and the content of coach education material contributed to these discourses remaining unchallenged and being embodied within coaches' own practice. This process demonstrates how knowledge is socially reproduced and that the embodiment of discourse is constitutive of our dominant understanding of a topic (Edwards, 2008).

Discourses of reflection at East United FC were framed and reproduced by an overarching performance discourse that perceived the

pursuit of winning as being fundamental to both players' and coaches' roles as professionals (Cushion & Jones, 2014,). It is suggested that this understanding is socialised and reproduced by young players within Academies (Cushion & Jones, 2014) and then continually accepted and replicated in their professional careers. Through their attendance and participation in coaching sessions, the players themselves also demonstrated a compliance and acceptance that winning was everything as they too embodied this discourse. This acceptance and embodiment of discourse informed their understanding of what it meant to be a successful professional football player. This 'hidden curriculum' informed both coaches' and players' practice at the club as continual attempts were made to correct unsuccessful performances (p. 291). Discourses are social "practices that systematically form the objects of which they speak (Foucault, 1972, p.182) and in this case contributed to an understanding of reflection as a positive and fulfilling process as it was perceived to help reduce mistakes and enhance their chances of winning (e.g. Swain, 1998; Margolis, 2002; Moore & Ash, 2002; Knowles et al., 2006; Knowles & Gilbourne, 2010). This view was also held by the coaches and was demonstrated through their approach to training and their own reflective practice (see Chapter Five p. 216-217).

Coaches, however, engaged in reflection on their own, whereas players explained that reflective conversations occurred as a result of coaches highlighting performance issues to them. It was found that coaches used their positions of power to enforce their beliefs and 'regimes of truth' relating to the benefits of reflection through on-going 'games of truth' (Foucault, 1984, 1991a). These 'regimes of truth' were legitimatised and

informed by the discourse held amongst the players that “the manager is always right”. This discourse was constantly reaffirmed through the design and delivery of training sessions by the manager on behalf of his players. In doing so, culturally established rules and perceived knowledge significantly influenced players’ learning experiences. Viewed in this way commonly held assumptions of the politically neutral and unbiased nature of reflection can be challenged (see Smyth, 1992; Zeichner, 1996a, 1996b; McNay, 1999; Cotton, 2001; Fendler, 2003). Instead, reflection was significantly influenced by established imbalances in power relations and the effective use of disciplinary power (Foucault, 1991a). In this instance, players’ reflective behaviour was dictated by the coaches where “power and knowledge directly imply one another” (Foucault, 1991a, p. 27) in the eyes of the players. Therefore, coaches’ opinions took on added legitimacy and successfully influenced players’ behaviour (Cotton, 2001). As a result, Foucault’s suggestion that “[t]he chief function of disciplinary power is to “train”” (Foucault, 1991a, p.170) was achieved. Players at the club trained themselves to accept instructions without questioning them.

The role of reflection as a key component of professionalism (Saylor, 1990) and underpinning best practice (Borrie & Knowles, 2004; Irwin et al., 2004; Ghaye, 2010) has remained largely unchallenged, and the lens through which an individual’s experiences are interpreted, unexamined. Only recently have Foucauldian interpretations of reflection as a technology of power been presented (see Cotton, 2001; Fendler, 2003; Fejes, 2008, 2013). In the present study coaches dominated players’ reflective conversations. Coaches initiated the process and content of reflection and also identified how

situations may be best addressed. By maintaining a disciplinary presence throughout the process, coaches were able to maintain a critical and normalising gaze (Foucault, 1991b) that judged the cognitions, behaviour and interpretations of the players in line with their own perceptions. This level of involvement coupled with hierarchical discourse resulted in the coaches' interpretations being understood as the right course of action (Foucault, 1991a, 1991b). Foucault (1991a) explains; "it is easy to understand how the power of the norm functions with a system of formal equality, since within a homogeneity that is the role, the norm introduces, as a useful imperative and as a result of measurement, all the shading of individual differences" (p.184). In this context, players reflected the critical gaze back onto themselves and in doing so further increased its power and control over how they perceived their own experiences (Tsang, 2000; Lang, 2010).

As a result, reflection in the context of a technology of power here sought to "determine the conduct of the individuals & submit them to certain ends or domination & objectivising of the subject" (Foucault, 1988, p.18). In short, the more efficiently players aligned their own interpretations with the interpretations of the manager, the greater chance of success they had in terms of minimising perceived errors and being selected in his team. This level of regulatory power occurred as a direct result of using reflection along with the temporal and spatial control over players actions in training (Mills & Denison, 2014) in a disciplinary manner as it "...define[s] how one may have a hold over others' bodies, not only so that they may do as one wishes, but so that they may operate as one wishes, with the techniques, the speed, and the efficiency that one determines." (Foucault, 1991b, p. 182). Recent literature



has likened this to Christian confession; as the more efficiently the sinner can align their lifestyle and behaviour with the expectations of God (and the priest/vicar as God's teacher), the more likely they are to lead a good life and be accepted into heaven (Fejes, 2008, 2013). Reflection in this context occupies a disciplinary role with the aim of normalising the behaviour of the wrongdoer in line with socially perceived acceptable behaviour (Cotton, 2001; Fendler, 2003; Rabinow & Rose, 2006; Fejes, 2013). In the present study it was clear that *The Gaffer* (Steve) formulated the lens through which players interpreted their own experiences. This key finding challenges current conceptualisations of reflection as an unbiased and objective process (e.g. Dewey, 1933; Schön, 1983; Smyth, 1992; Taylor, 1998). Although it is commonly accepted that learning occurs as a result of experience (Salmela, 1995; Gilbert & Trudel, 2001; Jones et al., 2003, 2004a; Irwin et al., 2004; Abraham et al., 2006; Erickson et al., 2008), the social and political conditions surrounding an individual's experience have been largely un-investigated. This omission reveals the traditionally positive and self-fulfilling interpretation of reflection in the literature (i.e. Zeichner, 1996a, 1996b).

The present study has shown that professional footballers operated in an environment where their experiences were constantly judged and normalised as a result of reflection in the presence of a 'powerful other' (i.e. a coach). Dependent on the social environment, it could be proposed that indoctrination and the replication of socially accepted behaviour may actually occur as a result of experience, as opposed to learning. The experiences that players encountered were not their own experiences or interpretations, but those that a 'powerful other' tried to influence and create (Foucault, 1998).

The use of reflection as a technology of power in this instance was not concerned with empowering the individual: instead its primary concern was to oppress and inculcate the beliefs and assumptions of others (Foucault, 1988). A coach's normalising gaze was used as the point of reference and influenced what was deemed to be the desired outcome (Foucault, 1991b; Lang, 2010; Manley et al., 2012).

The club's coaches also governed players' attitudes towards reflection where players embodied the coaches understanding that reflection was more effective and necessary when losing games. As a result, players described that they would not reflect on their performance if the team were successful, irrespective of their own contribution. In doing so, the construction and socialisation of discourse into knowledge within the club environment was revealed. Based on the positions of power that coaches had established, their knowledge and interpretation of varying situations held an unchallenged level of legitimacy in the eyes of their players (Foucault, 1991a). This was directly underpinned and supported by the scheduling of coaching sessions in relation to the most recent result experienced. If the team had lost, training tended to be longer and more thorough than if the team had won. In doing so, coaches maintained a high level of control through the 'games of truth' that constantly occurred between them and their players (Foucault, 2000a). By establishing rules and procedures for players to follow that were embodied through their own coaching practice, players were exposed to a discourse of winning on a daily basis. By participating in coaching and video-based PA sessions that emphasised the importance of winning through their existence,

players embodied this discourse and contributed to a dominant understanding that winning was everything.

Players did not question their ideas and philosophies but instead accepted and reproduced their coaches' understanding in everyday actions at the club. It was perceived that by embodying the belief system of the "gatekeeper", players increased their own chances of achieving success (Bampouras et al., 2012, p.473; Cushion & Jones, 2014). This resulted in a constant social production and reproduction of knowledge that was specific to the performance culture at East United FC. This unchallenged process of socialisation revealed how compliant and docile the players had become. Players actively embodied their coach's beliefs relating to reflection by predominantly seeking their advice when devising strategies to alter their future behaviour and by physically participating in coaching sessions that were designed to address issues of significance (Ghaye, 2010). In doing so players allowed themselves to "be subjected, used, transformed, and improved" (Foucault, 1991a, p.136).

Players' independent reflective behaviour revealed that a level of self-surveillance had been established as they effectively assessed their own performances continuously in line with what was expected of them by *The Gaffer* (Steve). In this context, video-based PA provided a resource with which players could re-observe previous performances and evaluate their contribution in line with both cultural discourses and also the perspective of the manager (Manley et al., 2012). In this instance, video-based PA can therefore be interpreted as an integral component in promoting self-surveillant players, as the opportunity to frequently compare behaviour in line with the

expectations of more 'powerful others' enhanced the possibility for the normalisation of behaviour (Foucault, 1998). Therefore, interpretations of video-based PA as an integral component of the coaching process appear idealistic and misrepresentative of its potential disciplinary function (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton, et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011).

The reflective conversation process revealed the function of reflection as a technology of power (Foucault, 1988; Cotton, 2001; Fejes, 2008, 2013), in line with Foucault's portrayal of power as relational, however, where "individuals are [thus] the vehicles of power, not its point of application. Individuals are not passive, inert entities who are simply at the receiving end of power..." (Foucault, 1980, p. 98), there is also "the possibility of resistance for if there were no possibility of resistance...there would be no relations of power" (Foucault, 1988, pp. 11-12). As a result, individuals can be described as "self-determining agents capable of challenging and resisting the structures of domination" (McNay, 1992, p.4). It was found that players demonstrated a level of resistance and challenge to the overarching culture of surveillance and discipline of which a positive discourse of reflection was a key component (Foucault, 1972). In this context, not engaging in reflection or engaging with it in a manner that was predominantly player led as opposed to reliant on the coach's input and critical gaze (Foucault, 1991b) was deemed to be a form of resistance.

Avoiding *Advice Seeking* may be interpreted as a form of defiance and resistance as some players deemed their *Football Repertoire* to be more important than the advice of the coach. This could be interpreted as actively

challenging the knowledge and authority of the coach by applying an individual interpretation to varying situations as opposed to adopting the coach's critical gaze (Foucault, 1991b). The data suggested only the older and more experienced players engaged in this resistance. Having seen multiple managers sacked or leave clubs throughout their careers, these players developed an approach that was reliant on individual interpretation and not the unstable and disciplinary laden environment. Alternatively, with less career time left, it could be interpreted that they had less to lose than some of the younger players. Whilst, in line with traditional interpretations of reflection as a positive and empowering process, marginal reflective behaviour such as this may be interpreted as either being unprofessional or unacceptable (Cotton, 2001), yet in this instance it was clearly a challenge to the disciplinary power that dictated behaviour (Foucault, 1977, 1991a).

It could be interpreted that players attempted to achieve transgression (Foucault, 1977b): a process that "challenges unequal power relations to moments of relative freedom when the apparently powerless step outside the realities of the oppression (Spencer, 1996, p.489). Foucault (1977) proposed that, like players in this study, individuals must initially acknowledge that there are boundaries or limits to confront in order for these boundaries to be challenged. As a result, "it is likely that transgression has its entire space in the line it crosses" (Foucault, 1977, p.34). In the context of the present study, the players established that their level of control was being compromised, so they attempted to transgress in order to achieve moments of "freedom or otherness" (Allan, 2013, p.30). By doing so, players had by no means eradicated current power imbalances and/or perceived boundaries; instead

they confirmed that the boundaries existed whilst simultaneously weakening them (Foucault, 1977). As a result, players were not transformed into individuals with free reign over their own actions, but they acknowledged that resistance could contribute to moments of perceived freedom (Foucault, 1977; Allan, 2013).

*Mark Hall's* resentment relating to his coaches' comments: "*I was like, right I'm going to show you that I can do it*", highlighted that players were aware of the imbalances in power relations and may have attempted other forms of resistance. In this context, players "are not passive, inert entities who are simply at the receiving end of power..." (Foucault, 1980, p. 98), they demonstrated resistance within "the relations of power" (Foucault, 1988, p.12). Regarding the prominent use of *Advice Seeking*, players may have actually been feigning compliance in order to satisfy their coaches. Players positioned themselves where they were seen to be doing the right thing, but in reality they may not have actually acted upon the information that was given to them. Given that coaches occupied marginal roles in the *Evaluation* phase, little formal follow up was actually conducted following the *Strategy Generation* phase. Therefore, players' feigned compliance could remain largely undetected. In scenarios such as this, any form of "surveillance may not be able to distinguish between acceptance and refusal" (Hope, 2013, p.46) as players appeared to be actively carrying out behaviour that was encouraged. In summary, while compliance and docility appeared prominent, players' responses and behaviour may have also demonstrated subtle yet largely unidentifiable forms of resistance (Foucault, 1988).

It is important to acknowledge here that the players' experiences discussed in this chapter are specific to East United FC. Subsequently, while a macro level disciplinary and autocratic culture has been found prevalent within professional football (e.g. Cushion & Jones, 2006; Roderick, 2006a), micro differences, such as the manner in which reflection is perceived and/or the way in which video-based PA is used, may exist at other clubs. As a result, differences in cultural norms may influence the experiences of players within their respective clubs. Having said that, however, *Jordan van Helden* was a foreign player within this research and he had aligned himself with the disciplinary culture and expectations of players at East United FC in an attempt to 'fit in' and to be successful. Therefore, while players may experience less autocratic coaching styles and receive more autonomy and control within their reflective practice at other clubs, their willingness to align themselves with a dominant culture (in this case a disciplinary one) appears relatively stable. Thus while slight variations in clubs' cultures and their attitudes towards reflection and video-based PA may exist, overarching similarities also remain within the culture of professional football and players' willingness to conform to social norms (Cushion & Jones, 2006; Roderick, 2006a).

#### **4.5 Conclusion**

The purpose of this study was to provide a critical examination of the reflective behaviour and experience-based learning of professional football players at East United FC. This is the first study to have adopted an in-situ

approach to investigating reflection and experience-based learning within professional football. Specifically, players' responses were located within the reflective conversation interpretation (Gilbert & Trudel, 2001) of Schön's (1983) experience-based theory of learning and reflective practice prior to a Foucauldian analysis (Foucault, 1972, 1979, 1988, 1991a). As a result, both players' experiences and interpretations were able to be placed into perspective by the series of overarching discourses that had been created and reproduced relating to performance and reflection. No previous research in sport has located reflection and experience-based learning within the context of a wider social environment.

The novel structure of this study allowed for three research questions to be specifically addressed; (1) How are discourses of reflection and coaching defined and to what extent do they influence player and coach learning? (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches? and (3) What effect does video-based PA have on players' and coaches' reflective practice and experience-based learning? In addressing research question one it was found that a positive discourse of reflection existed at the club which replicated the perception of reflection held within wider coaching discourse (Cushion, 2007). This had been socialised into a "regime of truth" by the management team who maintained control through the many 'games of truth' that occurred between players and coaches and directly influenced players' initial willingness to reflect (Foucault, 1991a, p.131). Thus, discourses of coaching and reflection were defined by key stakeholders within the environment (i.e. coaches) who had established positions of power for



themselves. These discourses were found to dictate the manner in which both players and coaches reflected upon their own experiences. This was evidenced as coaches and managers dominated the *Issue Setting* process of players' reflective conversations (Schön, 1983; Gilbert & Trudel, 2001) to the extent that seven of the eight players described situations where the coach/manager had decided which football issues were worthy of reflection.

The coach/manager had a similar influence in the *Strategy Generation* phase where the most cited strategy to manage a situation was to seek the advice of a coach/manager, followed by *Physical Practice* and observing others (*Reflective Transformation*). By citing *Physical Practice*, players revealed coaches' effective use of disciplinary power as they dictated the organisation of *Physical Practice* whilst maintaining surveillance over players' actions throughout. Players' reference to it as a strategy demonstrated that they had become reliant on it to make sense of their experience (Foucault, 1991a; Mills & Denison, 2014). Coaches maintained a "critical" and "normalising gaze" over players' responses and behaviour throughout the reflective conversation process (Foucault, 1991a, 1991b; Gilbert & Trudel, 2001). In this context, reflection occupied the role of a technology of power due to the controlling and normalising effects that coaches 'advice' had on players' future actions throughout the process (Foucault, 1988; Cotton, 2001; Fendler, 2003; Rolfe & Gardner, 2006; Fejes; 2008, 2013). By locating players' experience-based learning and reflection within an existing framework prior to examining their experiences from a social perspective, this study addresses the gaps in knowledge and understanding relating to the influence of the social environment within current reflection and experience-

based learning research. No previous research in sport has sought to critically examine athlete experiences of reflection or experience-based learning.

During the *Strategy Generation* phase of the reflective conversation process players engaged in *Creative Thought* strategies where video-based PA assisted in re-assessing critical incidents with the gaze and interpretation created by *The Gaffer* (Steve) and his coaching team. This demonstrated that players independently attempted to reflect on their experience and normalise their future behaviour in alignment with what was expected of them. Whilst generally appearing to adopt a compliant and docile approach to this overarching form of subjugation (Foucault, 1991a), players also demonstrated an element of resistance. This was achieved either through the prioritising of other forms of knowledge or through feigning compliance and ensuring that their own perceptions and interpretations remained unknown (Marx, 2003; Simon, 2005; Hope, 2013). Multiple interpretations of players' reflective behaviour such as these aligned themselves with the fluid, interchangeable and complex nature of power as described by Foucault (1980, 1988, 1991a).

In reference to research question two, players' experiences of reflection revealed that the disciplinary culture of the club determined their reflective practice, suggesting that traditional literary interpretations of these processes are conceptually flawed (see Cotton, 2001; Fendler, 2003). In this study, the process of reflection was socially constructed and directly represented the disciplinary and surveillant culture prevalent at the club (Foucault, 1972; Lang, 2010; Manley et al., 2012). Moreover, representations of reflection being an unbiased and politically neutral process were found to

be inaccurate given the influence and control that coaches had on players' experiences. Finally, in response to research question three, the disciplinary and facilitative role of video-based PA in encouraging players to normalise their behaviour during the reflective conversation process suggests that current apolitical representations of the delivery of video-based PA are also flawed (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011; Wright et al., 2012).

The results of this study have a number of implications for athletes' and professional football players' reflection and experience-based learning. Athletes may opt to critically examine their own understanding and interpretation of reflection and compare it to the manner in which they currently engage in reflective practice. Moreover, athletes could critically question the need for others within their reflective practice, and consider the normalising effect that those others may have on their own experience-based learning. As a result, athletes are encouraged to reflect independently, where possible, and in congruence with their own beliefs, rather than trying to align their responses and reflections with their coaches' beliefs or interpretations. They may also consider the levels of docility expected of them by their coaches, and where possible (and within reason) engage in discussion with their coach about the perception that athletes' interpretations and learning need to be normalised.

If athletes are either uncomfortable or unable to reflect independently, they are encouraged to establish support networks that exist away from the potential disciplinary training environment that they may commonly experience. By doing so, the necessary conditions for learning occur (Moon,

1999a, 1999b; 2004), and feelings of control within the interpretation of previous experiences may be attained. Athletes may seek to create communities of practice (Lave & Wenger, 1991; Wenger, 1998) with athletes from other sports or clubs who find themselves in a similar situation, where open and non-threatening discussion can occur relating to how they interpreted the situation. By creating an environment with no social hierarchy or measurable outcome required as a result of their discussions, athletes would be encouraged to reflect freely and share experiences about how they may have dealt with similar dilemmas previously. In doing so, the presence of a 'normalising gaze' experienced by players in this study would be eradicated (Foucault, 1991b).

Athletes may also choose to challenge their current understanding of the role that video-based PA should fulfil within reflection and experience-based learning. Moreover, they may question the assumed benefits arising from how they currently engage with video-based PA. Athletes are encouraged to use video-based PA to re-examine performances in their entirety (where possible) and with an open-mind, as opposed to merely confirming initial reflections by selectively re-watching critical incidents that coaches have pre-determined as being either positive or negative. Prominent re-examinations of negative aspects of performance in relation to the team's overall outcome (i.e. win, loss or draw) are discouraged in favour of more focus being placed upon an individual's role-specific contribution in relation to the process that had been agreed upon (i.e. role in a tactical game plan).

The results of this study found that players' reflective practice and experience-based learning at East United FC were dominated by the

disciplinary and normalising presence of their coaches. In short, coaches had accepted the role of reflection traditionally held within a wider coaching discourse (Cushion, 2007) and encouraged the players to embody their knowledge and understanding. This was made possible as coaches maintained strict control over the regular 'games of truth' that occurred between themselves and players, in which discourses were played out and knowledge and understanding was established (Foucault, 1979). By establishing rules and procedures during these games and maintaining surveillance over players' responses, reflection became a means with which coaches were able to normalise players' behaviour (Foucault, 1991a). Given the significance of the coaches' contributions to players' reflection and learning, the next chapter will focus specifically on the coaches' reflective practice and experience-based learning and how their understanding and knowledge was formulated.

## **Chapter 5. A Critical Analysis of the Reflection and Experience-Based Learning of Professional Football Coaches at East United FC**

### **5.1 Introduction**

Chapter Four (p.203) established that coaches occupied a central role within players' reflection and subsequent experience-based learning to the extent that players almost exclusively highlighted issues that were deemed worthy of reflection by their coach(es). As a result, players predominantly sought the advice of their coach (7 out of 8 players) when compiling strategies to address the initial dilemma that they had encountered. In this context coaches initiated imbalances in power within the coach-athlete relationship so that reflection could be used as a technology of power in order to control and normalise the interpretations of their players (Foucault, 1988, 2003; Fejes, 2008). Because of this, the manner in which coaches themselves highlight issues and engage in reflection is of significant interest. Moreover, by investigating the reflection and experience-based learning of both players *and* coaches, a more holistic representation of how their respective experiences influenced each other is provided, as is their contribution to the wider social environment.

Players' experiences revealed that the management team asserted a level of control and surveillance that contributed to a legitimacy that became associated with the ideas and knowledge that coaches had. As a result, players reported that they were keen to embody and reproduce this knowledge in order to be successful, irrespective of whether they agreed with it or not. Given the legitimacy afforded by the players to the coaches' actions, such power and influence is worthy of further exploration and the manner in

which coaches construct their knowledge and discourse is worthy of research attention.

It is common for coaches to engage in formal coach education, often with prescriptive curricula, with the result that their knowledge of reflection and learning may have been influenced by institutional forms of practice and more academic and evidence-based portrayals of learning and reflection (Fejes, 2008). Coaches also experience an 'apprenticeship of observation' and are socialised into the coaching role where knowledge has been constructed as a result of (prior) experience. To provide a holistic understanding of reflection and experience-based learning within the culture of professional football, the perspectives of both players *and* coaches are required. Typically, research has tended to focus on coaches alone (e.g. Gilbert & Trudel, 2001; Knowles et al., 2001, 2006; Lemyre et al., 2007) and no research has considered the intersection of reflection and learning experiences of both coaches and players, not least those who work at the same club and operate within the same social conditions. If coaches occupy the role of 'gatekeepers' to their players' reflection, how does this manifest itself within their own reflective practice?

The aim of the present study was to investigate the reflective practice and experience-based learning of professional football coaches at East United FC. By using the same theoretical framework as in Chapter Four to interpret coaches' responses (Gilbert & Trudel's, 2001 reflective conversation interpretation of Schön's experience-based theory of learning and reflective practice), any interactivity that occurred between coaches' and players' learning experiences could also be examined. Unsurprisingly, a number of

the same themes from the players' experiences such as reflection as a technology of power and video-based PA facilitating the disciplinary use of reflection are also raised. However, here they are considered from the coaches' perspectives in order to gain an in-depth and rounded understanding of their reflective practice. A Foucauldian lens (1972, 1979, 1988, 1991a, 1999b) was again applied in order to examine both cultural and social factors that may have influenced and constructed coaches' experiences (Groom et al., 2011; Mackenzie & Cushion, 2012). Specifically, this study addressed research questions (1), (2) and (3) – see *Methodology*, p. 95-96, for detail surrounding the research questions:

- (1) How are discourses of reflection and coaching defined and to what extent do they influence player and coach learning?
- (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches?
- (3) What effect does video-based PA have on players' and coaches' reflective practice and experience-based learning?

## **5.2 Methodology** (*refer to Methodology, pages 89-156, for specific details*)

The methodology is outlined in the *Methodology* chapter of the thesis. The methods of data collection and also the manner in which the data were



analysed remained consistent throughout the process. A case study approach was adopted in which data were collected through ethnography (participant observation, informal interviews and audio/video recordings – see p. 108) and formal interviews (see p. 121) following a period of one season at East United FC. These data were subjected to data analysis involving coding techniques taken from grounded theory methodology (open, axial and selective coding – see p. 131-137).

The data that informs the *Results & Analysis* section of this chapter have predominantly been taken from the three formal interviews that were conducted with members of the management team (*Steve, John* and *Peter*) and the 20 informal interviews that were undertaken with them and other members of the club's staff. Interviews were conducted at a location decided by the participant and totalled three hours and 35 minutes. The longest single interview lasted 81 minutes and the shortest lasted 52 minutes (see *Methodology*, p. 125). Full details of the participants' backgrounds and experience level can be found in *Methodology*, p. 100-107. The three coaches (*Steven* – The Manager, *John* – Assistant Manager & *Peter* – First Team Development Coach) had an average age of 45 and they had been coaching professionally for 10, 5, and 1 year respectively. Both *John* and *Peter* were referred to as '*Widds*' and '*Greavesy*' throughout the club's training ground based on abbreviations of their surnames. As a result, they will be referred to by these names within the *Results & Analysis* section. *Steven* was referred to as '*The Gaffer*' by the players, but insisted that his staff called him *Steve*. With this in mind, he will be referred to as both *Steve* and *The Gaffer* within the following section. Field notes documented as a

result of participant observation also supplemented these data. Having spent an extensive period of time within the research setting, I witnessed a number of situations where the manner in which coaches reflected upon their practice was realised. As the coaches and players were connected, the coach data cannot be viewed in isolation, so where pertinent, the chapter also includes data from the players' formal and informal interviews.

The themes from the analysis (see *Methodology* p.131-137) were: *Definitions (discourse) of reflection, reflection within the coaching process, conditions surrounding reflection, memorable learning experiences, coaching practice, coaching philosophies, perception of players' experiences, the role of video-based PA within the coaching process, the role of video-based PA as a learning resource and conditions surrounding video-based PA delivery.* During open coding, data were further analysed and ordered into more concise, theoretically underpinned groups. For example, raw data and explicit narrative that had initially constituted a broad understanding of *coaching practice* were then considered within Foucault's notion of discourse. Data were grouped and categorised in relation to whether the coach's understanding of coaching had occurred as a result of previous exposure to mediated experience i.e. other coaches' practice, or whether it was unmediated as a result of their own independent experience. These were then represented as "*Coach Perspectives*" and "*Coach Experiences*" within *axial coding* (see Figure 11.), that, in turn, contributed to an overarching "*Discourse of Coaching*" being presented as part of the *selective coding* process - refer to Figure 11. This approach allowed for the identification of specific sources of data related to the formation of coaches' discourse.

Other themes that were produced as a result of *selective coding* included the varying stages of the reflective conversation process (similar to the players), such as *football issues, conditions, issue setting, strategy generation, experimentation and evaluation*. Similarly, Foucauldian concepts such as “*Discourse of Reflection*”, “*Performance Discourse*”, “*Discourse of Coaching*”, “*Imbalances in Power Relations (within the Management Team)*”, “*Social Construction of Knowledge*” and “*Video-Based PA as a Technology of Power*” were established as a result of categorising the data within *selective coding* (see *Methodology*, p. 134).

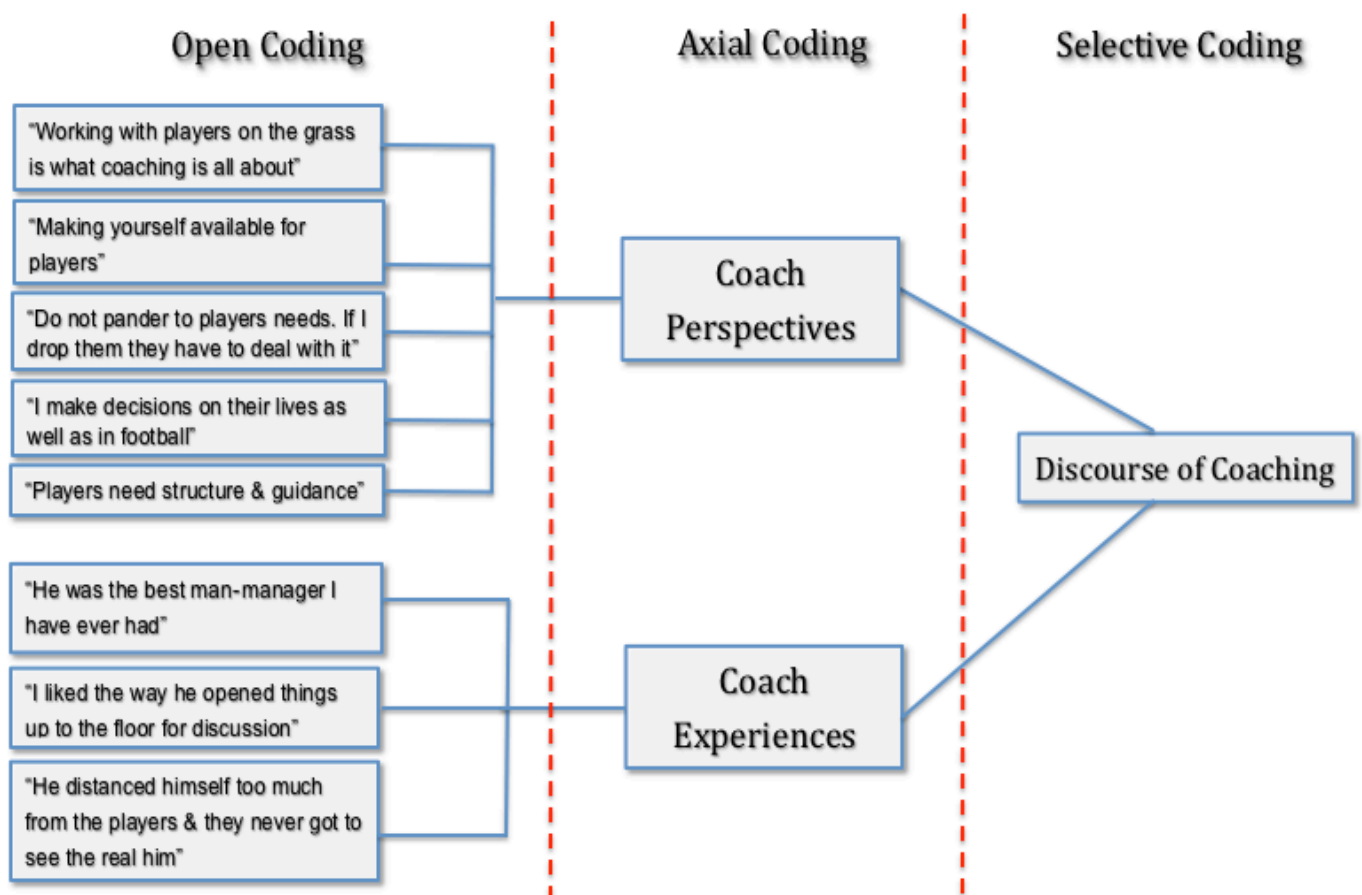


Figure 11. Example of Coding Process and Data Taken from Themes Relating to Coaches' Discourse of Coaching

### 5.3 Results & Analysis

When reflecting on experience it is proposed that there are five stages of a reflective conversation; *Issues, Issue Setting, Strategy Generation, Experimentation and Evaluation*; Gilbert & Trudel, 2001) - see *Review of Literature*, p. 39 for schematic representation. In the previous chapter (Chapter Four), professional football players at East United FC aligned their previous learning experiences with the respective stages proposed by Gilbert and Trudel (2001). In doing so, it was accepted that the framework represented the process that individuals engaged in when learning from their experiences. The “reflective conversation” (Gilbert & Trudel, 2001) was framed by an individual’s perception and understanding of their own role (Role Frame) in that given situation. All three coaches made reference to engaging in processes of reflection that aligned with the concept of a reflective conversation (Gilbert & Trudel, 2001). Therefore, a common discourse of reflection was found to exist between players and coaches, where both the importance of reflection and what reflecting on experience actually constituted were understood clearly. Discourse relating to reflection will be discussed specifically later in the chapter.

The process of reflection is initiated by experiences or situations that are deemed incongruent with the beliefs and/or understanding of the individual fulfilling a specific role (Schön, 1983). These (experiences) are often referred to as “important triggers for reflection” (Gilbert & Trudel, 2001, p.25) and initiate the reflective conversation cycle. In the present study, the coaches highlighted ten different football issues (*Managing club stakeholders, managing players’ perceptions, man management style, fulfilling role*

*expectations, making yourself available to players, player behaviour in training, dropping players, ensuring structure and organization, role clarity amongst staff and performance improvements*) related to their respective roles as First Team Manager, Assistant Manager and First Team Development Coach. These ten issues can be categorized into three generic coaching related themes which represented the overarching subject that coaches were referring to; *Management/Coaching Style, Relationships and Match Performance*.

“Triggers for reflection” (Gilbert & Trudel, 2001, p.25) in relation to *Management/Coaching Style*, for both *Steve (The Gaffer)* and *Widds* were related to the need to make themselves available for their players. *Steve (The Gaffer)* in particular, made reference to working under a previous manager who did not do this which, in turn, caused him to reflect on his own management style:

*“I think that was a shame because I think the players actually wanted to like him but didn’t get to know him. I think that’s important with the players that they...they get a chance to see you know there’s nothing wrong with holding your hands up and saying you’ve made a mistake or apologising. I don’t think there’s any harm in showing that you are capable of making mistakes because I think they probably respect you more for it.”*

(The Gaffer)

*Widds’* also described situations where he had reflected upon his own

approach to managing “modern” players’ expectations when considering the *relationships* that he had established with some of the club’s players:

*“I went over to him, put my arm round him and I said “You know what, I don’t give a toss what colour boots you’ve got on, it’s what you do wearing them that counts. If you want to wear them, it’s not a problem.” And he said “You know, I don’t think I would have been allowed to wear them before” [at his previous club] and I felt he appreciated that. Now again, if a player plays shit in them is it because of the boots that he’s had a bad game? I think as a player I wouldn’t have worn fucking pink boots that’s for sure but as a player I would have appreciated a coach saying that to me, so I try to use my experience as a player as a coach now but I think when I first started as a youth coach that it would probably have got my back up more and I know speaking to coaches now it gets their backs up about what colour boots players wear”*

(Widds)

The issues that the coaches deemed to be puzzling and/or worthy of reflection (Borrie & Knowles, 1998; Knowles et al., 2001, 2006; Ghaye et al., 2008; Knowles & Gilbourne, 2010) were primarily related to how they carried themselves in the presence of players and the tactical and technical aspects of coaching. Both *Widds* and *Steve (The Gaffer)* did however refer to trying to understand and make sense of the team’s performance as something that they both reflected on individually, albeit in the context of the team’s result.

By placing added emphasis on the result of games within their reflection, *Widds & Steve (The Gaffer)* provided further evidence of the performance discourse discussed in Chapter Four (p. 176), where players embodied and reproduced an understanding that 'winning' was everything and that they should be willing to take steps to ensure that it was achieved (Cushion & Jones, 2014). Given their respective roles as Manager, Assistant Manager and First Team Development Coach, and the legitimacy that players associated with their knowledge and actions (see Chapter Four, p. 179-181), it appeared that the coaches' constructed performance discourse was being reproduced through their players' actions (Cushion & Jones, 2014). Interestingly however, as with the players, of the issues that were discussed by the coaches as being worthy of reflection, none were directly related to either video-based PA or in its statistical form, thus providing further evidence of a reproduction of the performance discourse at East United FC.

The players reported that reflective conversations were predominantly initiated by the influence of a coach (e.g. Chapter Four, p. 172), and video-based PA had no role in influencing what should be reflected upon. The coaches also did not refer to the influence of video-based PA in determining issues that they should re-examine. In line with Foucault's (1991a) proposal that "power produces knowledge" (p.27), it appeared that the non-use of video-based PA by the coaches was confirmed and reproduced through players' similar non-use of video-based PA. As a result, 'knowledge' regarding the use (non-use) of video-based PA was constructed. With this knowledge in mind, issues that were considered significant enough to reflect upon in relation to match performance were done so as a result of the

coaches' subjective experiences of the game rather than any objective analysis.

Steve (*The Gaffer*) had been successful in creating an environment in which both *Widds* and *Greavesy* not only felt valued but where they were happy to discuss issues openly. As a relatively inexperienced coach, *Greavesy* referenced *Steve (The Gaffer)* and the way he regularly involved his staff in the decision making process as a point of learning throughout the reflective conversation process (Gilbert & Trudel, 2001). Interestingly, however, *Widds* made reference to the influence that the results of matches had on his own reflective thinking:

*"Do you know what, I think I've tended to when the game's finished not reflect too much back on the analysts work of what we did and didn't do and I think if we're honest we all do that because if we've won we don't look too much back on it, if we've lost again, I do look forward to the next one rather than too much back because we've told the players what we wanted them to do. If we've lost the game for whatever reason, yes we'll do a debrief but the idea is to get them into a positive frame of mind for the next game."*

(Widds)

He revealed that his likelihood to reflect on the team's performance in a game was significantly influenced by the result of the game. If the team had been successful, he was unlikely to reflect on the game, whereas if the team had lost the game he was likely to re-visit the game and an analysis debrief session was likely to be held with the players in order to establish the reasons behind the loss.



A Foucauldian interpretation of these data suggests that the coaches' reflective behaviour was underpinned by "discourse" relating to what was deemed important to reflect upon and what was not (Foucault, 1972; Markula & Pringle, 2006). Modern interpretations refer to discourses as "the unwritten rules that guide social practices, produce and regulate the production of statements, and shape what can be perceived and understood" (Johns & Johns, 2000; Denison & Scott-Thomas, 2011, p.29). In this instance both *Steve (The Gaffer)* & *Widds* established a discourse which suggested that the impact of any intervention was accentuated following a poor result compared to that following a successful performance. This discourse was a product of having worked previously with coaches who operated in this manner (see *Steve's* experiences of video-based PA, p. 235). As discussed tentatively in Chapter Four, this discourse also aligned itself with traditional portrayals of reflection held within wider coaching discourse where a dominant understanding that 'you learn more from your mistakes' exists (Cushion, 2007). Discourse is described as "rendering particular aspects of existence meaningful" to the point of influencing action (Edwards, 2008, p. 23). Given the importance of winning within professional sport, the coaches were willing to align themselves with a belief and discursive understanding that if you reflect on poor performances you are more likely to be successful in the future. As a result, knowledge and a dominant understanding of how coaches 'should reflect', and what initiates the process was constructed socially.

At East United FC, the coaches embodied this discourse within their own practice and since players were recipients of their practice with little or no input into the structure of daily activities (such as training or video analysis

feedback sessions), the players also embodied their “gatekeepers” attitudes towards reflecting on poor performances through their participation (Bampouras et al., 2012, p.473). Of the eight players, six players stated that the result of matches determined whether they reflected upon their performances or not. In doing so, the performance discourse that dominated perceptions and actions was reproduced, as was a discourse that through reflection normative correction and improved future results could be achieved. Given suggestions that knowledge is socially constructed and the knowledge of powerful individuals (i.e. coaches) is afforded added legitimacy (Foucault, 1991a; Cotton, 2001), it is perhaps unsurprising that players’ perceptions and discourse directly mirrored those held by their coaches. Thus a wider coaching discourse, in which reflection was understood to be important, was socially confirmed and embodied through players’ and coaches’ daily practice (e.g. Lynch, 2000; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002). In this way discourse directly informed the belief and knowledge held that individuals should reflect on poor performances (Edwards, 2008). As a relatively inexperienced coach, Greavesy adopted a similar approach to the players and accepted the discourses outlined by his more experienced colleagues without questioning them:

*“I’ve learnt over the years from when I first became a coach with Steve, your staff, it’s huge. Once you get those sort of in place I think your team will always evolve.”*

(Greavesy)

We are able to place the decision-making of the management team into perspective as a result of knowing how discourses were socialised at the club and contributed to dominant understandings about learning and reflection. The emphasis placed on reflection following poor performances appears to have also directly informed discourse relating to video-based PA, since it was perceived as a resource capable of correcting behaviour following poor performances. Given the relatively new addition of video-based PA within the coaching process (Drust, 2010) the perception that it can help reduce errors, as players 'learn' from their mistakes by reviewing them on video, remained unchallenged by coaches. By encouraging players to re-observe their mistakes this discourse was embodied by coaches and directly informed how they believed video-based PA should be used.

It was found that an insular culture existed at the club in which discourses were generated predominantly as a result of previous exposure to certain approaches to practice (coaching and reflection in this example) within a similar or almost identical environment. Concurrently, however, unproblematic and generalised representations of how to use video-based PA, that are typically held within wider coaching discourse (Hodges & Franks, 2002; Lyle, 2002; Stratton, et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011), also remained unchallenged by coaches. Discourse held by individuals who had established positions of power at the club (i.e. coaches) were embodied and reproduced by individuals who had less power (i.e. players and *Greavesy*) but who wanted to meet the expectations of their more powerful counterparts. By maintaining control over the design and structure of both training and video-based PA sessions (Mills & Denison,

2014), *The Gaffer* established unwritten rules and procedures that contributed to him dominating the 'games of truth' in which discourse was played out between him and the players (Foucault, 2000a). In providing players with 'inactive' roles within these sessions, and by maintaining control over players' actions through the establishment of accepted standards and the use of constant surveillance he was able to ensure that his discourse was accepted and embodied by his players. This process of socially reproducing discourse constituted the dominant understanding held at the club that reflection and the use of video-based PA were important in trying to minimise future mistakes.

While Greavesy's acceptance and reproduction of discourse revealed that the process of knowledge construction remained consistent at the club, his experience was distinctly different from the players'. His decision to accept Steve's (*The Gaffer*) interpretation of how important staff were to a manager's chances of success as opposed to the fear of discipline and punishment, was borne out of inexperience and a lack of knowledge. Greavesy accepted the legitimacy of Steve's (*The Gaffer*) knowledge given his role within the football club, but could still develop his own discourse relating to the role of a manager's staff. Players, however, had limited opportunity to develop their own discourse as their chances of success were determined by their willingness to embody their coaches' discourse (see Chapter Four, p. 165). As a result, 'knowledge' was created through the same process of socialisation, but the experiences of those involved in its construction were remarkably different because of the differences in power relations (Foucault, 1980).

With this process of knowledge construction in mind, key stakeholders' understanding of processes such as reflection and the use of video-based PA may not have been scientifically informed, but instead were formulated as a result of confirming culturally created discourses through a process of socialisation (Foucault, 1979; Markula & Pringle, 2006; Cushion & Jones, 2014). This was demonstrated by coaches' willingness to reproduce an overarching and generic coaching discourse and understanding of reflection that was held by coaches who they had worked with previously. Evidence revealed that video-based PA did not influence the issues that coaches highlighted for reflection. Therefore, the results of this study challenge academic portrayals of video-based PA being integral to the coaching process (i.e. Hodges & Franks, 2002; Lyle, 2002; Stratton et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011; Wright et al., 2012). Instead, it is proposed that through the social construction of knowledge (as seen in this study), unless a key stakeholder, who holds a powerful position within a sporting organisation, creates a positive discourse towards video-based PA and implements it accordingly within their practice, its influence may be minimal. Moreover, given the manner in which knowledge was socially constructed in this study, the purpose of video-based PA will be determined and reproduced by powerful individuals within an organisation, irrespective of how their discursive understanding has been formulated.

For the coaches, *Football Issues* were self-generated as opposed to being influenced by peers or significant others. This supports the notion that coaches were able to internalise their own experiences and put them into perspective when engaging in retrospective reflection-on-action (Schön, 1983;

Knowles et al., 2005; Lee et al., 2009). This is in contrast to the experiences of players in Chapter Four (p.169), who, given their positions within the social hierarchy at the club, had the football issues that they should reflect on dictated to them. In comparison, coaches' relative freedom provided a further insight into the influence that power had on the learning experiences of individuals within the club. *Steve (The Gaffer)*, *Widds* and *Greavesy* all described situations where their response was incongruent with how they had intended to approach the problem. As a result, they engaged in a period of reflection. *Greavesy* made specific reference to a scenario where he had been instructed to tell a player that he had been dropped, but he failed to manage the situation as he wanted to:

*"Well I'm saying to you I've made a mistake before and I know what mistake I have made so next time I'm in it, I won't make that mistake. Surely, that's me saying it's clear. I'm not dealing with it how I should have done first time. So next time I do it, deal with it how I should have dealt with it the first time. It's not going to be the same."*

(Greavesy)

Similar experiences were shared by both *Steve (The Gaffer)* and *Widds* who made reference to highlighting aspects of their roles/practice that they felt they needed to reflect upon:

*"I do reflect on what I do and I do think about what I do. I try and improve. I get things wrong, as everybody does"*

(The Gaffer)

While these data revealed a discourse of reflection that was held amongst the coaches, it was placed into context by a similarly distinct discourse that had been developed in relation to coaching. Coaches believed that contact time spent with players during coaching sessions would equate to success (Foucault, 1979; Cushion & Jones, 2006; Markula & Pringle, 2006). In this context, video-based PA was considered largely unrelated, as time spent having analysis sessions could be time spent '*on the training field*':

*"I understand it (video-based PA) and I probably we know a bit more about it than a lot of people who use it and that's why I don't use it because you know we need to spend more time improving the players on the training field rather than showing them what they can't do and show what the opposition do or can't do. Do you know what I mean so if we're not careful the technology actually gets us away from improving players by coaching them so it's become a bible which people use but actually don't believe in. It's like having the Gideons under your arm and being an atheist."*

(The Gaffer)

With this narrative in mind, further questions can be asked of research that has portrayed the dissemination of video-based PA as a simplistic, logical and step-by-step process (e.g. Hughes & Franks, 2004; Carling et al., 2005; O'Donoghue, 2006). Moreover, claims that it has established a role as a key component in the coaching process are also challenged (i.e. Hodges &

Franks, 2002; Lyle, 2002; Stratton et al., 2004; Drust, 2010; Groom et al., 2011; Wright et al., 2012). Both players (see Chapter Four) and coaches failed to acknowledge the influence of video-based PA when highlighting issues that were deemed worthy of reflecting upon. Coaches' discourse relating to the questionable applicability of video-based PA within their practice (see above) was embodied by players' lack of engagement with video-based PA during the majority of their learning experiences. As a result, it was the coaches' belief that video-based PA should occupy only a peripheral role within their coaching practice which determined players' lack of engagement with video-based PA during reflection (see Chapter Four). Since the coaches controlled players' access to video-based PA at the club, they were able to dominate the 'games of truth' that occurred in relation to 'playing out' an understanding of how this resource should be best used (Foucault, 2000a). By adopting a discourse that video-based PA should only occupy a peripheral role and embodying that discourse through their own inconsistent engagement with it, coaches were able to dictate the discourse that players believed to be true. In doing so, this process of socially reproducing discourse resulted in the formation of knowledge and dominant understanding relating to the role of video-based PA within learning.

Coaches cited six strategies that were predominantly used during the *Strategy Generation* (see *Review of Literature*, p. 41 for schematic representation) phase of their reflective conversations. Of the six strategies, five were strategies that were used by youth sports coaches (Gilbert & Trudel, 2001); *Joint Construction*, *Reflective Transformation*, *Advice Seeking*, *Football*



*Repertoire (Adapted from Coaching Repertoire), Strategic Management and Creative Thought*, with *Strategic Management* being a strategy that was specific to the elite coaches in this study. Replication of these strategies implies that coaches had reproduced a wider coaching discourse that they had been exposed to previously regarding reflection and 'how' to reflect (Lynch, 2000; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002). *Strategic Management* referred to the delegation of responsibility to other key stakeholders in the management team to deal with a specific problem. *Steve (The Gaffer)* had highlighted that his ability to "manage upwards", and the eagerness of the club's chairman to be involved in decision-making regarding team selection and transfers may become a barrier to his success and as a result he delegated the responsibility of liaising regularly with the club's hierarchy to the club's Head of Recruitment.

All three coaches made reference to using *Joint Construction* and *Creative Thought*. *Widds* was the only coach to have acknowledged *Creative Thought* in relation to non-performance related issues, whereas *Steve (The Gaffer)* and *Greavesy* only acknowledged it in relation to the formulation of pre-match strategies. *Joint Construction* was described as a process in which "mutually developed strategies with one or more peers, ideas are tossed around and discussed in a two-way relationship" (Gilbert & Trudel, 2001, p.24). One reason for the popularity of this strategy appeared to be the responsibility and input that *Steve (The Gaffer)* gave his coaching staff when making decisions about the team as these data illustrate:

**31<sup>st</sup> June Approx 1:30pm** - *It is the day before the first day of pre-season training and all of the football staff has been summoned for a meeting with the manager to discuss the club's playing squad. We all file into the very narrow and darkened video analysis room at the club's training ground. We sit in anticipation of the manager entering the room. I take a sip from my freshly made cup of tea just as he walks in.*

**Steve:** *"Alright lads, lets keep it quick and not drag it out for the sake of dragging it out. Fuck me there's enough things to worry about. Right...."*

*He begins to work through a list of all the professional players that are registered with the club for the forthcoming season which are scrawled in black marker pen on his three-sided white board behind him. Discussions have taken place about the majority of the squad as the process moves on to a young player who has yet to sign his first professional deal despite one having been offered.*

**Steve:** *"What's the situation with Sammy then?"*

**Widds:** *"Patrick (club secretary) told me that he hasn't signed his deal yet"*

**Steve:** *"Fuck him then, lets put him in with the bomb squad<sup>1</sup> shall we? What do we think?"*

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<sup>1</sup> The "bomb squad" at East United FC refers to players who are under professional contract by the club but are deemed "not good enough" or "unwanted" by the First Team Manager and as such train separately to the First Team Squad

*He begins to write the players name into the group of unwanted players who were mainly signed on long contracts by the club's previous manager and are now deemed surplus to requirements. They are referred to as the "bomb squad" by staff at the club.*

**Widds:** *"Well it depends doesn't it?"*

*He stops writing.*

**Steve:** *"Depends on what?"*

**Widds:** *"Well what message you want to send him...."*

*(Silence)*

**Steve:** *"Go on..."*

*Cups of tea are lowered from various staffs' lips and gently placed on the floor as everybody's attention is drawn to the assistant manager.*

**Widds:** *"Well if you want him to stay and think about signing the new contract then I think putting him in with that group will indicate that you don't want him won't it? So if you want him to stay or consider signing the new deal I'd say put him in with the main group and see what his decision is then. If he still*

*hasn't signed it by next week then we can put him in with the bomb squad can't we?"*

*The room remains silent. All that can be heard is the manager picking up a cloth as he begins to slowly rub the players name off one board (Bomb Squad board) followed by the familiar high-pitched squeaking sound of the board marker making contact with the middle board which had the list entitled "First Team Squad" written on it. He writes "Sammy Gardner" at the bottom and then slowly turns around.*

**Steve:** *"Good point Widds, I like that...I hadn't thought of it like that"*

As a result of involving his staff in decisions relating to team selection and training content, *Steve (The Gaffer)* appeared to have generated a feeling of togetherness amongst the staff, which was reflected in the fact that *Joint Construction* was a frequently cited strategy. *Creative Thought*, described as "introspective" and "personal cognitive processes" that are formulated "inside your own head" (Gilbert & Trudel, 2001, p. 24), was cited in relation to the formulation of pre-match game plans for competitive matches. Coaches made reference to video-based PA as a form of complementary information and/or perspective during *Creative Thought* (Carling et al., 2005). By doing so, coaches embodied discourse held by coaches that they had previously worked with which positioned video-based PA as being useful in illustrating game plans. This demonstrates the extent to which the acceptance of discourse constitutes knowledge and dominant understandings surrounding a

specific topic. In this instance, discourses that are similar to those held within much sport science research and coach education reinforced coaches' perceptions of how video-based PA should be used, and in doing so, influenced their practice. By using video-based PA in this manner and tentatively resembling some aspects of the unproblematic representations of the process that have been proposed (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton, et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011), simplistic portrayals of how role video-based PA can assist player learning are indirectly strengthened.

Players' experiences in Chapter Four suggest that coaches' discourse relating to video-based PA as being suitable during *Creative Thought* was reproduced and embodied through players' inclusion of it during their own *Creative Thought* strategies. *Creative Thought* was the joint second most cited strategy by players (only behind seeking the advice of their coaches directly), and more specifically, video-based PA was described as allowing them to re-observe critical incidents prior to initiating ideas "inside their own heads" (Gilbert & Trudel, 2001, p.24). This 'mirroring' of coach behaviour and perceived knowledge provides a further example of how knowledge was created at the club through a process of socialising and embodying discourse. This provided further evidence of the control and dominance held by coaches over players during 'games of truth' that occurred, in which discourse held by coaches were constantly reaffirmed by disciplinary rules and procedures (Foucault, 2000a). As a result, players sought to accept and embody discourse in order to avoid punishment and enhance their chances of personal success. In doing so, a dominant understanding that video-based

PA can help illustrate game plans was developed at the club. Despite his reluctance to use video-based PA when reflecting upon what happened in a match, *Widds* described the role that it can play in preparing players and helping translate coaches' *Creative Thoughts* to players before a match:

*"Pre-match all the time. Because I think it's (the game plan) what you can have an effect on. Debriefs, it's as I said before for me it's for looking, debrief looks back and what might be relevant there of what we didn't do well, what we need to do better might not be relevant for the next game."*

(Widds)

A similar stance was adopted by *Greavesy* who suggested that having an effective analyst can be vital in supplementing the coach or manager's pre-match instructions:

*"So I think the role of an analyst at a club, there are some big clubs now, any club, if you can get an analyst and a good one, I think it can really help you out as a manager, as a coach and as a team, no doubt about it. You know I'm talking all about opposition here."*

(Greavesy)

*Steve (The Gaffer)* also acknowledged the role of video-based PA in illustrating how to beat the opposition and represent his *Creative Thoughts* to the players in relation to the forthcoming game. He also revealed his

scepticism and reluctance to over-use analysis in the *Strategy Generation* process:

*“I’m a little bit old fashioned in the sense that because I worked in environments where and I’ve tried it myself where you can go so analytical you take away the...I’ve worked with some coaches who it becomes all about the technology and all about that and I believe there’s a lot more to it than that. I think freeing the players’ minds up to make them think “this is how we beat them” rather than being so bogged down with what the opposition do.”*

(The Gaffer)

Despite this, pre-match video-based PA sessions were delivered before every game that the team played. An example of Steve’s (*The Gaffer*) delivery however, revealed his discourse relating to how it was best used. He delivered sessions as a monologue to players, who had no active involvement in the process:

*“Now tonight I expect us to combine the two [Set Plays & Open Play]. Alright? Like I said, we’ve got to exploit them. So that’s us. I think they could work for us tonight if we get that right. Same again with our delivery. Fucking believe you’re going to be the one that scores the goal. Okay? And as always, let’s make sure we don’t give them time to fucking play their own tippy-tappy fucking football on our patch. Right at them from the word go, starts up from the top. Okay? And like Widds said, be aware all the time and switch on. Yes. Come on, let’s sort it out tonight. Let’s get a fucking win tonight, but you*

*can only do that if we build on the last, in other words, the work rate's got to be there, but also our play in terms of being brave in possession totally there. You've got to pass the ball. You've got to be willing to run in behind. You've got to be willing to make the runs and not receive it when your team-mates [say]. Let's get another good win tonight. All the best."*

(Team-talk before game vs. Northern United)

This demonstrates that players were subjected to the instructions of the manager and were then expected to carry out his demands irrespective of whether they agreed with them or not. By determining the duration of analysis sessions and by using specific video examples only to support the insight that he offered to his players, *The Gaffer* was able to maintain control over the spatial, temporal and organisational aspects of the session and in doing so provided less opportunity to be challenged (Mills & Denison, 2013). By delivering sessions to players who were sitting in rows of chairs in front of him, he was also able to constantly assess their responses to his proposals. Players were rendered powerless in fear of punishment or de-selection and opted not to challenge either his discourse or position of power. As a result, analysis sessions reflected the effective use of disciplinary power by *The Gaffer* as he dominated the conditions surrounding 'games of truth' to the extent that players accepted his discourse and adopted his dominant understanding of how they should improve (Foucault, 2000a).

Coaches used monologues as opposed to actively encouraging their players to engage in dialogue (Groom, 2012). By delivering monologues and



maintaining control over what was said, players' future actions could be held to account and as a result any deviations from the managers instructions could be assessed and potentially punished. The use of video-based PA to complement a coach monologue in this manner represents a disciplinary mechanism and technology of power (Foucault, 1988, 2003; Manley et al., 2012), which will be discussed later in the chapter alongside data relating to the *Evaluation* phase.

By locating their own experiences within the respective phases of the reflective conversation framework (Gilbert & Trudel, 2001), coaches revealed their underlying discourse relating to both reflection and how their coaching should be influenced. In doing so they mirrored a wider coaching discourse in which reflection is often positioned as a linear, step-by-step process (Lynch, 2000; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002). Given that players also recognised the different phases of the reflective conversation when trying to learn from their experience (see Chapter Four), a club-wide discourse of the importance of reflection and what the process represents had been established. For example, *Steve's (The Gaffer)* willingness to "open things up to the floor" influenced the other coaches' *Strategy Generation*. The coaches' preference for *Creative Thought* also appeared to have occurred as a result of an underlying discursive understanding of the role that video-based PA can serve as a preparatory tool (e.g. Reilly, 2003; Carling et al., 2005; Reeves & Roberts, 2013). Despite research having predominantly portrayed video-based PA as a learning resource and a feedback mechanism, the coaches instead had developed a

discourse in which its primary purpose was to provide information when presenting the 'game plan' to their players.

In contrast to some research (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton et al., 2004; Carling et al., 2005; Drust, 2010), this further emphasises how prior experience can contribute to the establishment of discursive knowledge, which in turn leads to the future replication of certain behaviours (Foucault, 1979; Markula & Pringle, 2006). As previously suggested, this process also appeared to have occurred amongst the players at the club since they also perceived video-based PA to be primarily a preparatory tool (see Chapter Four for player perspectives). This level of socialisation provides a tentative insight into the culture and power relations occurring at the club (Foucault, 1991a; Manley et al., 2012). This will be further discussed in the discussion section of this chapter and also in Chapter Six (see p. 324-329).

In relation to the *Experimentation* and *Evaluation* phases of the reflective conversation (see *Review of Literature*, p. 41), *Steve (The Gaffer)* and *Greavesy* both discussed a number of occasions in which real world experimentation was the prominent outlet for implementing their chosen strategy. In contrast, both *Steve (The Gaffer)* and *Widds* also described a strong preference for rehearsing the strategy in a virtual environment prior to deploying the strategy in a real word scenario. Subsequently, video-based PA acted as a resource with which a certain strategy (Virtual) could be practiced in preparation for *Real World* delivery. In *Widds'* case he explained that engaging in it virtually first (where possible) gave him heightened confidence

when delivering it in the real world scenario:

*“You can’t go into it all fuzzed and clouded that you’re going to change it in five minutes because you have got to give the players some belief in what you are doing but I also think from watching the DVD I’ll have ideas in my head of how, if this isn’t working what are we going to do to change it. You are always trying to get the edge.”*

(Widds)

Steve (*The Gaffer*) also cited the potential negative consequences associated with deploying strategies underpinned by inaccurate or misleading information and as such placed a value on video-based PA:

*“I always make sure I’m as clued in as possible before I make any sweeping statements, whether that be criticisms or whatever because I think you know, you really only get the once chance to get it right and if you get it wrong after a game and then come Monday you’re back tracking or you’ve had chance to reflect on it or you’ve seen it more you know....”*

(The Gaffer)

As a result, using video-based PA to directly support ideas and refute alternative interpretations can strengthen a coach’s position within the playing out of discourse with players during ‘truth games’ (Foucault, 2000a). By maintaining control over the content and theme of analysis sessions, coaches were in a strong position to introduce and justify discourse through the use of

video evidence. The structuring and surveillance of specific training sessions allowed for players' compliance to be assessed in line with the the rules and procedures that they were 'encouraged' to follow in order to be successful (Edwards, 2008). With this in mind, the control that coaches maintained throughout the dissemination of video-based PA ensured that disciplinary power could be exerted over their players and their responses could be normalised (Foucault, 1977, 1991a). Interestingly, however, when evaluating whether a pre-game strategy was successful or not, *Widds* suggested that video-based PA only confirmed whether his initial reactions from the game itself were correct. As such, he placed more emphasis on his "eyes" and his retrospective recollection of the game than any statistical or video output of the game:

*"Not so important as my eyes, my memory and myself. I have to say that when I'm travelling home from a game I like to switch the radio off and reflect in my head. We still do the marks for players so I'll go over each player in my head. I'll also go over the game in my head. The video in all truth I've not watched many after a game because again, I like to look forward to the next but from what you're saying in terms of the information that's stored in there from the game"*

(Widds)

This reference to the coach's 'eye' was significant when placed in the context of how discourses were constructed at the club. The perspective that *Widds* viewed the world through had been socially constructed and was informed by

his previous life experiences and exposure to different situations. Indeed, given his significant exposure to professional football, his “eyes” reflected a primarily reluctant and sceptical stance. In relying on his own interpretation of events, as opposed to using video-based PA, *Widds* revealed his dominant understanding of how to best analyse matches (Edwards, 2008).

Through their responses in Chapter Four, the players described a similar process of socialisation as their ‘eyes’ and interpretations had been socially constructed. Due to the imbalances in power relations that existed at the club, however, the manner in which players re-examined their experiences was determined by the perspectives and demands of key stakeholders (i.e. coaches). In this context, *Widds*’ ‘eyes’ represented Foucault’s “eye of power” (Foucault, 1980) as he provided a normalising gaze over the players that was “everywhere and always alert...function[ing] permanently and largely in silence (Foucault, 1991b, p.192). His gaze situated players in “a state of conscious and permanent visibility that assures the automatic functioning of power” (Foucault, 1991a, p.201). In controlling coaching sessions that were delivered to the players, *Widds*’ gaze acted as a form of surveillance and a means with which their complicity could be assessed. The combination of maintaining strict control over individuals’ actions within confined spaces during specific periods of time, and the presence of constant surveillance, contributed to players’ behaviour being normalised (Mills & Denison, 2013).

While *Widds*’ ‘eyes’ and perceptions were also socially formulated, the manner in which this occurred was remarkably different from players’ experiences. Given his position of power within the environment, he had a

level of autonomy regarding whose interpretations he sought to replicate, as his behaviour was not under constant scrutiny and surveillance. As a result he did not experience the lack of autonomy and freedom experienced by the players during the playing out of discourse within 'games of truth' (Foucault, 2000a). Therefore, while more subtle imbalances in power relations did exist within the social hierarchy of the management team, they were not oppressive or entirely normalising in nature.

Greavesy stated that he used video-based PA within the evaluation phase of the reflective conversation (see Gilbert & Trudel, 2001), whilst drawing special attention to its effectiveness at challenging his players rather than influencing their future behaviour through learning:

*"I had a player who was saying "well why haven't I had a chance"? I said "well first things first, you need to improve on your training". So he took that on board and I was right. In the games he's been involved in he's been a real mixed bag. So he came up again, "when am I going to get a chance"? So I said "right I'll tell you what we're going to do, we'll clip you up in the games you have been involved in, the games you've come on in" and we'll show him what you've done good, which we want more of and what you did poor on which we want you to improve on, it was there, he couldn't argue. He'd seen it, he came back and the feedback is "right, ok I didn't realise"...I think now it's almost like there's no hiding place I think with regards to if you think you've done something, it's there now to say, "well you didn't, you think you did but here is the evidence, here is how we can improve you".*

(Greavesy)

Steve (*The Gaffer*) described video-based PA as providing an insight into how effectively the team fulfilled a pre-match game plan within the evaluative phase of the reflective conversation. *Widds'* and *Greavesy's* experiences of video-based PA were significantly different. *Widds* cited its ability to confirm initial reactions and responses without necessarily providing any other additional evaluative input or value, and *Greavesy* made reference to its effectiveness in challenging players and settling arguments relating to non-selection or getting dropped. *Steve's (The Gaffer)* primary use of video-based PA was in his coach-led pre-match monologues (See team-talk vs. Northern Utd, p. 236) in order to strengthen his position, and provide players with little freedom or autonomy during the playing out of discourse in 'games of truth' (Foucault, 2000a). In doing this, video analysis acted as a disciplinary mechanism as it provided guidelines that should be adhered to, coupled with a high level of surveillance that allowed for players' complicity to be directly assessed and compared to others' (Foucault, 1991a). The use of video-based PA in this manner allowed *The Gaffer* to exert disciplinary power over his players and normalise their behaviour to the point of replicating socially desired behavior (Foucault, 1979; Dreyfus & Rabinow, 1983; Gyorgy, 1996; Cushion & Jones, 2006; Parker 2006; Manley et al., 2012).

*Steve (The Gaffer)* also explained that video-based PA provided a certain level of "truth" or factual basis from which he could then present information without challenge from players. Using the resource in this manner demonstrates how it can contribute to a disciplinary culture where athlete docility is encouraged (Foucault, 1979; Johns & Johns, 2000). If we consider

the extent to which players were willing to embody and reproduce discourse that had been initiated by the management team at East United FC (see Chapter Four), their docility had been assured. Moreover, players made reference to the notion that they had become self-surveillant as they used video-based PA as part of *Creative Thought* to try and proactively normalise their future behavior in line with their coaches' expectations. Players' experiences align themselves with Foucault's notion of confessional power: since players were regularly exposed to the use of video-based PA in this manner, and within such a controlled environment, they had "gained a conscience that prevents deviation from whatever is perceived as normal" (Mills & Denison, 2014, p.223). In short, players felt obliged to 'confess' and highlight their own weaknesses in order to try to avoid future punishment (Foucault, 1979). Simultaneously, through the process of constant surveillance at the club, coaches were able to reaffirm their positions as knowledgeable experts within the club's environment (Halas & Hanson, 2001; Denison & Scott-Thomas, 2011; Manley et al., 2012).

Interestingly, *Widds* failed to acknowledge video-based PA during the *Evaluation* phase of the reflective conversation. Instead he made reference to a reliance on his 'eyes'. Although *Greavesy* made reference to video-based PA, it was only in relation to its disciplinary qualities, and not in its ability to complement his initial reflections on the situation that had occurred. Ironically, the fundamental purpose of video-based PA, as a feedback mechanism, which can allow for changes in future behavior (e.g. Court, 2004; Groom & Cushion, 2004, 2005), was only cited by *Steve (The Gaffer)* in the *Evaluation* phase. This was consistent, irrespective of whether coaches had



used video-based PA earlier in the reflective conversation or not. Given the lack of coach input within the evaluation phases of players' reflective conversations (as discussed in Chapter Four) and players' willingness to embody their coaches' beliefs and perspectives, it is perhaps unsurprising that players did not use video-based PA in this manner either. This provides another example of how players mirrored the understanding and actions of their more powerful 'gatekeepers' within their own reflective practice and approach to experience-based learning (Bampouras et al., 2012, p.473). The lack of consistent and structured engagement with video-based PA evidenced by players and coaches within this research suggest that traditional perceptions should be re-examined in the context of both cultural and coaching discourses (Denison, 2007; Pringle, 2007; Cushion & Jones, 2014). Moreover, the underlying social function of video-based PA should also be critically considered (Groom & Nelson 2012).

## **5.4 Discussion**

### *5.4.1 A Foucauldian Critique of Coaches' Reflection & Experience-Based Learning*

As with the players, in order to examine the learning experiences of East United FC's management team (Steve, Widds & Greavesy) and locate the role of video-based PA within their experience-based learning, Schön's (1983) experience-based theory of learning and reflective practice was adopted through the theoretical framework of a reflective conversation (Gilbert & Trudel, 2001). Given that both players' and coaches' responses aligned themselves with the different phases suggested by Gilbert and Trudel (2001),

its applicability and suitability as a structure with which to highlight a process of reflection is supported. The similarities in their responses also support the concept that between themselves coaches' and players' had socially produced knowledge and dominant understanding of what the reflective process 'should look like' (e.g. Lynch, 2000; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002). Unsurprisingly, the coaches' experiences were similar to those of the players' in Chapter Four, but given their different social positions, the coaches' perspective adds another layer of understanding to the wider processes at play. At face value similar interpretations of reflection, experience-based learning and how knowledge was socially constructed were applicable to both players and coaches. However the context surrounding their experiences were distinctly different.

As discussed in Chapter Four, there were a number of assumptions associated with reflection and experience-based learning that remained unchallenged (Cotton, 2001; Loughran, 2002; Fendler, 2003). For example, simplistic, linear and logical representations of reflection and experience-based learning, such as the framework implemented in this study, portray the process as beneficial, idealistic and politically neutral (e.g. Schön, 1983; Kolb, 1984; Ross & Bondy, 1996; Korthagen & Kessels, 1999; Evans & Policella, 2000; Rodgers, 2000; Gilbert & Trudel, 2001; Cox, 2003; Burt & Morgan, 2014), without consideration for the impact of the environment and culture on the reflective conversation framework (see *Review of Literature*, p. 39). Given, that neither players nor coaches challenged the very discourses of reflection that they attempted to embody when addressing performance issues, it is perhaps unsurprising that positive and politically neutral

interpretations of the reflection process continue to underpin our dominant understandings of learning and reflection. With specific reference to the framework used in this study (Gilbert & Trudel, 2001), the only aspects of the six-stage process that were deemed to be influenced by the “environment” were the initial stages of the process where coaching issues were ‘extracted’ and acted upon. As a result, it appears to imply that the remainder of the process occurs in a social vacuum.

Within both this study and also Chapter Four, however, this has been found to be misrepresentative. Whilst players engaged in the same stages of a reflective conversation as their coaches, this occurred merely as players tried to mirror discourse held and enforced upon them by their coaches. Players described how their own perceptions and interpretations of their experiences were socially constructed by coaches’ discourse as a result of the imbalances in power at the club. Similarly, a discourse of coaching, which underpinned coaches’ practice within this study, was constructed as a result of socialisation, as was a discourse of how best to use video-based PA. Working alongside previous managers who had adopted the same strategies had influenced the coaches into trying to replicate and adopt their approaches. This socialisation process was also evident within the club, as *Greavesy* accepted and reproduced *Steve’s (The Gaffer)* understanding that a manager’s staff are pivotal to his chances of success. This was made possible through meetings arranged by *Steve*, in which an emphasis was placed on his staff’s feedback. Whilst dictating the spatial and temporal boundaries, he invited his staff to have an input into the proposed structure for the day and to reflect on any noteworthy issues. By embodying his

understanding and discourse through his own actions (by letting his staff have an input), whilst maintaining control and surveillance over the environment in which they were allowed to speak, he was able to enforce his discourse onto his staff. As a result, the social environment and culture at East United FC had a significant influence on the reflection of both players and coaches.

Whilst the literature is concerned with the various definitions of reflection and the reflective process (Feiman-Nemser, 1990; Johns, 1998; Mackintosh, 1998; Knowles, 2009), the notion that reflection is a beneficial and aspirational activity has until recently been uncritically accepted (e.g. Swain, 1998; Mayes, 2001a, 2001b; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002; Rock & Levin, 2002). Individuals who choose not to engage in reflective strategies may often be seen as “unacceptable, unprofessional and unnatural alternatives” (Cotton, 2001, p. 514). This prompts the question; for whom is the process beneficial, the organisation/institution or the individual? These discourses of reflection have created a landscape where it is frowned upon to not reflect on one’s own practice, yet it is uncommon for reflection to remain a solely internalised process (Foucault, 1998). Instead it appears to be interpreted that an individual’s own reflections may be “unguided” or “distorted” (Cotton, 2001, p. 516) and as a result, there is a need for a critical friend (Smith, 1991), guide (Johns, 2000) or coach (Schön, 1983) to place their perceptions into context. In Chapter Four it was found that the coaches had embodied this discourse as they sought to control players’ reflective conversations.

In the present study, the coaches’ willingness to engage in the process reinforced this ‘positive’ discourse of reflection and revealed how wider

representations of reflection and learning may be reproduced or remain unchallenged (e.g. Saylor, 1990; Borrie & Knowles, 2004; Irwin et al., 2004; Ghaye, 2010). Foucault (1979) suggested that when discourses, as in this example, are fully accepted and interpreted as being the “truth”, individuals commonly operate in a self-surveillant manner (Foucault, 1991b; Fejes, 2008) and align their own behaviour in re-confirming the discourse. Foucault proposed that if discourses are embodied and reinforced regularly within a disciplinary environment (as experienced at East United FC), individuals become obliged to align themselves autonomously with the ‘rules’ that they encourage as a result of ‘confessional power’ and “gain a conscience that prevents deviation from whatever is perceived as normal” (Mills & Denison, 2014, p.223). When this level of acceptance and self-surveillance occurs, discourse becomes constitutive of knowledge and a dominant understanding regarding a certain topic and governs future action (Edwards, 2008). Here, the coaches embodied the perception that reflection was important, and that it also involved a period of structured thought in relation to what they may change during similar situations in the future. Consequently, coaches engaged in a process of reflection on a number of occasions, which, in turn, then reinforced the common discourse that reflecting upon practice was important.

Coaches’ own replication of positive discourses of reflection were framed and underpinned by an overarching performance discourse at the club, which interpreted that the pursuit of winning should determine the conduct of both players and coaches (Cushion & Jones, 2014). As a result, the use of reflection and subsequent normative correction (especially

following poor performances) was understood to increase the chances of improved future results. Given that this discourse was initiated and embodied by the coaches' actions, players confirmed and reproduced it themselves through their own willingness to reflect on their performances. Players shared a positive discourse of reflection in order to avoid discipline and punishment, and to increase their chances of being named in the team (see Chapter Four, p. 168-169). This was largely due to the disciplinary environment in which reflection was advocated. During video analysis sessions, for example, players' responses remained under surveillance throughout and they had no role in determining the content or duration of what was being reflected upon. In this way, *The Gaffer* controlled both the space and time in which players were able to respond or act. This is noteworthy given that the manipulation of both space and time are understood to be disciplinary techniques that assist in the control of bodies (Foucault, 1991a). As a result, *The Gaffer* was able to manipulate players' actions during 'games of truth' such as analysis sessions, and by so doing ensured that his discourse was accepted by his players (Foucault, 2000a).

Both players' and coaches' acceptance and constant embodiment of the importance of reflection provided an insight into the construction of knowledge and affirmation of discourses at the club. Foucault (1991a) proposed that "power produces knowledge" (p.27) and suggested that individuals or institutions who have established positions of power for themselves have the opportunity to integrate discourses within the culture until the point of acceptance. This process of integrating discourse may "gain power and legitimacy from its relations to complementary, dominant

discourses in society” (Cotton, 2001, p. 514). In this instance, the discourse at the club of “the manager is always right” (as described by the players in Chapter Four), coupled with the manager’s position at the club, appears to have afforded a sense of legitimacy and truth to the notion that players should engage in reflection as their manager is doing likewise. Similarly, the belief held by both players and coaches that they ‘should’ reflect in the presence of others (on part of the players) appears to have been influenced by the legitimacy associated with wider discourses of reflection typically found within coaching (e.g. Saylor, 1990; Borrie & Knowles, 2004; Irwin et al., 2004; Ghaye, 2010). Therefore, it could be argued that reflection may not necessarily be a beneficial and self-fulfilling activity for individuals who are not in powerful positions (e.g. Swain, 1998; Mayes, 2001a; 2001b; Artzt & Armour-Thomas, 2002; Margolis, 2002; Moore & Ash, 2002; Rock & Levin, 2002). At East United FC, through a process of socialisation it became an accepted form of practice, which had a normalising effect on the players and staff.

In the case of the coaches, a similar process of socialisation appeared to have occurred. In the pursuit of professionalism within the coaching profession (Côté & Gilbert, 2009), the National Governing Body (whom coaches gain their coaching accreditation from) actively encourages reflective coaches (Borrie & Knowles, 1998; Reilly & Gilbourne, 2003). Moreover, academic research has advocated its role specifically within effective professional sports coaching (e.g. Borrie & Knowles, 2004; Irwin et al., 2004; Ghaye, 2010). As a result, a discourse of reflection established by a higher authority, which the coaches have to be seen to accept, appeared to have

been translated into coach compliance and practice. Given that both players and coaches embodied this discourse at East United FC, it constituted a knowledge and dominant understanding of learning and reflection that had been established and was regularly acted upon (Foucault, 1972).

Within *Joint Construction* and *Creative Thought* strategies, coaches revealed that reflection in the presence of another (Fejes, 2008, 2013) was being practised at the club. By adopting this approach, coaches made their own internal thoughts and feelings available for consideration and critical judgement by others (Wallace, 1996; Hargreaves, 1997; Cotton, 2001; Fejes & Dahlstedt, 2012). It is through this process of verbalisation that people make themselves visible to themselves and others (Foucault, 1998). As a result, a strong case can be made for the interpretation of reflection as such a technology of power (Foucault, 1988, 2003). Whilst some scholars have challenged the interpretation of reflection as a technology of power (Rolfe & Gardner, 2006), in the present study there appeared to be a direct link between the function of a technology of power and the underlying purpose of reflection. That is: technologies of power “determine the conduct of individuals and submit them to certain ends or domination, and objectivising of the subject” (Foucault, 1988, p. 18).

Although traditionally interpreted as a positive and integral aspect of professionalism (i.e. Gore, 1993; Korthagen & Wubbels, 1995; Collier, 1999; Yost et al., 2000), reflection can, in this instance, be interpreted as a technology of power in which individuals allow their thoughts and feelings to be scrutinised and placed into context by overarching discourses that govern social practice (Foucault, 1988; Hulatt, 1995; Rich & Parker, 1995; Foucault,



2003). Thus an individual's interpretations and beliefs may be challenged, compared and altered in a manner not necessarily congruent with the individual, but with the expectations of that individual given their position in society (Radcliffe, 2000; Cotton, 2001; Fendler, 2003). At East United FC, morning staff meetings occurred on a daily basis where coaches, sports scientists and analysts would share their reflections on the previous day and propose how they felt the forthcoming day should be structured. *Steve (The Gaffer)* would listen to their input before making a decision as to how he wanted the day to be structured, which would override the suggestions of his staff.

Chapter Four revealed that players' experiences of reflection supported the interpretation of reflection as a technology of power (Foucault, 1988). In the present study, whilst the basic concept of these technologies of power remained consistent, the context surrounding coaches' experiences of reflection were significantly different from those of players, given their contrasting roles. For example, coaches cited a preference for *Joint Construction*, which appeared to have been informed by the manager's preference for "opening things up to the floor". By adopting this approach, *Steve (The Gaffer)* included both *Widds* and *Greavesy* in deciding how they may approach a given situation but he also allowed for their reflections to be judged and compared to his own thoughts on the matter. Given the previous emphasis placed on power in generating knowledge and legitimising specific actions (Foucault, 1991a), it could be suggested that in his position as the manager of the club, *Steve (The Gaffer)* provided a critical, "normalising gaze" on the reflections of his staff (Foucault, 1991b). By asking them to make their

feelings known publicly within an environment that he had established (Mills & Denison, 2013), he was able to compare his coaches' responses to both his own interpretation and also to the interpretations of other members of staff. In doing so he was able to implement a series of normalising judgements over their responses and encouraged them to align their reflections with his own expectations (Foucault, 1977). He was able to do this by making his expectations known but within the controlled and non-threatening environment that he had created for himself. Whilst coaches embraced this approach and embodied discourse that reflection in this context was positive, it also had underlying disciplinary connotations. In this situation, reflection constituted a technology of power (Foucault, 1988, 2003) that sought to normalise the coaches' behaviour and cognitions. This interpretation, in turn, implies a culture of surveillance and discipline at the club, (Chapter Six, p. 285). Whilst the coaches' cognitions were normalised within a relatively protected environment given their relationship with *Steve (The Gaffer)*, the underlying function of reflection and the process of normalisation, remained consistent with players' experiences (see Chapter Four).

It has been established that players at the club engaged in reflection only following the intervention of the manager/coach who highlighted issues that they deemed were important (see Chapter Four). This re-affirms the concept that "power produces knowledge" (Foucault, 1991a, p.27) given the social roles of coaches. Although the players provided rhetorical accounts relating to examples where they had reflected on their practice, which reinforced a discourse of reflection, the process only occurred when the manager or coach used their power and legitimising capabilities. Given,

coaches maintained total control over players' training schedules and working timetables at the club (see Chapter Six), there was little opportunity to resist their power (Mills & Denison, 2013). As a result, the manager had successfully established the "training and modification of individuals" (Foucault, 1988, p.18). The use of reflection and the strict control over players' training resembled "practices that systematically form the objects of which they speak" (Foucault, 1972, p.49), where individuals' beliefs were exposed, judged and normalised in line with dominant cultural preferences (Foucault, 1988; Fendler, 2003; Foucault, 2003; Fejes, 2008, 2013). From the players' perspective, the perceived "privileged knowledge" that occurs as a result of reflection was not the knowledge of the players themselves, but instead the knowledge held by the individuals who had access to power and legitimisation during the process (i.e. the manager/coaches).

The discourse of reflection at the club, embodied by both coaches and players, had become an accepted form of practice (Foucault, 1972). As such, coaches and players did not challenge the concept of reflecting on their practice. In the context of the present study, coaches became self-surveillant in that they reflected autonomously (Foucault, 1991b) in line with the discursive understanding of the benefits of, and need, for reflection. By doing so, they reflect Foucault's notion of confessional power in which individuals are reluctant to deviate away from established norms and attempt to align themselves with accepted standards (Edwards, 2008). This application of power "fixes...arrests or regulates movements" (Foucault, 1991b, p. 208). During this process the coaches independently or collectively compared their own actions to those that were expected of them both from others and the

institution (National Governing Body). Therefore, the process of engaging in reflective practice had become something to which coaches actively subjected themselves, as an outcome of governmentality<sup>2</sup> (e.g. Foucault, 1980, 1997; Dean 1999; Usher & Edwards, 2007).

A further unchallenged assumption associated with simplistic, linear and sequential representations of reflection is that it occurs in a neutral social and political environment. Moreover, it is implied that the individual who is reflecting has the capability to reflect upon their actions in an objective and detached manner (Korthagen & Kessels, 1999). Despite the assumption that it is “impossible to guarantee an uncompromised or unsocialized point of view” (Fendler, 2003, p.21), Schön (1983) suggested “through reflection, he can surface and criticize the tacit understanding that have grown up around the repetitive experiences of a specialized practice, and can make new sense of the situations of uncertainty or uniqueness which he may allow himself to experience” (p.61). However, in the light of reflection being understood as a technology of power (Foucault, 1988, 2003), the extent to which “new senses” of uncertainty or uniqueness can be generated may be questioned. Instead as the evidence in the present study suggests, reflection may serve to merely “reinforce existing beliefs rather than challenge assumptions” (Fendler, 2003, p.16). Moreover, it may not be the beliefs of the individual engaging in reflection that are reinforced but instead the beliefs of a powerful stakeholder.

The reinforcement of existing beliefs was demonstrated through discursive understandings of reflection and coaching by coaches at the club

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<sup>2</sup> Governmentality refers to how the state exercises power over and ‘governs’ individuals. It also describes the way in which individuals are taught to govern themselves and in doing so shift power from a central authority, state or institution (Foucault, 1980, 1991a).

(Foucault, 1972). For example, despite research evidence suggesting that video-based PA provides opportunities to learn and place experience into context (e.g. Court, 2004; Carling et al., 2005; Groom et al., 2011, 2012), the coaches in the present study did not use it to initiate any of their own reflective conversations (Gilbert & Trudel, 2001).

The coaching discourse at East United suggested that video-based PA can “bring the pre-match game plan to life”. The reality of the coaches’ interaction with video-based PA was sporadic and unstructured in nature. The coaching discourse instead valued “working with players on the grass”. As a result, video-based PA was perceived as something that would get in the way of ‘coaching’. It is surprising that potentially unstructured and largely insignificant uses of video-based PA, such as this, remain unknown and unchallenged despite the amount of research that has referred to it as being vital to the coaching process (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton et al., 2004; Carling et al., 2005; Groom et al., 2011).

In the context of how discourse is socially reproduced and constitutes understanding and knowledge, however, it is perhaps understandable that discourses prevalent within the sport sciences and coach education have remained unchallenged due to the legitimacy that is associated with their construction. Through the publication of research within peer-reviewed journals and the credibility that is associated with coach educators’ knowledge, discourse from these domains is typically ratified and is deemed to be ‘correct’ by individuals who are exposed to it. As a result, dominant understandings of video-based PA being an unproblematic approach to enhancing coaches’ effectiveness and players’ learning and performance

have remained prevalent and largely unquestioned. In the present study, however, coaches used video-based PA spontaneously to construct a knowledgeable image of themselves as well as managing players' dissatisfaction or helping with pre-match preparation. In this context, academic portrayals of video-based PA as a reflective tool that can make "new sense of the situations of uncertainty or uniqueness which he may allow himself to experience" (Schön, 1983, p.61) are encouraged to be re-visited.

This research provides an alternative Foucauldian interpretation where "Truth is a thing of this world; it is produced only by virtue of multiple forms of constraint. And it induces regular effects of power. Each society has its regime of truth, its "general politics" of truth, that is the types of discourse which it accepts and makes function as true" (Foucault, 1991b, p.72-73). As a result, the importance of "society" and the perceived "regimes of truth" that existed within the club environment are brought to the fore when challenging benign understandings of reflection (Foucault, 1991a, p.131). Within the 'games of truth' that occurred between coaches and players, coaches established rules and procedures whilst also maintaining surveillance over players in order to establish their positions as dominant members of "society" and ensured that their 'regimes of truth' and discourse were accepted and embodied by the players (Foucault, 1979, 1991a). This evidence from East United FC suggests that knowledge construction and the reproduction of discourse occurs as a result of socialisation within a specific culture or environment (Foucault, 1991b).

The inconsistent use of video-based PA within both coaching and reflective practice at East United FC has remained unchallenged as it aligned

itself with cultural discourse specific to the club. Therefore, what was deemed to be 'true' within the club had a significant influence on the lens with which coaches interpreted their own practice, and then decided what was deemed worthy of reflection. Given that the 'lens' or 'eye' with which coaches interpreted their practice was socially constructed, there was little opportunity for alternative aspects of their coaching to be considered important as they sought only to reinforce existing cultural beliefs and traditional discourse rather than actively challenge assumptions (Fendler, 2003). This had a direct impact on the experiences of the players at the club. Since coaches held positions of power and their knowledge and practice was attributed almost unassailable legitimacy, players did not question their practice or consider alternative approaches unless their coaches did likewise. As a result, players were limited to experiencing the types of coaching practice that their coaches deemed to be most appropriate (see Chapter Six).

Coaches also referenced the potential of video-based PA to be a disciplinary mechanism (Manley et al., 2012), that could be used as a means of holding players to account for their performances and to constantly monitor their performance (Foucault, 1991b). *Steve (The Gaffer)* delivered analysis sessions to his players in the form of monologues rather than involving players in active dialogue (Groom, 2012). This allowed him to maintain control over the tone, content and duration of analysis sessions as well as the actual environment in which they took place (Mills & Denison, 2013). Moreover, his 'knowledge' and instruction' within this format remained unchallenged due to the level of control he maintained during this 'playing out' of discourse (Foucault, 1979, 2000a). Video-based PA ensured that players'

performances were assessed, compared and normalised in relation to expected behaviours. Moreover, this use of video-based PA lends itself to Foucault's (1991b) concept of the panopticon<sup>3</sup> (Bentham, 1995), due to its "state of consciousness and permanent visibility that assures the automatic functioning of power" (Foucault, 1991b, p.200). The possibility of being observed ensured that players behaved in an obedient, conforming and non-complaining manner (docile) throughout. By establishing a set of expected standards and maintaining control and surveillance over the environment in which these standards should be met (i.e. training sessions), video-based PA contributed to coaches being able to exert disciplinary power over their players and normalize their behavior (Foucault, 1991a).

Given the disciplinary and surveillant qualities associated with video-based PA, it is perhaps unsurprising that players did not cite 'group' analysis sessions as having influenced their own reflection and experience-based learning (see Chapter Four). In not doing so, it appears that the predominant purpose that group video-based PA sessions served was to attempt to normalise players' behavior and maintain a level of social control. During these sessions all players were seated in front of *The Gaffer* so that he could observe their responses to the information that he was delivering. By controlling the duration of the sessions, the content of what was being delivered and how players should position themselves physically throughout the session, coupled with his ability to observe their complicity, he maintained a dominating level of control over the players (Mills & Denison, 2013). As a

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<sup>3</sup> The Panopticon refers to a central prison tower that was specifically designed (Bentham, 1995) in order to ensure that "a single gaze to see everything perfectly" could be held over prisoners (Foucault, 1977, p. 173). This allowed for their behaviour to be constantly assessed in line with prison rules and for any necessary punishment to be issued.



result, the use of video analysis within a group setting was underpinned by a number of subtle yet effective disciplinary instruments that permitted the coaches' use of disciplinary power and the normalising of players' behavior (Foucault, 1991a).

In this context, coaches rarely sought objective data or specific footage relating to the team's performance (and themselves indirectly) within their own practice, as this may have provided a level of surveillance or accountability over their own respective contributions. Therefore, coaches' own independent interaction with video-based PA after a performance had occurred was minimal, as if to try to avoid the very disciplinary techniques that they subjected their players to.

Foucault suggested that the disciplinary institution "compares, differentiates, hierarchises, homogenises, excludes, in short, it normalises" (Foucault, 1991a, p. 183). The manner in which Foucault (1991a) describes the aims/purpose of the disciplinary institution is synonymous with how coaches referred to the purpose of video-based PA at East United FC within the *Evaluation* phase of Schön's (1983) theory of experience-based learning and reflective practice. It appeared that the surveillant culture present at the club (see Chapter Six), had not only contributed to the resource being used as a mode of surveillance and a disciplinary mechanism (Lang, 2010; Manley et al., 2012), but it helped form knowledge as to how video-based PA *should* be used. Subsequently, the "regimes of truth" within the club had directly influenced and constructed the discourse of video-based PA along with knowledge and a dominant understanding of what was important to reflect upon (Foucault, 1972, 1991a, p. 131). Through this process, discourse

constituted knowledge and understanding held at the club surrounding the function of video-based PA and what type of events should initiate the reflective process.

One such “regime of truth”, which dictated whether a period of reflection should be engaged in or not (Foucault, 1991a, p.131), was the result of match play. If the team were unsuccessful, coaches were far more inclined to reflect on specific aspects of the team’s performance than if the team had been successful. This was a socially constructed trigger for reflection that was specifically relevant to the performance culture that had been established at the club. Given that coaches, like *Steve, Widds* and *Greavesy*, typically make the transition into coaching following a career as a professional football player they have been exposed to this performance discourse constantly. It appears that it is initially encountered and accepted by young players within the Academy setting (e.g. Cushion & Jones, 2006; Parker, 2006; Roderick 2006a, 2006b; Cushion & Jones, 2014), prior to then being reproduced and encouraged throughout their respective professional careers as either players and/or coaches. As a result, the coaches in this study had socially constructed ‘knowledge’ relating to the importance of winning and acted accordingly whenever possible (Cushion & Jones, 2014). Given their roles within the social hierarchy at the club and the implications that their actions had, players mirrored this understanding within their own reflective practice (see Chapter Four). This continual process of socially constructing knowledge created an overarching performance culture within the club where reflection was deemed to be important and poor results were interpreted as a “triggers for reflection” (Gilbert & Trudel, 2001, p.25).

Coaches were able to influence players within the reflective process by using their positions of power and the legitimacy that was associated with their knowledge and instructions as coaches. Although to a lesser extent, given their direct contact and relationship with the manager, coaches at East United FC were also influenced by the managers learning preferences and desire to normalise behaviour. These findings emphasise the importance of the social and political environment that place an individual's reflective practice into context, and confirm its position as a "culturally specific construct" (Cotton, 2001, p.518). The notion of unbiased and socially neutral reflection is therefore perhaps idealistic but not realistic (Gore, 1993; Zeichner, 1996b; Cotton, 2001; Fendler, 2003). Instead, coaches' and players' ways of thinking and understanding were moulded and disciplined by the very social practices and relations that the reflective process is supposed to challenge (Foucault, 1991a, 1996).

As mentioned in Chapter Four, in relation to the players' experiences, it is important to note that the coaching discourse and discourse of reflection accepted and embodied by coaches in this study were specific to East United FC. Therefore coaches from other clubs and/or countries may have experienced different approaches to coaching and thus developed different coaching discourses, which in turn may inform their practice. At the same time, however, it is also known that a well-established, disciplinary and autocratic culture exists within professional football (e.g. Cushion & Jones, 2006; Roderick, 2006a; Cushion & Jones, 2014). As a result while micro level differences may exist between clubs' respective cultures, such as how reflection is perceived and how video-based PA should be used within

coaching, a dominant macro level understanding of what 'constitutes' or 'resembles' coaching still exists. Consequently, while individuals may experience subtle differences within their practice at other clubs, a number of common overarching cultural themes (such as the structuring of players' daily activities) will also arguably remain consistent (Cushion & Jones, 2014).

## **5.5 Conclusion**

This study was aimed at locating and critically examining the reflection and experience-based learning of three professional football coaches at East United FC within Schön's (1983) reflective conversation framework. This is the first study to critically investigate the reflection and experience-based learning of elite football coaches whilst examining the influence that their reflective practice and discourse of reflection had on professional players at the same club. Gaps in knowledge and understanding that currently exist within the literature relating to the influence of the social environment on reflection and learning (see *Review of Literature*, p. 34) have been addressed with a unique holistic approach that examined the interaction between players' and coaches' experience-based learning whilst considering their contribution to the overarching culture at the club.

This approach was underpinned by three specific research questions; (1) How are discourses of reflection and coaching defined and to what extent do they influence player and coach learning? (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches? and (3) What effect does video-based PA have on players' and coaches' reflective practice and

experience-based learning? By answering these research questions, new understanding regarding how knowledge is socially constructed within the confines of a professional football club has been generated. Following this process, the notion of reflection being solely a positive, self-fulfilling activity was challenged in the context of its similarities with Foucault's notion of technologies of power (Foucault, 1988, 2003).

Through addressing research question one, it was found that socially constructed discourses relating to reflection and coaching underpinned coaches' behaviour and were framed by an overarching performance discourse of 'winning' (Cushion & Jones, 2014). Central to their coaching discourse was an emphasis on working with players on the training pitch and as a result, resources such as video-based PA were only used at sporadic points across their "reflective conversations" (Gilbert & Trudel 2001, p.24). This appears to be directly representative of, and underpinned by, the amount of time coaches spend 'on the training pitch' during various coaching courses, as opposed to engaging in conceptual discussions about various topics in a classroom environment: such as how to maximise the use of video-based PA (e.g. Cushion et al., 2010; Cropley et al. 2012). Thus the discourses of reflection and coaching prevalent at the club determined the learning experiences of both players and coaches.

In reference to the culture of the club, and in addressing research question two, it was found that by engaging in reflection and by making inner thoughts public within meetings, coaches allowed themselves to be assessed, judged and compared to the dominant discourse (Foucault, 1972, 1991a; Fejes, 2008, 2013). As in religious confession, feelings and behaviour may

be normalised through the critical gaze provided by ‘more powerful others’ (Foucault, 1998), who in the case of coaches (*Widds & Greaves*) at East United FC were either *The Gaffer* (Steve) or the National Governing Body (who established the guidelines for coaching). Whilst operating in far more restrictive circumstances (based on their lack of power at the club), players also experienced reflection as a technology of power as they had become ‘reliant’ on their coaches’ input as to whether to reflect or not (Foucault, 1988, 2003). The power that coaches had established for themselves resulted in them maintaining a normalising presence within players’ experience-based learning and reflective practice (see Chapter Four).

In contrast and directly reflecting the power relations at the club, coaches themselves predominantly initiated issues that were deemed worthy of reflection when engaging in a reflective conversation. Coaches relied mainly on *Joint Construction* and *Creative Thought* strategies in addressing their “triggers for reflection” (Gilbert & Trudel, 2001, p.25). Moreover, they described preferences for both *Virtual* and *Real World Experimentation* followed predominantly by *Self-Evaluation*. The analysis of findings from research question two represents one of the first studies in sport and coaching research to challenge the notion that reflection can occur independently of the culture in which an individual operates and adds critical leverage to the current reflection and experience-based learning research. It was evident at East United FC that the club’s culture defined the reflective practice and experience-based learning of the players and coaches.

Whilst addressing research question three it was found that the dominant uses of video-based PA at this club were to supplement game plans

(*Creative Thought*), confirm initial experiences of the game, or act as a form of surveillance (Foucault, 1991a; Lang, 2010; Manley et al., 2012). Its peripheral and often insignificant role resulted in having a minimal effect on players' and coaches' reflective practice and experience-based learning. Using Foucauldian concepts such as "disciplinary power", "docile bodies" and the "panopticon" (Foucault, 1991a, 1991b; Bentham, 1995) as a lens to understand coaches' learning experiences and uses of video-based PA, it was found that coaches' behaviour was governed by the construction and reproduction of cultural discourse.

This was complemented by a performance discourse of winning that had been socially constructed at the club (and was revealed as part of research question two), which positioned reflection as an important and necessary enterprise (Cushion & Jones, 2014). As a result coaches understood reflection to be a precursor to making improved decisions in the future and as such could contribute to the 'pursuit of winning'. This cultural understanding underpinned their own reflective practice, and the extent to which players were also 'encouraged' to reflect. Moreover, these culturally derived discourses relating to reflection and coaching also informed the lens with which individuals interpreted their experiences. In this way, it was found that a discourse of reflection had constituted knowledge and a dominant understanding of 'how' to reflect, which in turn was embodied through coaches' own reflective behaviour (Foucault, 1972; Edwards, 2008)

The findings of this study therefore suggest that, subject to the environment in which it is conducted, reflection may actually occur as a result of the belief system or knowledge of 'more powerful others' as opposed to the

belief and philosophy of the individual who is engaging in reflection (Foucault, 1998). Similarly, by initiating a period of reflection, there may be opportunities for interpretations and future actions to be normalised in line with the expectations and interpretations of individuals who have established imbalances in power relations. Subsequently, future research should critically question the potential cultural implications involved in the creation and replication of discourse relating to reflection and examine the influence that they may have on an individual's experience-based learning. Coaching discourse and the dissemination of video-based PA should also be considered from a theoretical framework in relation to reflection and experience-based learning.

A number of practical implications have also arisen as a result of this original research. Coaches are encouraged to pay special attention to the training environment that they create and the discourse that underpins it. Given the significant influence that culturally held discourses were found to have in both players' and coaches' experiences at East United FC, coaches may opt to critically examine the environment that they wish to create against the one that currently exists. How is reflection viewed in this environment and why? What is their involvement in their athletes' reflection? How does their reflective practice influence the reflective practice of their athletes? Moreover, coaches could consider and reflect upon how their own knowledge has been created and the implications that this may have had on how they interpret their own experiences. Is their knowledge empirically driven or is it socially constructed through the embodiment and reproduction of culturally specific discourse? By adopting a novel approach to investigating reflection and



experience-based learning, conceptual questions such as these have emerged that may improve coaches' self-awareness and practice.

This study has revealed the willingness of coaches to reflect upon their practice in line with a wider coaching discourse that was embodied by previous colleagues and is portrayed within much coaching research (e.g. Saylor, 1990; Borrie & Knowles, 2004; Irwin et al., 2004; Ghaye, 2010). Within this overarching discourse reflection was deemed to be an important and commendable activity that underpins professional practice. It has also been found that *Widds'* and *Greavesys'* reflection was influenced by *The Gaffer* in a way similar to how players' reflection was found to be influenced by the coaches in Chapter Four. With this in mind, Chapter Six will now focus on the specific disciplinary techniques and mechanisms used by *The Gaffer* and his coaches that allowed for players' behaviour to be normalised and their reflective practice to be controlled.

## **Chapter 6: A Critical Investigation of the Performance Culture Present at East United FC and the Role of Technologies of Power**

### **6.1 Introduction**

Coaches and players at East United FC constructed and were impacted by an institutional performance discourse, which was reproduced and embodied through everyday actions (see Chapters Four & Five). As a result, the present study was concerned with critically investigating how this social construction of knowledge was made possible, and the effect that the actions and beliefs of both players and coaches had on the overarching culture at the club, thus “engaging in a socio-pedagogical analysis of contextual factors and how these impact upon coaching practice and athlete learning” (Groom & Nelson, 2012, p.99).

Foucault (1980) understood power to be fluid and interchangeable. However, the imbalances of power relations already identified (see Chapter Five p. 207-208) were maintained and reproduced not only at East United FC but also within the wider football culture (e.g. Cushion & Jones, 2006; Roderick, 2006a, 2006b; Manley et al., 2012; Cushion & Jones, 2014). Video-based PA has been identified in both Chapters Four and Five as one disciplinary mechanism that allowed coaches to normalise behaviour, so it is possible that other ‘taken for granted’ sports science resources may have been used in a similar manner (c.f. Manley et al., 2012). Therefore, the performance culture at the club, which framed and constructed interpretations of both experience and practice, required investigation.

Culture is described as “the set of attitudes, values, beliefs, and behaviors shared by a group of people, but different for each individual,

communicated from one generation to the next” (Matsumoto, 1996, p.16). The culture of professional football has been characterised by discipline, punishment, insecurity and masculinity (e.g. Brewer, Van Raalte & Linder, 1993; Young, 1993; Nixon, 1994; Parker, 1996; Roderick, Waddington & Parker, 2000; Cushion & Jones, 2006; Roderick, 2006a, 2006b; Hammond et al., 2013). Typically, however, ‘culture’ has often been portrayed as passive and as something into which social actors are dropped, rather than it being influenced by the actions and beliefs of the individuals who constitute the social environment. Indeed, if power relations between individuals are understood to be fluid and interchangeable (Foucault, 1980), it would appear that the construction of a culture is equally fluid and interchangeable as it is based on the actions of those informing its creation. In Chapters Four and Five, both players and coaches cited varying cultural discourses as contributory factors to either reflecting in a certain manner, or developing a specific coaching philosophy. Thus the culture at the club influenced the way in which both players and coaches interpreted situations and the manner in which they reflected upon them.

This study, therefore, was specifically concerned with addressing how the disciplinary and surveillant culture at East United FC, highlighted in Chapters Four and Five, was both constructed and reproduced. Field notes that were collected as a result of participant observation, along with players’ and coaches’ interview responses, were analysed from a Foucauldian perspective in order to locate and examine varying disciplinary techniques and technologies of power that were used - see also Chapters Four and Five (Foucault, 1988; Johns & Johns, 2000; Foucault, 2003; Manley et al., 2012).

The manner in which coaches used performance data, viewed performance enhancement and provided feedback were also considered in the context of player compliance and conformity, and their normalising effects and association with sporting excellence (Goffman, 1961; Foucault, 1979; Lenskyi, 1994; Manley et al., 2012). The study specifically addressed research questions (2) and (4) as part of the overall thesis (see *Methodology*, p. 95-96):

(2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches?

(4) To what extent is the use of video-based PA influenced by the culture in which it is implemented?

## **6.2 Methodology** (*refer to Methodology, p. 89-156, for specific details*)

The methodology is described in detail and outlined in the *Methodology* chapter (p. 89). A case study approach was adopted in which data were collected through ethnography (participant observation, informal interviews and audio/video recordings – see p. 108) and formal interviews (see p. 121) following a period of one season at East United FC. These data were subjected to analysis involving coding techniques taken from grounded theory methodology (open, axial and selective coding – see p. 131-137).

The data for this chapter have predominantly been taken from the ethnography conducted at the club. Twenty-two players and members of the backroom staff at East United FC (i.e. Manager, two Assistant Managers, First Team Development Coach, Reserve Team Manager, Goalkeeping Coach,

Performance Analyst, Strength and Power Coach, Sports Scientist and two Senior Physiotherapists) were observed over a 49-week period. Full details of the participants' backgrounds and experience levels can be found in the main *Methodology*, p. 100-107.

As the primary researcher, I was located within the research setting where I spent four working days a week (and a home match day on alternate weeks) at the club, which totalled approximately 1500 hours. In addition, informal interviews with both players (25) and staff (20) were conducted as well as recording team meetings (15 analysis units – see *Methodology*, p. 118 & 127). Players and coaches made reference to the culture and social environment at the club during their formal interviews (see Chapters Four & Five), so narrative from those transcripts has been used to supplement ethnographic data.

The initial generic themes of *players' beliefs, coaches' beliefs, cultural discourse, the role of sports science (inc. video-based PA), disciplinary mechanisms, surveillance, forms of punishment, knowledge construction and reflection*, were further analysed using open coding, and ordered into more manageable and concise groups that were underpinned theoretically. For example, raw data and explicit narrative that had initially constituted a broad understanding of '*the role of sports science (inc. video-based PA)*' were then considered in the context of Foucault's notion of technologies of power. Data were grouped and categorised in relation to both how players perceived video-based PA and also the manner in which analysis was used. This resulted in *axial coding* themes of "*Players' Experiences*" and "*Organisation of Analysis Sessions*" (see Figure 12). These both directly informed the abstract

theme of ‘*Video-Based PA as a Technology of Power*’ that developed through *selective coding* – see Figure 12. This approach to categorising data ensured that Foucauldian interpretations of situations at the club could be justified in a bottom-up manner.

Other themes that were produced as a result of *selective coding* included “*Reproduction of Discourse*”, “*Cultural Practices*”, “*Imbalances in Power Relations*”, “*Social Construction of Knowledge*”, “*Technologies of Power*”, “*Hierarchical Observation*”, “*Normalising Judgements*” “*Examination*” and “*Oligopticon Surveillance*”.

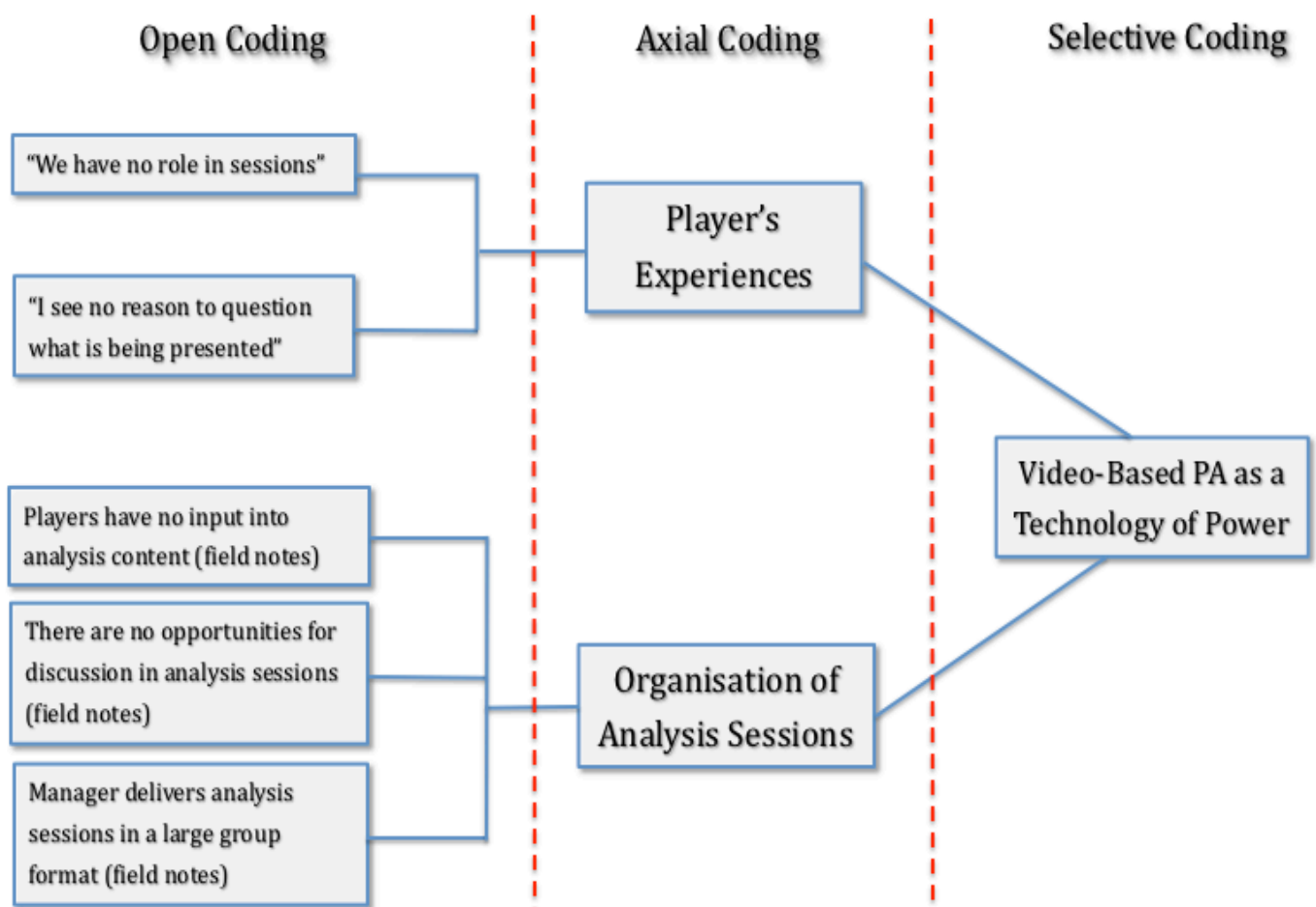


Figure 12. Example of Coding Process and Data Taken from Themes Relating to the use of Video-Based PA as a Technology of Power

### **6.3 Results & Discussion**

It is important to acknowledge how a number of Foucault's (1972, 1979, 1988, 1991a, 1991b) concepts are interdependent and construct not only what individuals believe to be true (discourse) but how this then contributes to their willingness to conform to culturally accepted norms and become 'docile' (Foucault, 1991a). The research has already outlined how positive discourses of reflection that exist within wider coaching discourse were accepted and embodied by both players and coaches at the club, thus allowing for their reflection and experience-based learning to be placed in context (see Chapter Four, p. 166 & Chapter Five, p. 225-227). In this study other cultural discourses, which are defined as "practices that systematically form the objects of which they speak" (Foucault, 1972, p.182), will be further examined and developed.

#### *6.3.1 Culturally Established Discourses*

Much of Foucault's work (1972, 1979, 1991a, 1991b) revolved around developing an understanding of how institutions are able to govern individuals who operate within an establishment. He proposed that in order for notions of "governmentality" to occur, a level of social control is required over and between its citizens (Gilbert, 2001; Foucault, 2003). In this instance, the players at East United FC were considered citizens of the organisation. In order for an institution to successfully regulate the behaviour of its citizens, however, a number of discourses are required to frame their understanding and perceptions of varying situations. Contemporary adaptations of Foucault have described discourses as "unwritten rules that guide social practices,

produce and regulate the production of statements, and shape what can be perceived and understood” (Dension & Scott-Thomas, 2011). It is the formation and maintenance of these discourses that establish a level of social agreement over what is deemed to be true and correct initially, and which then creates a situation where citizens can be subjugated (Rabinow & Rose, 2006; Chase, 2008; Manley et al., 2012) and behave in accordance with what they perceive to be correct or the “norm” (Foucault, 1979; Falzon, 2006). In short, discourses are constitutive of knowledge and dominant understandings of a given topic (Edwards, 2008).

If this level of agreement and understanding is achieved and constantly reaffirmed amongst an organisation’s citizens it is then possible for individuals who are in powerful positions to strengthen them by imposing a number of “technologies of power” (Foucault, 1988; Johns & Johns, 2000) onto their subjects. This is possible given the perceived relational nature of power (Foucault, 1980) in which “individuals are [thus] the vehicles of power, not its point of application. Individuals are not passive, inert entities who are simply at the receiving end of power...” (Foucault, 1980, p. 98). It is also proposed that power is fluid and that imbalances in power relations between individuals within an organisation can be strengthened, weakened and are also open to resistance (Foucault, 1988). Therefore, if an individual(s) has established an imbalance of power that is in their favour,, their discourse and their expectations of others often occupy a position of authority. Through the strict control, management and surveillance of individuals’ actions during ‘games of truth’ in which discourse is played out, individuals who have established dominant positions are able to enforce their discourse onto others (Foucault,



2000a). This was illustrated by both coach and player data as *The Gaffer's* discourse relating to reflection and the necessity of being 'winners' was embodied and reproduced by players without question. Thus evidence shows that as coaches were in a position of authority, and maintained constant control and surveillance over players' actions to remain so, their discourses were not challenged by players who deemed that by agreeing with their coaches they improved their own chances of success (see Chapter Four, p. 176-177).

This willingness to reproduce coach discourse, however, had also been socially constructed through the deprivation of autonomy and control within players' own working lives. Coaches were able to exert disciplinary power over their players through the implementation and monitoring of regimented training programmes and daily meetings, in which the spatial, temporal and organisational components were dictated by the coaches and their colleagues (Foucault, 1991a; Mills & Denison, 2013). Players' actions were restricted and controlled by members of staff who determined the content of their training programme. This was accompanied by the use of constant surveillance (hierarchical observation) and the measurement (normalising judgements) of players' responses and performance levels in order to establish the conditions required for disciplinary power to be implemented (Foucault, 1977, 1991a). As a result, players became accustomed to not challenging instruction or 'guidance' and instead accepted what was decided for them (see also Manley et al., 2012; Cushion & Jones, 2014).

At East United FC, players were not involved in decision-making relating to either the content of their own training or the tactical approach that

the team adopted in matches. Instead the manager was deemed to be a “tactical expert”, primarily as a result of the fact that he was the individual responsible for tactical training (see later in the chapter for discussion relating to the control of training as a disciplinary technique). Irrespective of whether players deemed the information and instruction that they received to be correct, the manager implemented a number of disciplinary instruments such as the use of video-based PA and GPS monitoring in order to evaluate whether players had successfully carried out what he had asked of them. In doing so, the opportunities for players to challenge the decisions made for them (without punishment) were minimal. A willingness amongst players to avoid punishment, in the knowledge that they were under constant surveillance, contributed to a level of compliance and co-operation, that interpreted decisions made for them as being “correct”. In this way, players also re-confirmed the notion that the manager was a “tactical expert” as they carried out his instructions on a regular basis without challenging them.

This continuous and complex social process was underpinned by an understanding that “power produces knowledge” (Foucault, 1991a, p. 27) and that powerful individuals’ demands “gain power and legitimacy” (Cotton, 2001, p. 514) based on the imbalances in power that they have initially established. As was the case at East United FC, these imbalances in power can be maintained and exaggerated further by the strategic design and construction of activities that afford little or no control to individuals, whilst maintaining surveillance over their responses and actions (Foucault, 1991a). If disciplinary instruments, such as the strict control of space, time and

movement are coupled with overarching surveillance, then disciplinary power can be maintained and utilised (Foucault, 1991a). Within this relationship, citizens (players) fulfil the role of “objects of knowledge” (Denison & Scott-Thomas, 2011, p.32) and coaches act as “agents of normalization” (Halas & Hanson, 2001, p.123).

When investigating the social environment at East United FC, a number of cultural discourses were in evidence (Foucault, 1972). These included “the manager is always right”, “the result is all that matters”, “coaching is about being out on the grass”, “reflection is important”, “players should respect the manager”, “players need decisions to be made for them” and “players believe they are never to blame”. Interestingly, the final two discourses were held by coaches but about players specifically. Given the power that they had established and the subsequent legitimacy that their opinions embodied, however, even if players were not explicitly made aware of these discourses, decisions were made on their behalf that were underpinned by these beliefs (Mills & Denison, 2013). By dictating the content of players’ training sessions, coaches embodied the discourse that players needed decisions to be made for them through their coaching practice (Mills & Denison, 2013). By denying players any opportunity to contribute their own thoughts, and by maintaining surveillance over their every action within training, this discourse remained unchallenged and was re-confirmed on a daily basis through their passivity and complicity.

In maintaining a constant ‘gaze’ over players’ reflective conversations the coaches embodied the discourse that reflection should occur in the

presence of more knowledgeable others as “players believe they are never to blame”. Since the players operated within a very controlled and surveillant environment, they believed that compliance was their best chance for success and thus also simultaneously embodied the discourse that ‘the manager is always right’. This further demonstrates the influence that powerful individuals had on the socialisation of knowledge at the club as the coaches dominated and controlled the unwritten rules and procedures surrounding the varying ‘games of truth’ that occurred between players and coaches where discourse was exchanged and played out (Foucault, 2000a). In so doing, the prominent outcome was that the discourse held by coaches at the club constituted the knowledge and dominant understanding of varying topics such as reflection and the role of video-based PA that were held by the players. The two most prominent discourses, “the manager is always right” and “players should respect the manager” will now be discussed in turn.

- *“The Manager is Always Right”*

Players made reference to the “manager always being right”, the need to “do what the manager wants you to do” and not questioning what is asked of you in order to be successful and be selected in his team (see Chapter Four). This complicity revealed the constraining outcomes associated with the use of disciplinary power, as players had socialised discourse into a dominant understanding that the manager was unchallengeable (Foucault, 1991a). For example, one of the club’s young defenders, *Peter Evans*, who had successfully made the transition from non-league football two years earlier,

explained that he felt unable to disagree with or challenge *The Gaffer* (Steve) due to the power and control he held over his future:

*“If you disagree with something and he’s the manager, you can only disagree so strongly, do you know what I mean, because he’s the manager. It’s his decision, isn’t it? And you wanna play under him. You don’t want to undermine him or anything ‘cause he’s the boss, isn’t he? It’s like any job, isn’t it?”*

(Peter Evans)

Similar experiences were highlighted by *Simon Wootton* who was in his first season at the club. He described experiences of anonymity and losing his identity when having to fulfil a role that the manager wanted him to:

*“Erm, when you say stuff like sometimes a manager can want you to do something and you end up playing the manager’s game, and sort of like lose your... I don’t know if you lose your identity as a player. If I did still sort of manage to enjoy what I usually do, err, and what I think I can – what I do best”*

(Simon Wootton)

The loss of identity described by *Simon Wootton* appears to have occurred because of the control and surveillance that coaches maintained over players’ actions during training, and in various meetings at the training ground (Foucault, 1991a). As a result, he found himself confined to having to

'play the manager's game' instead of being able to act on his own interpretations of the situation. Moreover, coaches at the club acknowledged that they were people that players had to impress in order to be successful within their environment. *Peter (Greavesy)*, the club's First Team Development Coach, articulated his interpretation of this social dynamic between both player and coach at the club:

*"The players have obviously seen me out there, seen me as one of the ones who make decisions on their lives really, not only their playing careers but on their lives because if I go in on a player I don't like, or don't foresee a future under my leadership then I'm affecting his life. So they see me as someone they have to impress."*

(Peter – First Team Development Coach)

In short, a situation was constructed in which the oppressed (players) had accepted their fate through the socialisation of cultural discourse, and the subsequent creation of knowledge relating to coaches' and players' specific roles. The players demonstrated compliance, docility and reproduced discourse that was held by *The Gaffer (Steve)* and his coaches (see Chapter Four, p. 176-177 & Chapter Five, p. 218-219). By creating situations at the club where the coaching team had been seen as unchallengeable, this discourse had in turn been reinforced by the oppressors (coaches), and allowed for the imbalance in power relations between player and coach to be maintained (Foucault, 1991a). Because players replicated and embodied coach discourse (see Chapters Four & Five), the coaches introduced

discourse that acknowledged and reinforced their own positions of power and influence. In doing so they confirmed their positions as 'gatekeepers' in the eyes of the players (Bampouras et al., 2012, p.473).

The social conditions that underpinned the acceptance of this 'knowledge' align themselves with previous research concerning the culture of professional football. Cushion and Jones (2006) described that a dominating, 'legitimised' authority, which was used 'to reproduce existing configurations of privilege', was present within a professional club's youth Academy (p.148). Moreover, Thompson et al.'s (2013) research regarding the micro-political experiences of a fitness coach at an English Premier League club revealed that a "contextual hierarchy" (p.9) existed at the club whom staff attempted to please in order to be successful. Therefore the socialisation and reproduction of certain forms of practice and behaviour by individuals in powerful positions appear commonplace within professional football (Cushion & Jones, 2006, 2014).

- *"Players Should Respect the Manager"*

When considering alternative discourses at the club, it became apparent that the management team had also established discourses relating to what they perceived to be "good coaching/management". Subsequently, their perceptions of how this level of coaching was achieved underpinned their own coaching practice and the conditions that they attempted to create at the club. *Steve (The Gaffer)* made reference to needing a management structure in which "respect" was the vehicle that provided "direction" for the players:

*“Players need direction and I think the ultimate thing is as a manager, I would hope that I have respect rather than if you’re liked you’re liked but the ultimate thing is to function in terms of a managerial system there has to be an element of respect.”*

(The Gaffer)

When examining the language used by the manager in this instance, behaviours that were associated with “respect” were interpreted as non-threatening and not challenging of the coaches; in essence getting on with the job in hand as directed. This discourse and expectation of players’ behaviour had direct implications for how players conducted themselves and appeared to have significantly influenced their experiences. Players aligned their beliefs and interpretations with those held by their coach as efficiently as possible in order to avoid potential punishment (Chapter Four, p. 173-174 & 176). This was epitomised by the fact that seven of the eight players sought the advice of their ‘respected’ coaches during *Strategy Generation* (see Chapter Four). *Mark Hall* described his willingness to show respect to his manager by doing whatever was asked of him:

*“at different times of my career where I’ve been doing this and he [manager] goes “Right, I need you to do this” and I don’t think it’s an issue. I think whatever the manager says goes. I think he goes “You need to do this” then that’s what you should do. I don’t believe in a player going “Right, I’m not doing that, I’m doing my own thing”.*

(Mark Hall)



In short, analysis revealed that the manager had created an environment in which players demonstrated their “respect” through a lack of resistance (Foucault, 1979), accepted workplace subservience and conformity to institutionally enforced regulations and disciplinary codes (Parker, 1996; Fournier, 1999). This resonates with the unchallenged reproduction and embodiment of coach discourse by the players (see Chapter Four) and the culture of professional football described in recent studies by Cushion and Jones, (2006, 2014) and Hammond et al. (2013) who suggested that players “just learnt to put up with it” (p.1).

### *6.3.2 Oligopticon Surveillance and The Structuring of Training as Disciplinary Instruments*

Fundamental to Foucault’s interpretation of being able to normalise behaviour through the establishment of disciplinary discourse (as discussed above) is the presence of surveillance (Foucault, 1991a). It is proposed that for surveillance to be effective in being “permanent in its effects, even if it is discontinuous in its action” (Foucault, 1991a, p.201), three conditions are required; *hierarchical observation, normalising judgements and examination* (Foucault, 1977; Allan, 2013). In order for this to occur successfully, however, a set of rules, procedures or expected behaviours need to be established against which individuals’ responses can then be directly assessed (Edwards, 2008). Moreover if the parameters of an environment or activity are strictly controlled or managed, there is a greater potential for the use of these three underlying components of surveillance to result in the normalisation of

behaviour (Foucault, 1991a). Hierarchical observation refers to “a single gaze to see everything perfectly” (Foucault, 1977, p. 173), and draws on Jeremy Bentham’s Panopticon design of prisons. In essence, structures (whether physical or invisible) are required in order to maintain a level of observation on an organisation’s inhabitants (Bentham, 1995). Normalising judgements refer to creating a situation where correction and the standardisation of behaviour can be justified. Publicising an individual’s physical or cognitive responses in comparison to a set of expected standards allows for their deviance away from the norm to be established (Foucault, 1977; Allan, 2013).

The examination itself is in essence a culmination of the hierarchical observation and normalising judgements by turning the “economy of visibility into the exercise of power” (Foucault, 1977, p.187). Within the examination, individuals are often “described, judged, measured, compared with others” (Foucault, 1977, p.191). As a result, it is proposed that individuals can be manipulated into normalising their own behaviour in line with others who have demonstrated compliance with what is expected of them. For example, the players aligned themselves with traditional positive discourses of reflection that had been adopted by the coaches, and any player who had failed to adopt this discourse would have been subject to potential judgement, measurement or punishment (Foucault, 1977) (see Chapter Five p. 216-217). By maintaining an extensive presence throughout players’ reflective conversations, coaches were able to directly observe (hierarchical observation) to what extent they were attempting to embody their discourse and interpretations (Foucault, 1977). All players aligned themselves with this

discourse therefore the surveillance at East United FC appeared to have been effective.

Previous research by Lang (2010) and Manley et al. (2012) revealed that surveillance is used prominently within swimming and elite youth football and rugby environments. Coaches deployed forms of surveillance that were both subtle and obvious in order to maintain a level of compliance and conformity amongst their athletes during training sessions that were managed by coaches (Foucault, 1991a; Danaher, Schirato & Webb, 2000). This contributed to the promotion of norms that had been established through the socialisation of sport specific discourse (Lang, 2010; Manley et al., 2012). As a result, Scott (2010) proposed that sporting organisations can be viewed as institutions that promote disciplinary mechanisms aimed at normalising the behaviour of their athletes in line with perceived 'best practice'. Therefore in this case the docility and willingness of players to replicate coach-led discourse is perhaps unsurprising (see Chapter Four, p. 175-176). The data revealed that this level of conformity was made possible through a culture of surveillance that was prevalent at East United FC. This culture will now be discussed in order to position the social construction of knowledge that existed at the club (highlighted in Chapter's Four and Five).

At East United FC it remained unchallenged that *The Gaffer* and his coaches delivered a programme of coaching for the players in order to try and improve their respective performance levels. Because of this, the duration, content and space in which training sessions occurred were dictated to the players on a daily basis by the management team (Mills & Denison, 2013). In this way

the scheduling and delivery of training sessions inhabited techniques that allowed for the maintenance of disciplinary power and its normalising effects (Foucault, 1991a). Mills and Denison (2013) used Foucault to problematize endurance running coaches' practice and proposed that by controlling the spatial, temporal and organisational aspects of training sessions, coaches are able to exert disciplinary power over their athletes (Foucault, 1991a).

In the context of coaching sessions at East United FC, sessions tended to last ninety minutes and were broken down into varying time-specific segments, such as fifteen minutes for a warm-up, fifteen minutes for a technical drill, thirty minutes for a possession drill followed by thirty minutes for a small-sided game. Sessions tended to follow an almost identical pattern in terms of both the duration of each segment and also the order in which the segments were delivered (Cushion & Jones, 2006). A Foucauldian interpretation of breaking sessions into time-specific segments would suggest that coaches were "regulat[ing] the cycles of repetition" (Foucault, 1991a, p.149) and creating a "succession of elements of increasing complexity" (p. 158). By constantly making players aware of how much time was scheduled for each part of the session, players' effort levels were manipulated in the knowledge that their opportunity to make a lasting impression would soon be over (Mills & Denison, 2013; Cushion & Jones, 2014). Similarly, through separating coaching sessions into time-specific sub-sections, the expectations of players' physical performance within each sub-section could also be scrutinised more explicitly through the use of surveillance, which took the form of mobile GPS units (Foucault, 1977). Players were expected to wear GPS

units during every aspect of training and refusal to wear a GPS unit resulted in a £20 fine.

The data produced by these mobile tracking units were assimilated on a constant basis with the specific purpose of influencing “data subjects” (players’) behaviour (Lyon, 2003; Ball, 2005). Results of players’ daily physical outputs from training were presented in a variety of graphs on walls of the main corridor of the training ground. Similarly, the walls of the club’s large open plan gymnasium displayed charts, and hierarchical lists that classified players’ performances during the most recent battery of physical tests, which occurred three times a season (e.g. sit and reach test, agility test, vertical jump test, stamina test, squats, dips, maximal bench press, leg strength test, sprint test). In this way, players’ deviance from accepted standards could be publicly observed and judged. From a Foucauldian perspective (Foucault, 1977), the measurement of players’ physical performance during specific periods of training represented *hierarchical observation*. By publishing their data *normalising judgements* could be made upon players’ own individual performances in line with the social norm as well as how they compared to their teammates (*examination*). As a result, players were made aware that they were under constant surveillance both on the training field and in the gym where their performance and actions were “described, judged, measured”, and “compared with others” (Foucault, 1977, p.191). This use of surveillance within regimented and structured coaching sessions at East United FC sought to “fix[es]...arrest[s] or regulate[s] movements” (Foucault, 1991b, p.208) of players in line with discourse and

accepted standards that had been defined by the manager and his staff (Cushion & Jones, 2014).

By dominating the spatial and organisational components of training sessions at the club, the coaches ensured that specific outcomes occurred (Mills & Denison, 2013). For example, it was typical for warm-ups to take place on the 'top tier', an area of the training facility that had specific grid markings and lines painted on the grass in order to identify a variety of distances that would be specific to what was asked of players. Foucault (1991a) advocated that the control of space was a disciplinary technique as it allowed for the specific observation and judgement of an individual's actions in line with what was expected of them. By controlling the space in which individuals are asked to 'perform', the opportunity for resistance is minimised as there is less opportunity for any non-compliance to remain undetected. In this instance, predictably, players sought to meet the physical expectations of their coaches wherever possible in order to avoid punishment.

As previously stated, the use of possession-based drills and small-sided games were prominent within coaches' practice at East United FC. By implementing drills that involved the organisation of players into teams and by introducing a score-line to assess teams' performances directly, players' training once again inhabited disciplinary qualities (Foucault, 1991a). Small-sided games were typically played across half the length of a football pitch and comprised of two teams of eight playing each other. Both teams tried to reach ten goals before their opponents in order to end that specific game. Coaches controlled the space in which players were able to play, the rules of the game and the teammates with which they played. In this context players'

actions remained under constant scrutiny and were judged directly in relation to the evolving score-line. Due to this level of control and the discourse of winning that was prevalent at the club, players 'gave their all' during small-sided games in order to avoid the humiliation associated with losing (Cushion & Jones, 2014). This aspect of training allowed coaches to exert disciplinary power over their players by controlling and manipulating their actions and efforts whilst under surveillance (Foucault, 1991a). In summary, through the regimented structuring, delivery and surveillance of training sessions, coaches were able to create and maintain imbalances in power relations that allowed for disciplinary power to be used in a similar vein across a number of other activities that players engaged in (Foucault, 1991a).

#### *Video-Based PA as a Form of Surveillance*

Developments in technology during recent years have accelerated the ability to maintain surveillance over individuals across a variety of social contexts (Lyon, 1993; Smith, 2007; Mattelart, 2010; Manley et al., 2012). Since surveillance is a situated activity that has a direct impact on the observed (Gad & Lauritsen, 2009), the ability of an individual to resist culturally accepted norms (Foucault, 1979) may be restricted and/or limited if the surveillance of these behaviours is many and/or multiple in nature (Manley et al., 2012). The introduction of GPS represents some of the technological advancements occurring within professional football that allow for wider surveillance (Smith, 2007), but developments in the tracking and measurement capabilities of video-based PA have also increased the level of surveillance that can be achieved. It became apparent that at East United FC

video-based PA was used as a form of surveillance (Manley et al., 2012) in order to directly examine whether players' performances and behaviour during match play represented what had been worked at and 'agreed' upon during controlled training sessions.

This provides specific context to the discourse where coaches referred to video-based PA as a resource that could hold players to account for poor performances (see Chapter Five, p. 242). Even in reserve team games, where a limited number of first team players tended to be involved, games were filmed in case the coaching team wished to assess players' performances retrospectively:

**29<sup>th</sup> July 2009 – Approximately 7:15pm**

*It is the day of a pre-season friendly game for the club's reserve team playing away at a local non-league club. The weather is atrocious. I arrive in the same car as one of the physiotherapists. As soon as we see the ground it is apparent that getting into a position to film the game from a height is going to be difficult.*

**Researcher:** *"Alright [reserve team manager's name], I think its' going to be a bit difficult to film to be honest"*

**Reserve Manager:** *"Can't you get up there?"*

*He points to the clubhouse, which is an flimsy temporary building.*



**Researcher:** *“Erm...I think I might be struggling to get up there! Have you seen the weather?”*

**Reserve Manager:** *“Yeah I know but the Gaffer wants the game filming to have a look at how some of the kids do”*

**Researcher:** *“Ok then, I’ll see what I can do”*

*I speak to one of the club’s employees who tells me that I will have to go up by propping a ladder against the side of the building and climbing up it with my bag on my back. Moments later he duly delivered the ladder. I begin to climb up the ladder as the rain is beating down and as I get five rungs up my trainer slips off the ladder and I nearly fall.*

**Physio:** *“Whoaaa steady on their pal! You are brave as fuck going up there!”*

*I come back down, readjust how the bag is positioned on my back and begin to climb again. As I get to the top, disembarking from the ladder is difficult given the weather and the weight of the bag. I hear shouts from below as some of the players take a break from their warm-up to see me struggle, taking great pleasure from my situation. I finally get myself off and put my foot into a large puddle – because the roof is flat and relatively unstable there are a number of deep pools of water everywhere. I set up the camera and source a carrier bag to try and stop the lens from getting wet. It proves useless. Instead I have to wipe the lens on a regular basis to try and keep it dry, but*

*with my clothes being soaking wet themselves this proves to be a wasted effort.*

*As the teams walk out for the start of the game, the Reserve Team Manager looks up at me, nudges his assistant to get his attention and starts to laugh. He puts his hands out to the side and shrugs his shoulders:*

**Reserve Manager:** *“Well...at least we’ll have the video for the Gaffer!”*

By filming reserve team games where first team players were commonly accused of ‘*not applying themselves properly*’ or ‘*just making sure they avoided getting injured*’, coaches manipulated the “economy of visibility into the exercise of power” (Foucault, 1977, p.187). In this instance, by asking a Performance Analyst to film the game from a portakabin roof, video-based PA aligned itself closely with Foucault’s work on the “Panopticon” (Bentham, 1995), which provided “a single gaze to see everything perfectly” (Foucault, 1977, p. 173) and created a normalising gaze that was “everywhere and always alert...function[ing] permanently and largely in silence” (Foucault, 1991b, p.192). Through filming the game, players were consciously aware that their performance *may* be examined by *The Gaffer* (Steve) and his coaching team at a later date. Foucault proposed that this sheer possibility of being under surveillance at any given time “induce[s] in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power” (Foucault, 1991a, p. 201). As a result,

players tended to '*apply themselves properly*' in reserve team games that were filmed, in order to avoid punishment or non-selection.

Given, however, that this overarching gaze was established through a multitude of interconnecting disciplinary mechanisms and forms of surveillance, as opposed to one singular focal point, using the concept of the "panopticon" may be misrepresentative (Bentham, 1995). Instead the notions of oligopticon surveillance (Latour, 2005), as adopted by Manley et al. (2012) or taleidescopic<sup>1</sup> surveillance (Michael, 2006) may be more representative of the culture at East United FC.

In 46 of the club's 50 first team games during the season, players were filmed and performance measures were used that included; *total distance covered, high intensity distance, sprint distance, number of passes, pass completion, pass direction, headers, tackles, blocks, interceptions, shots and crosses* (amongst others) to assess their overall performance and 'contribution' to the game. This level of surveillance was made possible as the club had a contractual agreement with a third party data service provider who was responsible for statistically analysing each player's match day performance from both a technical and physical perspective. Consequently, *hierarchical observations* were conducted during each game (Foucault, 1977).

In a similar approach to publicising players' physical data from training sessions, a notice board had been erected in the main corridor of the club's training ground in order to display performance analysis and statistical feedback to players regarding their match performance. Players' position

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<sup>1</sup> Taleidescopic surveillance refers to a process whereby individuals who are maintaining surveillance over others are themselves also placed under surveillance. In doing so views of the world are partly populated due to the reflection and re-reflection of what is deemed to be acceptable practice within complex and shifting patterns (Michael, 2006)

specific performance statistics were ranked and compared directly to their team-mates'. The coaches rationalised this as a positive attempt to encourage competition within the group:

*"You put it up there (performance scores) and you may get one or two players not looking for it but from seven or eight players who weren't interested, over a matter of time they want to see their name up there they want to see their name up the top, high intensity runs or...they do, because it's natural you want to be a winner, you want to win so that's why I think it's really helped and it gives you the information"*

(Peter – First Team Development Coach)

Whilst it may have contributed to a culture of competition being established between the players, publishing performance statistics in this manner made possible *normalising judgements* and the *examination* of players' match day performances in line both with each other and with the social norm (Foucault, 1977). Therefore, Greavesy's concept of increasing competitiveness within his players can actually be explained as efficient normalisation (Foucault, 1977, 1991b). In addition to publishing the data, so that coaches could '*make best use of the analysis*', they also integrated it into both "pre-match" and "debrief" analysis sessions.

Pre-match video analysis sessions were typically delivered ninety minutes before kick-off and debrief sessions generally occurred on Monday lunchtime after training. In pre-match video sessions it was common for a projected line up of the opposition to be presented, along with examples of

their common patterns of play, and specific weaknesses that could be exploited, along with a variety of set play routines. While this does not directly reflect the surveillance of players at East United FC explicitly, it clearly demonstrates that a significant level of *hierarchical observation* occurred in relation to other teams' players too. Opposing teams were closely monitored to see how individual players may have been expected to perform as part of a given game plan, and against specific opposition (Foucault, 1977). Subsequently, it appears that a culture of surveillance and the presence of overarching observation that "sees everything perfectly" (Foucault, 1977, p. 173) are prevalent throughout professional football (Manley et al., 2012).

Constant exposure to the surveillant qualities of video-based PA in this manner, even when not in relation to their own team, appeared to have informed players' general reluctance to engage with video-based PA unless instructed to do so, or when using *Creative Thought* during a reflective conversation (see Chapter Four). More importantly, given the manner in which knowledge was socially reproduced at the club, the use of video-based PA in this context embodied coaches' discourse as to its suitability as an effective form of surveillance (see Chapter Five). Given the lack of autonomy experienced by players at the club, they reproduced and embodied the discourse held by their coaches and shared the understanding that video-based PA was valuable as it allowed performances to be re-examined. The interaction and interdependency that existed between the use of video-based PA as a form of surveillance, coaches' discourse of it being a useful surveillance tool and players' reproduction of coach discourse contributed to a dominant understanding of the function that video-based PA should serve. As

a consequence, this knowledge helped shape the overarching culture of surveillance at East United FC.

In contrast to 'pre-match' analysis sessions, 'debriefs' included basic match statistics that were put into 'perspective' by *The Gaffer (Steve)* who initially presented one or two areas for 'improvement', followed by three or four 'positive aspects' of the teams play from the game. Below is an extract of one of the team's debrief sessions led by *The Gaffer (Steve)* in which he made explicit reference to statistics surrounding the team's performance:

*"Let's have a quick run through this...It was a frustrating game. [PowerPoint slide with basic match statistics comes onto the screen]. I think you look at, fucking hell, the amount of times that we, that either side got into the penalty box too often and when you look at goal attempts, there's none of those either. There was – I mean it was a poor game in many ways. Alright? We go to the second half though, I mean we - they had a few [chances] late on, on the break, but generally speaking I mean we did boss possession even though the quality wasn't particularly good."*

(Beginning of a debrief analysis session following a 1-1 draw)

Since the areas for improvement and positive examples of the team's play were both primarily supported by video evidence alone, players were made explicitly aware that *hierarchical observation* was occurring in both a statistical and multimedia form (Foucault, 1991a; Allan, 2013). Delivery of video analysis sessions in this manner complemented the constant presence

of statistical data in the club's main corridor with very specific and explicit examples of their behaviour, which were then examined in front of the group (Foucault, 1977). In this instance, the potential normalising effects of surveillance were arguably enhanced as desired behaviour was presented in the presence of both peers and competitors (players of similar positions) whose exposure to the same material may have increased their own efficient normalisation in the future. For example, following a draw with a local rival team, *The Gaffer* (Steve) highlighted a situation where one of the team's strikers could have closed down the opposition goalkeeper more quickly in the build up to their late equaliser:

*[The video of the late equaliser that East United FC conceded is playing on the projector screen behind the manager].*

**The Gaffer:** *"I don't think we possibly organised ourselves quickly enough, but, like I've said, they have to take a little bit of credit as well. Just hold it there. [The Analyst pauses the video]. Now I know we've made one or two substitutions but this is where we spoke about ... you don't actually see him [opposition goalkeeper] kick it but this is where I said to [player] about not letting him come too far. When you watch when this one's kicked it's ... I don't know where it was that he actually kicked it from but we ended up heading it in our own box and I think that is, that's something that we can affect."*

In the context of this narrative it could be argued that the player in question may be more inclined to normalise his own future behaviour, i.e. close down

the opposition goalkeeper when told to do so, as he was aware that his response, both in strictly controlled training sessions and professional matches, would be observed and critically examined in a similar fashion. Similarly, since players at the club attempted to socially reproduce coach driven 'correct' responses, his chances of keeping his place in the team may be enhanced if he successfully normalised his future behaviour. Here, video-based PA acted as a disciplinary "technique that is able to instil a power relation that functions to ensure a self-regulatory discipline" (Manley et al., 2012, p.307).

*The Gaffer (Steve)* ended debrief sessions with a slide showing key points or words for the players to focus on during the coming week, and going into their next match. In doing so, he provided a set of guidelines with which he could interpret the feedback produced by the different forms of surveillance that monitored the players' behaviour during the week. As a consequence he minimised the extent to which players could openly resist his demands (Foucault, 1991a). In essence, he had created a complex disciplinary framework that included numerous opportunities for "*normalising judgements*" (Foucault, 1977; Allan, 2013) to be made. This process allowed him to directly assess players' docility, compliance and willingness to normalise their behaviour in line with his demands (Foucault, 1977). In response to this level of strictly controlled surveillance, players demonstrated a willingness to please *The Gaffer (Steve)* by reproducing his discourse and successfully carrying out his instructions, thus facilitating the creation and maintenance of an overarching culture of surveillance at East United FC. At the same time,



however, and as advocated as being possible by Foucault (1977), players demonstrated examples of resistance to video-based PA, as seen when waiting outside the video room before a debrief session:

*Prior to an Analysis Meeting – Approximately 10:15 am*

*We stand in single file on the stairs of the training ground, almost pinned to the wall in anticipation of allowing the youth team players to come down the stairs when they leave the video room where they are getting a dressing down by their coach following a poor performance at the weekend. None of the coaching staff are yet present:*

**Player A:** *“Alright Weasel (to researcher)...how longs today’s gonna be then? Bet it’s gonna be another blockbuster isn’t it?”*

**Researcher:** *“You love it really [name], that’s why you’re always the first one in here!”*

**Player A:** *“Fucking no chance. Fuck me...video again. How long is it then?”*

**1<sup>st</sup> Team Analyst:** *“About 11 minutes the videos are.”*

**Player A:** *“That’s fucking half an hour then. Fucks sake.”*

**Player B:** *“We gonna see the penalty again by any chance? Fucks Sake. Or just the fucking whole first half again like on the bus...”*

*As the manager makes his way up the stairs and shakes everyone’s hand in turn, the players who had voiced their opinions suddenly go quiet and slowly make their way towards the video room door.*

In acknowledging the fact that during analysis sessions, video-based PA was used to critically examine, re-observe and discuss previous behaviour in relation to expected behaviour (norm), players challenged the potential disciplinary and normalising capability of video-based PA. Players’ behaviour could be interpreted as a form of resistance and an act of challenging the imbalances in power (Foucault, 1980) that existed between them and *The Gaffer* (Steve). By demonstrating their knowledge surrounding the content of the session and what the desired outcome would be, players attempted to dismiss the importance of what was being delivered. This represented resistance towards the surveillant and disciplinary qualities of video-based PA that had been established. By acknowledging the existence of these disciplinary qualities, players suggested that they would remain unaffected (Foucault, 1991a; Allan, 2013).

It could also be proposed, however, that the players’ willingness still to “take part” in the video session and be subjected to the opinion and instruction of *The Gaffer* (Steve), irrespective of what they thought about the session itself, acted only as further confirmation of their roles as “docile bodies” (Foucault, 1977, p. 138; Cushion & Jones, 2014) and “objects of knowledge”

(Denison & Scott-Thomas, 2011, p. 32). Moreover it provided an insight into the level of control that *The Gaffer* had established over players' actions and their lack of opportunity to openly resist his instruction. Therefore the culture of surveillance proved to be unchallengeable. Despite their desire to resist and 'make a stand', players' compliance served only to strengthen the discourse, which understood video-based PA as an important feedback mechanism following a period of surveillance. Players' attendance confirmed the socially constructed importance of surveillance and it was their compliance that helped reproduce the culture. If players instead opted to provide resistance to the modes of surveillance and discipline that they were subjected to, the dominant understanding that underpinned the creation of the culture could have been challenged.

Players' responses and interaction with the researcher before the analysis session did, however confirm Foucault's proposal that power is relational and there is "the possibility of resistance for if there were no possibility of resistance...there would be no relations of power" (Foucault, 1988, pp. 11-12). *The Gaffer* (Steve) had attempted to minimise player resistance and normalise their behaviour but they were able to demonstrate their displeasure at the current situation and maintained the ability to provide future resistance to the disciplinary qualities associated with video-based PA. Hence, opportunities still existed where players could have challenged the imbalances in power relations within the player-coach relationship. This opportunity to provide resistance reflected the fluid and interchangeable nature of power (Foucault, 1977).

Whilst analysis and sports science are commonly employed by professional football clubs to try to enhance the performances of their athletes, the social and surveillant connotations associated with these forms of measurement cannot be underestimated (Manley et al., 2012). It has been established in this study that coaches' use of video-based PA epitomised the culture of surveillance at East United FC as it encouraged players to regulate their own behaviour in line with the desired norm (Ransom, 1997). This function was framed and informed by coaches' discourse of how video-based PA could best complement coaching practice and assist in maintaining control over players (see Chapter Five, p. 243-244). As a result, the context surrounding the use of resources with inherent surveillant and disciplinary qualities, such as video-based PA, determined the function that they served. Again the evidence from this research challenges the current simplistic and apolitical representations of the role of video-based PA (e.g. Hodges & Franks, 2002; Court, 2004; Carling et al., 2005; Drust, 2010; Wright et al., 2012). *Simon Wootton*, who was on the fringes of the first team, provided a players' perspective on the use of video-based PA at East United FC:

*"I think it's just, like I said, it's just like a, like a learning experience like it was back in school and you have to take the most that you can out of it and, you know, just accept it for what it is."*

(Simon Wootton)

These data provide a further insight as this player perceived analysis sessions to be like school lessons where he attempted to embody the discourse of his teacher (i.e. coach) as children typically do within the

classroom. Thus, like children whose attendance reproduces the understanding that they go to school in order to become more 'educated', players saw no reason to question their coaches' instruction. Moreover, in a similar way to that in which children wish to succeed at school and avoid punishment, players attempted to embody the understanding delivered to them by their coach, realising that any resistance would result in punishment (see Chapter Four). This narrative also provides an insight into some players' perceptions of the imbalances in power within the coach-player relationship: seeing themselves as children requiring further education, and their coaches as the more knowledgeable and powerful teachers (see Chapter Four, p. 168-169). This representation and acceptance of the social dynamics that existed within the coach-player relationship helped facilitate the reproduction of the culture.

*Simon Wootton's* perspective also provides an insight into how the dominant understanding that video-based PA is an unproblematic approach to enhancing coaches' effectiveness and players' learning has continued to be reproduced (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton, et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011). Despite the lack of autonomy (which is required for learning to occur) experienced by the player during analysis sessions, by likening it to being at school (where learning typically occurs), an overarching assumption that 'learning' has occurred is likely to be made. Also, by not actively challenging the dynamics of analysis sessions and by just 'accepting it for what it is', *Simon* did not raise any public objection to the type of information that was being presented to him and the manner in which it was typically presented. At first glance, and without the

application of social theory to interpret and analyse players' experiences in the context of the environment in which they operate, it is understandable that simplistic and idealistic portrayals of video-based PA continue to be accepted and reaffirmed within both academic literature and coach education (e.g. Hodges & Franks, 2002; Lyle, 2002; Stratton, et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011).

Without critically examining the experiences of those involved in the process of disseminating video-based PA from a social perspective, discourse relating to the role and function of video-based PA has continued to be socially reproduced in the absence of any conflicting evidence. As a result, the power and legitimacy associated with scholars' and coach educators' knowledge has allowed this relatively simplistic and misrepresentative portrayal (discourse) of video-based PA to constitute much of our current understanding relating to its use within the applied setting (Groom et al., 2011). This Foucauldian interpretation of how discourse constitutes the formation of knowledge and dominant understanding (Foucault, 1972) demonstrates how knowledge and 'what we believe to be true' is socially reproduced on both a macro (within academia) and micro scale (between coaches and players at the same club).

It is clear that the level of social control that was established over the club's players (see responses in Chapter Four) occurred as a result of the strict management and organisation of players' daily actions coupled with the coaches' 'gaze' (see Chapter Five), which presided over players' behaviour and 'saw everything perfectly' (Foucault, 1977, p. 173). The complementary use of disciplinary instruments (such as GPS, video-based PA etc.) in this

manner embodied discourse and understanding that had been developed regarding the social roles of both players and coaches, whilst also maintaining a 'cyclical' level of control over players' actions (Foucault, 1991a). In order to strengthen the disciplinary power that they were able to exert over their players, the coaches also ensured that the surveillant qualities associated with sports science testing were maximised (Foucault, 1991a). This provided a level of oligopticon surveillance through which "sturdy but extremely narrow views of the (connected) whole are made possible" (Latour, 2005, p.181). It is proposed that these multiple, interconnected points of contact with an individual provided a greater level of surveillance and in doing so reduced players' ability to resist the effects of power (Latour, 2005; Manley et al., 2012).

Data that were able to be collected at the club due to developments in GPS, video-based PA etc. constituted a "Superpanopticon" in the form of "a system of surveillance without walls, windows, towers or guards" (Poster, 1990, p. 93). Although the monitoring of players was commonly conducted at the club by different individuals with varying expertise at the club (e.g. physiotherapist, sports scientist, performance analyst, coach), their interconnectedness with both each other and *The Gaffer* (Steve) suggested that an oligopticon interpretation of surveillance at East United FC was applicable (Latour, 2005; Manley et al., 2012). Given the difficulty associated with having a singular gaze capable of maintaining surveillance over players at all times at the club, the deliberate creation of an interconnected network of surveillance revealed the importance placed on ensuring that players were monitored and observed whenever the situation allowed. The extent to which

*The Gaffer* (Steve) maintained control and surveillance over his players' actions contributed to their reflective practice having been dominated and normalised without resistance (see Chapter Four, p. 171 & Chapter Five, p. 243-244).

Although Manley et al.'s (2012) Foucauldian adaptation of 'oligopticonic surveillance' (Latour, 2005), has allowed for the presence of different modes of surveillance to be examined and understood within the context of East United FC, it could also be argued that a "taleidescopticon" model of surveillance may be more applicable (Michael, 2006, p.13). If *The Gaffer's* (Steve) position is considered within the context of a structure at a professional football club, whilst he commonly maintained control over decisions relating to first team selection, training content and the recruitment of players, it is also apparent that he himself was under the surveillance of a Chairman who made decisions regarding his future. As such, whilst he was able to employ modes of surveillance to influence the behaviour of his players, he was also subjected to modes of surveillance implemented by the club's hierarchy. Therefore, a "taleidescopticon" portrayal of surveillance may be more applicable as it describes the "complex mutualisms of surveillance" more accurately by embracing the notion that "surveillers are themselves surveilled" (Michael, 2006, p.13).

### *6.3.3 The Use of Video-Based PA as a Technology of Power*

Surveillance, like discourse is only one component necessary for the successful application of disciplinary power and the manipulation of behaviour (Foucault, 1991a; Lang, 2010). Surveillance facilitates the observation of an



individual's behaviour, but it is only placed into context following exposure to technologies of power (Foucault, 1988). It is proposed that these “determine the conduct of the individuals & submit them to certain ends or domination & objectivising of the subject” (Foucault, 1988, p.18). In this context, Foucault (1977) suggested that “docile bodies” (p.138) are constructed through the imposition of disciplinary mechanisms or “technologies of power” (Johns & Johns, 2000) which encourage the reproduction of social norms (Foucault, 1991b). Moreover, the individual can also be subjugated through the acquisition and assimilation of data (Rabinow & Rose, 2006; Chase, 2008; Manley et al., 2012).

However, in order for disciplinary power to be implemented successfully, the functions of both surveillance and technologies of power need to be inextricably linked (Foucault, 1991a). With this in mind, how these technologies of power were structured and the level of control maintained during their application may have had a significant impact on the extent to which players conformed to social norms (Foucault, 1991a). In short, the more control that was held over players within a technology of power (i.e. video-based PA session), the more likely they were to become a “docile body” (Foucault, 1979; Johns & Johns, 2000; Coupland, 2014; Nelson et al., 2014). Importantly, technologies of power at East United FC were also located within a wider culture that promoted surveillance, discipline and punishment. This approach to managing players was also underpinned by cultural discourses relating to the importance of compliance and ‘giving your all’ when engaging in activities whilst under surveillance. It was found that video-based PA was one of the most prominent technologies of power (Foucault, 1988, 2003) used

at the club. Therefore the manner in which analysis sessions were constructed requires further consideration.

Both 'pre-match' and 'debrief' video sessions were delivered by *The Gaffer* (Steve) to the players at either the club's training ground, the stadium, or in hotel meeting rooms (when playing away from home). The only break to this pattern was when *John* (Widds), the club's Assistant Manager, briefly delivered information to the players relating to an opposing team's set play patterns. *The Gaffer* (Steve) controlled both the content of the session and the manner in which it was delivered, giving no opportunity for player input. In this way, analysis sessions mirrored how training sessions were designed and delivered by *The Gaffer* and his coaching staff at the club (as discussed previously). By dictating when and where analysis sessions took place and for what period of time they lasted, *The Gaffer* maintained a cyclical level of control that could not be challenged (Foucault, 1991a). Moreover, the topics and specific video evidence that were used within analysis sessions were also decided by the manager on behalf of his players. In the analysis suite at the club's training ground, he demanded that players sat in regimented rows of chairs in front of a large screen onto which video examples were projected. By doing so he ensured that he was able to maintain a 'normalising gaze' over players' verbal and non-verbal responses to the information that he delivered to them (Foucault, 1977).

By maintaining control over every aspect of analysis sessions he was able to apply "the rather shameful art of surveillance" over players' reactions throughout sessions (Foucault, 1977, p. 172). Since players were provided with no opportunity to speak or offer their opinion on the topic in question,

their compliance and understanding was inferred through their silence. The level of control and surveillance assumed over players during these sessions made it difficult for any kind of resistance to remain unnoticed (Foucault, 1991a). During the 'playing out' of discourse through coach monologues, *The Gaffer's* (Steve) role as an "agent of normalisation" (Halas & Hanson, 2001, p. 123) and a "knowledge giver (Johns & Johns, 2000) were embodied. Similarly, it represented the "expert power" that was associated with his position (Luthans, 2011; Lunenberg, 2012).

Similar coach-led monologues have been highlighted when researching the delivery of video-based PA in elite youth football (e.g. Cushion & Jones, 2006; Groom, 2012; Groom et al., 2012), suggesting that this is an accepted form of practice within professional football, and that video-based PA is commonly used as a technology of power (Foucault, 1988, 2003). When delivering monologues imparting knowledge and information about the forthcoming opposition, to players and providing tactical insight based on their own performance, *The Gaffer* (Steve) had been successful in creating an environment where players felt unable to challenge the information that was presented:

*"Like you're just there and you get told what was good, what was bad, and what could be improved, and, err, you get on with it. You just I think need to understand what happened because you might have missed out some bits and you might, like you said earlier, have a different view of what the manager expects and what you expect, so maybe there was some stuff that you*

*thought, you know, was just alright but the manager was like “Well, that was just spot on. That was excellent. That’s what I want all the time.”*

(Simon Wootton)

Similar experiences of video-based PA were shared by *Jordan van Helden*, an experienced defender who had played in England for the last four seasons. Players’ lack of active contribution was highlighted by only one player (*Shaun Hughes*), having cited the video used during group analysis sessions as being one of the strategies used within *Creative Thought* to address a performance dilemma (see Chapter Four, p. 185). In this way, group-based analysis sessions acted primarily as a disciplinary mechanism where player behaviour was normalised. *Jordan van Helden* explained that players’ lack of input into analysis sessions had contributed them being “*not bothered anymore*”:

*“No involvement...well it shouldn’t be – it shouldn’t be. We should be more involved, but that was the case last year and it’s not this season because too many players are just not bothered anymore.”*

(Jordan van Helden)

The responses of both players reveal the normalising effects of disciplinary power (Foucault, 1991a): *Simon Wootton* stated that he just ‘gets on with it’ while *Jordan van Helden* is ‘just not bothered anymore’. Players’ reluctant acceptance of the situation aligns itself with Foucault’s notion of “docile

bodies” (Foucault, 1977, p. 138) where individuals do not resist institutional attempts to control their behaviour and manipulate their perceptions of what is right and wrong (Foucault, 1979; Johns & Johns, 2000; Coupland, 2014; Nelson et al., 2014). In contrast, their docility and willingness to carry out what was asked of them was deemed to be positive in terms of working efficiency (Parker, 1996; Manley et al., 2012).

*The Gaffer* (Steve) himself (see narrative on p. 284) made reference to the need for players to “respect” his authority, and therefore carry out his demands without question. As a result, the disciplinary and controlling manner in which video-based PA sessions were conducted appeared to be underpinned by his perception that players should demonstrate their respect for him through their docility (Foucault, 1991a; Lang, 2010). This docility became embodied and this definition of respect reinforced (see Chapter Four).

In failing to provide the players with an opportunity to speak during analysis sessions, apart from a rhetorical “any questions?” at the end of the presentation, *The Gaffer* (Steve) had created a strictly controlled and surveilled environment in which players demonstrated their commitment to the institution of professional football by remaining docile and promoting “admirable” characteristics which dominated their workplace identities (Roderick, 2006a). This aligned itself with the culture described by Cushion and Jones (2006), in which young players at Albion FC were constantly assessed on their attitude by their coaches and their willingness to show a “good attitude to work” (p.152). Failure to embody the attitude demanded by

their coaches (as in this study) commonly resulted in punishment and exclusion. As a result, docility appears to be a fundamental part of a professional football player's identity (see Chapter Four). The excerpt below places into context the perceived opportunity that players were given to speak at the end of analysis sessions:

*“So look at the season so far, is there anything fucking frightening? Is there fuck, absolutely nothing and what’s important now is that we get this week out of the way, enjoy your time, whatever you’re going to do with it and then we’re fucking back to it, back to getting fucking wins. Because this league on any given day there’s going to be some fucking strange results, we’ve got to be relentless, you’ve got to make sure that every time that we play we’re fucking trying to win the game, trying to win it and there’s enough in this room to do it and one or two of us who aren’t here. Alright...Any questions? Anybody want to say anything?...Super, thank you very much gentlemen. Thank you very much, enjoy your couple of days.”*

(End of Debrief Analysis Session Following a 3-0 loss)

Whilst *The Gaffer* (Steve) appeared to be providing the players with an opportunity to contribute something to the ‘discussion’, he had already moved on and concluded the analysis session before allowing anyone to speak. By delivering the information as a monologue, he maintained power and control over the session throughout. This design and structure of video-based PA sessions allowed *The Gaffer* (Steve) to exert disciplinary power over his

players (Foucault, 1991a; Westlund, 1999; Danaher et al., 2000; Lang, 2010; Groom, 2012). Furthermore both the club's First Team Performance Analyst and *The Gaffer* (Steve) maintained control over the content of sessions as they compiled slides and video evidence relating to what they believed was pertinent information about the opposition or their own performance. This assumed responsibility and control over the content of analysis sessions provided no opportunity for players to openly challenge whether the examples they had selected between them were representative or not. As a result, the only opportunity for players to challenge the information that was presented to them would have been through a public demonstration of resistance and rejection of the 'norm' (Foucault, 1991a). Given the repercussions of such behaviour (due to the extensive surveillance and disciplinary mechanisms that were deployed at the club), most players opted to remain docile and not challenge what was presented to them:

*"Not really, no. Erm, because ... because I suppose ... Personally because I think what he said has been correct, so I've got no reason to argue.*

(Shaun Hughes)

*Mark Hall*, a young central midfielder who had established himself at the club following his initial breakthrough as a youth team player 3 seasons ago, demonstrated a similar level of institutionalised docility:

**Researcher:** *"OK. What about your role as players in those meetings?"*

**Hally:** *"I don't think it's...unless the Gaffer asks for feedback, I don't think it's really necessary."*

[Interview continues]

**Researcher:** *"So if something like that [individual error] happened to you, would you see any benefit in watching it again?"*

**Hally:** *"No, I wouldn't see any benefit in it but I wouldn't have any problem with watching it again. He obviously sees that as something we need to look at again so it's about what the manager thinks."*

In this instance, video-based PA was successfully implemented as a technology of power as it "determine[d]" *Hally's* "conduct" and submitted him "to certain ends or domination & objectivising" (Foucault, 1988, p.18). Even though *Hally* personally saw no benefit in watching a certain critical incident involving him again, because *The Gaffer* (*Steve*) deemed it to be beneficial to re-watch it, he demonstrated his docility by agreeing with the manager (Foucault, 1991a). In so doing, a level of confessional power was also asserted over the players through their constant exposure to video-based PA and the accompanying discourse that they should reflect upon their performance (Foucault, 1979). Given that their reactions and attitudes towards analysis were under constant scrutiny, players had "gained a conscience that prevents deviation from whatever is perceived as normal"



(Mills & Denison, 2014, p.223), which resulted in them re-watching videos that *The Gaffer* deemed applicable.

*The Gaffer's* (Steve) belief that players were unable to accurately interpret and evaluate their own experiences independently underpinned his disciplinary use of video-based PA (see Chapter Four, p. 168). As a result, he used subtle disciplinary instruments (such as GPS, video-based PA etc.) as described by Foucault (1991a) to ensure that his perspective was reproduced and embodied by his players. The extent to which *The Gaffer* (Steve) had successfully achieved this level of embodiment and reaffirmed the understanding that 'the manager is always right' was evidenced in *Hally's* belief that unless he explicitly asked for feedback from his players, player feedback was not "*really necessary*". The level of control exerted over players during analysis sessions ensured that *The Gaffer* (Steve) and his coaching staff were also able to prevent situations where potential resistance may be encountered. For example, the club's goalkeeping coach was due to engage in a one-on-one video session with a recently-signed goalkeeper, but then changed his mind:

**Researcher:** "*Alright [name], do you still want those clips for your video session with [player name]? When are you doing it?*"

**GK Coach:** "*To be fair I've changed my mind and I'm not going to do it with him anymore.*"

**Researcher:** "*Oh right....*"

**GK Coach:** “Yeah, ‘cos it wouldn’t be so bad if he’d just sit there and listen to what I’ve got to say but he’d only want to get his opinion across and not accept what it is that I’ve got to say about it and challenge it so there’s no point in me doing it. I mean I could sit there and show him the clips and talk him through them but there’s just no point with him. He’s always fucking right.”

In anticipating that he may experience possible resistance during the video session from the player in question, the goalkeeping coach simply removed the potential for this to occur by cancelling the session. In doing so, he confirmed his role as an “agent of normalization” (Halas & Hanson, 2001, p.123) and refused to provide the player with an environment in which he may have been able to challenge his role as a “docile body” (Foucault, 1977, p. 138). Moreover, the goalkeeper coach embodied and reproduced *The Gaffer’s* (Steve) discourse that “players believe they are never to blame” (p. 279) as he explained that the player in question thinks “*he’s always fucking right*”. Similarly, he embodied the institutionally established discourse that players needed decisions to be made for them as he cancelled the analysis session on behalf of both himself and the player. In doing so, he reaffirmed the legitimacy associated with *The Gaffer’s* (Steve) knowledge and his role as the leader of the football club (see Chapter Five). In this way, a ‘united front’ was presented to the players by the coaches and management team, which minimised the possibility of resistance. By maintaining control throughout the process of compiling and disseminating video-based PA information, coaches

were able to manipulate the information presented to the players in line with the discourse and imbalances in power relations that they wanted to re-affirm (Foucault, 1972, 1980).

Another facet to the delivery of video-based PA was that both 'pre-match' and 'debrief' sessions were delivered to the players as a large group. Although this is a commonly adopted approach when either coaching (Lyle, 2002) or disseminating analytical information (Groom et al., 2011, 2012), there were social consequences associated with delivering information in this manner. Groom et al. (2011) suggested that by delivering feedback in a group environment, other players' perceptions of the performance under scrutiny contributes to a collective critical gaze, which in turn encourages normative correction (Foucault, 1991b). It is proposed that the control held over sessions and the presence of surveillance at East United FC strengthened this 'gaze' as it provided a constant reminder of players' expected behaviour within sessions (Foucault, 1991a). As a by-product, the opportunities for players to challenge *The Gaffer* were significantly minimised. *Shaun Hughes'* response on page 284, where he stated that he always believed the *The Gaffer's* (Steve) instructions during analysis sessions were correct, demonstrated the extent to which players' behaviour and interpretations had been normalised (Foucault, 1991b)

Moreover, in the context of applying Foucauldian concepts to reflective practice within nursing, Fejes (2008) suggested that when nurses engaged in group sessions to reflect on their own practice it served only to be a form of governing practice as each other's appraisals were made "visible" and

available for “scrutiny and assessment by others” (p.9). It was proposed that reflection is primarily an individually oriented process (when drawing links to notions of confession in religion, which is solely a one-to-one activity) and that the introduction of others into the process serves only to create a surveillant environment in which “self-governing Licensed Practice Nurses” are encouraged (Fejes, 2008, p.2). If we consider that video-based PA has traditionally been perceived as a feedback mechanism with the aim of initiating periods of reflection and changing future behaviour (e.g. Court, 2004; Groom & Cushion, 2004, 2005; Groom et al., 2011), using it in the presence of others (i.e. group sessions) can change this perception, rendering it surveillant and behaviour-normalising (Foucault, 1979; Johns & Johns, 2000).

In this way, during analysis sessions, the silence of players not under scrutiny acted only to reaffirm and encourage what was being presented by *The Gaffer* (Steve) regarding the player who was under scrutiny, thus increasing the pressure on that individual to conform. Therefore, if an individual player demonstrated a form of resistance, it could also be interpreted as a challenge to the rest of the group’s acceptance (Fejes, 2008; Groom et al., 2012). Such a sequence of events would create a situation where players may be punished for their non-conformity (Foucault, 1979), thereby creating enough of a deterrent for players to remain silent. *Peter Evans* made specific reference to this social dynamic:

*“No. I mean a lot of people don’t like to speak up, do they, in front of the group, when he [Gaffer] goes “Has anybody got anything to say?” and*

*everybody's sitting in there, and you've got training and it's Monday morning and everyone's like "No, I ain't got nothing to say" do you know what I mean?"*

(Peter Evans)

Interestingly, however, he suggested that in order to "get the best out of debrief sessions" *The Gaffer (Steve)* should make the analysis sessions more interactive and give the players an opportunity to speak:

*"It's up to the Gaffer to be-, to make it ... If he wants to get the best out of the debrief, to make it open, do you know what I mean, for people to say stuff."*

(Peter Evans)

This contrast in what he believed to be best practice versus the action he took, demonstrated the level of docility and compliance that had been achieved across the club's players (Foucault, 1991a). Moreover, it revealed the normalising effects of disciplinary power in action (Foucault, 1991a). Despite the belief that debrief sessions should be more interactive, he declined the few opportunities afforded to him by *The Gaffer (Steve)* to speak, as he felt intimidated in the current group environment. Even when he described how debrief sessions could be improved, he still made reference to *The Gaffer's (Steve)* role in deciding whether or not to adopt a more democratic approach. This level of conformity reaffirmed a number of the themes that have already been discussed throughout this chapter: but in particular, *Evo's* willingness to remain docile, irrespective of whether he agreed with *The Gaffer's (Steve)* decision or not.

The lack of trust in players' decision-making contributed to the fact that coaches chose to dominate players' reflection and experience-based learning (see Chapter Four). Despite this level of intrusion however, based on their desire to be successful and avoid punishment, players actively sought to embody the discourse that was introduced by their coaches as they represented the 'gatekeepers' to potential future success (Bampouras et al., 2012, p.473). In doing so, players' docility and willingness to reproduce their coaches' interpretations of situations actually confirmed the perception that they were unable to make effective decisions alone. This constant reproduction of coaches' views was facilitated by and recreated a disciplinary culture, which provided the necessary level of control and surveillance to prevent players from making (or attempting to make) poor decisions. Therefore, the use of video-based PA as part of coach monologues, represented a technology of power, constantly confirming and reminding players of their social positions within the club's hierarchy (Foucault, 1991a; Groom, 2012).

In the concluding parts of both Chapters Four and Five (pages 203 and 263-264), the specific and unique experiences of both players' and coaches' experiences within the confines of East United FC have been acknowledged. This has been accompanied by an understanding that micro differences within the cultures held at other both UK-based and non UK-based football clubs may exist. Therefore ideas relating to discipline, surveillance and the role of coaching may differ as a result of exposure to alternative forms of practice at other clubs. It is equally important, however, to acknowledge that a macro

level culture of dictatorial leadership and symbolic violence exists within professional football (Cushion & Jones, 2006). As a result, while subtle club-specific cultural differences may exist, entrenched domain-specific expectations of what 'coaching' and 'management' constitute will still also influence individuals' interpretations and experiences (Cushion & Jones, 2014).

#### **6.4 Summary**

By investigating from a Foucauldian perspective how video-based PA was used at East United FC, new knowledge relating to the social implications associated with varying forms of analysis delivery has been generated (Foucault, 1988; Johns & Johns, 2000; Foucault, 2003). By adopting an original in-situ approach to researching video-based PA within the applied setting, a unique contribution to existing literature has been provided as video-based PA was found to be a technology of power that contributed to a wider culture of surveillance. As a result, traditional and commonly accepted methods of delivering video-based PA as part of coach monologues, within a group environment, are questioned (Groom et al., 2011, 2012; Reeves & Roberts, 2013). It is clear that the culture and social environment in which video-based PA is delivered can have an influence not only on the behaviour, interpretation and responses of individual athletes who are part of it, but also on the underlying social function that justifies its existence.

In this study the use and structure of video-based PA occupied the role of a technology of power that facilitated the reinforcement of socially desired norms and encouraged normative correction (Foucault, 1979, 1988). This

occurred primarily as a result of *The Gaffer's* (Steve) lack of trust in his players' decision-making. Subsequently, the inherent disciplinary characteristics that video-based PA possesses were used as part of a wider culture of surveillance that prevented players from making independent decisions. The manner in which video-based PA was implemented (i.e. sessions were controlled and dictated to players by *The Gaffer*) also helped confirm discourses that underpinned imbalances in power relations between key stakeholders (players/coaches) and constituted the understanding of the coaches' respective roles as the 'unchallengeable experts' (Foucault, 1972; Edwards, 2008). In summary, video-based PA was used as a tool that governed and restricted players, rather than empowering them with new knowledge (Manley et al., 2012).

#### *6.4.1 The Implications of a Surveillant & Disciplinary Culture on Learning*

Throughout the chapter it has been revealed that an all-encompassing network of surveillance and the use of various disciplinary instruments, such as the strict control and management of training sessions, allowed for the subjugation and normalisation of players' behaviour (Foucault, 1991a; Aycock, 1992; Duncan, 1994; Markula, 1995; Chapman, 1997; Maguire & Mansfield, 1998; Lang, 2010; Manley et al., 2012). As a result, imbalances in power relations between players and coaches were established and maintained, which in turn rendered players docile (Foucault, 1977). Moreover, this docility represented a willingness to reproduce and embody the knowledge of their coaches (see Chapter Four), rather than formulate their own. Research suggests that in order for genuine learning to occur,



ownership and autonomy regarding the interpretation of an individual's experience are required (e.g. Mezirow; 1985; Gilbert & Trudel, 1999; Moon, 2004; Hodkinson et al, 2008). At East United FC, it was evident that players' experiences comprised of docility and conformity to social norms dictated by the coach in order to avoid the threat of punishment or non-selection (Foucault, 1979, 1991a).

The various activities (e.g. training, gym sessions, video-based PA sessions) that players engaged in on a daily basis at the club, which resembled potential opportunities for learning, were dominated and controlled in a disciplinary manner by their coaches. Subsequently, it could be concluded that the only "learning" that actually occurred within this disciplinary environment was the replication or indoctrination of discourse and encouraged behaviour. In summary, players were actively prevented from accessing conditions that were conducive to learning (e.g. Mezirow; 1985; Moon, 2004; Hodkinson et al., 2008) in either training sessions or during video-based PA sessions and were discouraged from independently interpreting their own behaviour.

The tactical structuring of players' interactions with their coaches and the multiple forms of surveillance that were used at East United FC, resulted in the freedom that players experienced being significantly compromised. Chapter Four critically examined players' reflective practice and experience-based learning and in doing so revealed that reflection was used by coaches as a technology of power (Foucault, 1988, 2003) to manipulate players' behaviour. By remaining present and applying a "normalising gaze"

throughout the reflective process, coaches were able to align players' interpretations with those of the dominant discourse that they themselves had established. Moreover, players were also encouraged to review critical incidents of their own performance via video-based PA and make normalising corrections (Foucault, 1991b), reflecting their coaches' expectations.

The disciplinary and normalising function of video-based PA was also cited by coaches in Chapter Five, where it was described as a good way to punish players and reaffirm their own positions as "knowledge givers" if players attempted to challenge their authority (Johns & Johns, 2000). As a result the surveillant and disciplinary culture at the club provided players with a set of pre-determined guidelines that they used to interpret their own experiences through reflection (Foucault, 1991a; Lang, 2010; Fejes, 2013). By designing and maintaining control over the conditions surrounding player-coach interactions, coaches were able to dominate any exchange of knowledge, understanding or discourse that occurred within transpiring 'games of truth' (Foucault, 1972, 2000a).

In this context, the club's culture was underpinned by a desire to normalise players' behaviour wherever the opportunity presented itself, irrespective of the circumstances. In creating this type of environment and by dictating the actions and responses that were required of their players, it was "easy enough to find signs of the attention then paid to the body – to the body that is manipulated, shaped, trained, which obeys, responds, becomes skilful and increases its forces" (Foucault, 1991a, p.136). At East United FC, given the lack of autonomy afforded to players and the accompanying oligopticon

surveillance that observed their every response, it was easy to assess players' levels of conformity (Latour, 2005; Manley et al., 2012). If players failed to demonstrate an acceptable level of compliance, they were subjected to further manipulation, shaping and training (Foucault, 1991a).

Consequently rather than being benign and unproblematic, this study has demonstrated that the manner in which sports science provision such as video-based PA is used, is socially constructed (e.g. Hodgkinson et al., 2008; Mackenzie & Cushion, 2013). Importantly, however, at East United FC an inseparable and interdependent relationship existed between the club's culture and the disciplinary outcomes associated with the assimilation of performance data. The use of data as a form of surveillance was underpinned by a desire to control players' actions. As a result the use of sports science provision such as video-based PA produced regular disciplinary effects and sought only to reproduce the perception of surveillance being an important aspect of the club's culture (Foucault, 1991a; Lang, 2010). Therefore, if video-based PA is to fulfil its traditional, positive perception currently portrayed in the literature, an environment that promotes player ownership and provides the necessary conditions for independent learning to occur would be required (e.g. (Court, 2004; Groom & Cushion, 2004, 2005; Groom et al., 2011).

Whilst this study has challenged traditional representations of the role that video-based PA may occupy within an elite performance environment, it is important to acknowledge how current discursive relating to its use and function may have been reproduced (e.g. Hodges & Franks, 2002; Lyle, 2002;

Stratton, et al., 2004; Carling et al., 2005; Drust, 2010; Groom et al., 2011). For example, without a specific theoretical analysis relating to its use and social function, the manner in which video-based PA was used at East United FC largely aligns itself with scholarly interpretations of video-based PA being a useful form of performance feedback (e.g. Hodges & Franks, 2002; Court, 2004; Carling et al., 2005; Drust, 2010; Wright et al., 2012). Similarly, the fact that players did not openly cite any disagreement or grievances with their coaches' actions during video-based PA sessions further supports unproblematic portrayals of the use of video-based PA within the coaching process (e.g. Carling et al., 2005). Moreover, the presence of video-based PA within players' reflective practice (albeit irregular) and players' reference to 'engaging' with it would also imply that it is a valuable learning resource and in doing so reaffirm perceptions that have been generated within academia (Hodges & Franks, 2002; Court, 2004; Drust, 2010; Wright et al., 2012).

Therefore, without critically examining the social environment in which video-based PA is used or in the absence of applying a theoretical or sociological stance to challenge traditional perceptions of its function, it is easy to see how discourse surrounding the use of video-based PA has been reproduced and transformed into knowledge (Foucault, 1972). For example, studies concerning the use of video-based PA within the coaching process have yet to consider interrogating players' or coaches' perceptions in direct relation to the social environment in which they co-exist (e.g. Carling et al., 2005; Drust, 2010). Thus, the process has been portrayed as being largely unproblematic and linear in nature. The lack of theoretical or conceptual challenge to this discourse has contributed to its acceptance, reproduction

and its role in constituting knowledge surrounding the topic under consideration (Foucault, 1972).

#### *6.4.2 Critical Commentary on using Foucault as a Theoretical Framework*

The application of Foucault (1972, 1979, 1991a, 1999b, 1999) as a theoretical framework has allowed for a critical investigation of the culture present at East United FC and the role of technologies of power. Fundamental to the analysis was Foucault's notion that power is relational and not unchallengeable and rigid in nature (Foucault, 1991a). Much of the study has referred to the different modes of surveillance employed by *The Gaffer (Steve)* to maintain control over his players (Foucault, 1979; Markula & Pringle, 2006; Manley et al., 2012) in order to re-affirm his position of power.

Irrespective of the techniques or strategies that a manager may seek to implement in order to control his players, there are a number of cultural expectations associated with his role within the structural hierarchy of a professional football club. For example team selection and deciding the content and scheduling of training are some of the responsibilities that are synonymous with the role of the manager. As a result, whilst boundaries within power relations may be challenged or tested in certain circumstances, it could also be argued that a number of long-standing institutional expectations will remain consistent and therefore govern how individuals behave (Fox, 2000). To this end, irrespective of who occupies the position, the extent to which players can affect the level of influence that the manager has over their lives is arguably quite limited. For example within a prison environment, which Foucault investigated (Foucault, 1991a), regardless of the resistance

that prisoners provide towards prison guards and the institution itself, their fundamental roles as prisoners will not change. Therefore, the suggestion that power is relational may be questioned within hierarchical structures where there are embedded and ingrained expectations of individuals occupying certain positions (as in professional football) (Fox, 2000).

The data has shown that players demonstrated some resistance to reflecting on their own performances (see Chapter Four, p. 202) (Foucault, 1980, 1988; Cotton, 2001; Fendler, 2003; Fejes, 2008, 2013). In doing so, the players' actions lend support to Foucault's interpretation of power acting as a "capillary-like network" in which every point in the network can affect other points in a flat rather than hierarchical structure (Markula & Pringle, 2006, p. 36; Kerr, 2014). Moreover, his notion that there is "the possibility of resistance for if there were no possibility of resistance...there would be no relations of power" (Foucault, 1988, pp. 11-12) is also supported. Whilst it is clear that power is fluid (Foucault, 1980) and the extent to which a manager can control his players may vary from time to time (based on a number of factors such as results, competence, relationships etc.), it is also evident that distinct hierarchies exist at professional football clubs.

Within these hierarchies, the manager alone is responsible for significant decision-making (i.e. contracts, transfers, team selection) irrespective of the current state of power relations between players and coaches. Therefore, even if players provide significant resistance towards a manager's training methods, decision-making and overall management style, they are arguably still unable to influence the responsibility or power that he has in making

decisions regarding their immediate futures. Subsequently, this hierarchical structure of a professional football club may be likened to that of a prison and does not completely align itself with Foucault's understanding of power being relational (Foucault, 1980).

## **6.5 Conclusion**

The aim of this study was to investigate the culture present at East United FC and the role of technologies of power (Foucault, 1988; Johns & Johns; Foucault, 2003). Two research questions underpinned the purpose and design of the study; (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches? and (4) To what extent is the use of video-based PA influenced by the culture in which it is implemented? By investigating the construction of a professional football club's culture in the context of the different disciplinary mechanisms that were used, this study has generated new knowledge that complements existing literature (e.g. Cushion & Jones, 2006; Manley et al., 2012; Cushion & Jones, 2014). This is the first study that has adopted an in-situ, case study approach to examine the social environment in which senior professional football players and coaches co-exist, and how their respective actions and beliefs contribute to its construction and maintenance. Moreover, it is the first study to critically challenge the roles and underlying functions of 'taken for granted' forms of sports science (such as video-based PA) from a social perspective in senior elite-level football. As a result, the originality of the approach that was adopted

has yielded findings that provide a unique contribution to the current football and video-based PA research landscape.

In addressing research question two, it was found that a complex, complementary and interchangeable structure of disciplinary mechanisms and forms of surveillance were present at the club, which allowed for the control and manipulation of the club's players (Foucault, 1991a; Johns & Johns, 2000; Cole et al., 2004; Barker-Ruchti, 2011). These mechanisms varied from non-observable culturally established discourses, which placed players' docility into context, to physical and observable practices such as the regimented structuring of training sessions that occurred on a daily basis at the club (Mills & Denison, 2013). Cultural discourses, such as 'the manager is always right' and the need for players to 'respect the manager', had a direct influence on players' willingness to engage in social practices, and remain visible and under surveillance on an almost constant basis. Moreover, as discussed in Chapters Four and Five, an institutional discourse where 'being a winner' embodied the sign of a true professional, placed players' and coaches' willingness to reproduce the knowledge of more 'powerful others' into context (Foucault, 1998; Cushion & Jones, 2014). The affirmation of this discourse was made possible through "the rather shameful art of surveillance" (Foucault, 1977, p. 172) which included *hierarchical observation*, *normalising judgements* and periods of *examination* (Allan, 2013).

Players were made aware of their visibility during training sessions through the use of GPS monitors and the constant presence of coaches' normalising gazes (*hierarchical observation*). Data from GPS monitors were



downloaded and compared with what would be expected of them, given the duration and intensity of the session (*normalising judgement*), and were then presented and compared with team-mates' in the corridor of the club's training ground (*examination*). By doing this, players were encouraged to normalise their behaviour in line both with their team-mates' and socially accepted levels of physical performance established by their coaches. Similar processes were conducted following matches as PA statistics were publicly displayed at the club's training ground, and used in the monologues delivered by *The Gaffer* (Steve) during video-based PA sessions.

As a result, much of the sports science provision at the club acted as technologies of power, which sought to “determine the conduct of the individuals & submit them to certain ends or domination & objectivising of the subject” (Foucault, 1988, p.18). The use of sports science provision in this manner was underpinned by *The Gaffer's* (Steve) belief that player's required constant guidance, as in isolation they made poor decisions. As a direct result, coaches maintained a “normalising gaze” throughout the process in order to influence and normalise players' responses in line with their expectations (Foucault, 1979, 1991; Johns & Johns, 2000). The structure of these technologies of power also contributed to their effectiveness in rendering the players docile and ensuring compliance (Foucault, 1977, 1988; Barker-Ruchti, 2011). The construction and reproduction of the disciplinary culture that existed at East United FC was made possible only through the active contribution of both players and coaches. Thus, the overarching culture in which surveillance and the use of technologies of power were

commonplace remained unchallenged and it was continually reproduced through a process of socialisation (Foucault, 1988, 2003).

It has been evidenced, therefore, that the culture at East United FC had a profound influence on inhibiting the reflective practice and experience-based learning of both coaches and players. It is likely that the culture at other clubs may have the same level of influence, though possibly with a different outcome, as it is the set of beliefs/attitudes held (i.e. culture) that determine how reflective practice and experience-based learning take place.

When considering research question four it was found that the use of video-based PA was determined entirely by the disciplinary and surveillant culture at East United FC. *The Gaffer* (Steve) delivered video-based PA sessions to the first team players as a group, and as part of a monologue (Groom, 2012). Both techniques afforded no opportunity for players to contribute to analysis sessions. In doing so, the silence of the group acted as a collective critical gaze, which in turn encouraged normative correction (Foucault, 1991b; Groom et al., 2011). If video-based PA is to be used as a resource that facilitates athlete learning, through providing them with the opportunity to directly re-observe and evaluate their responses and behaviours (e.g. Court, 2004; Groom & Cushion, 2004, 2005; Groom et al., 2011), a culture of player involvement and ownership would be required. Unless athletes have ownership and autonomy throughout the process of interpreting their own experiences, reflective practice will continue to be informed by disciplinary undertones (Fejes, 2008, 2013). Therefore it is suggested that any use of

video-based PA is influenced entirely by the culture of the club implementing it.

The new knowledge that has been generated in relation to the levels of interaction and interdependency that existed between key stakeholders' behaviours, beliefs and the formation of the culture at East United FC reflect the originality of this research. The findings of the study have a number of practical implications for sports coaches. Coaches may critically question their use of sports science provision in the context of whether it provides an insight into performance that can subsequently influence the content and structure of training, or whether it merely provides an opportunity to ensure a level of control over their athletes? Similarly, coaches could consider the disciplinary connotations and effects that adopting traditional approaches to planning, structuring and conducting training sessions have on their athletes (Mills & Denison, 2013; Denison & Mills, 2014). As a by-product, the training environment that they have co-created with their athletes may also be reviewed as coaches may seek to question how overarching cultures are informed by elements of their practice (Denison & Mills, 2014). Reflexivity within coaching practice is encouraged, as is an understanding of the controlling effect that coaches can have on athletes' experiences (Denison, 2007; Denison & Mills, 2014).

## **Chapter 7. Thesis Summary**

This thesis has identified a number of limitations in existing work related to reflection (Chapter Four, p. 193, Chapter Five, p. 252-253); experience-based learning (Chapter Four, p. 206 & Chapter Five, p. 246) coaching (Chapter Five p. 257) and PA research (Chapter Six, p. 304). In reality within a professional sport context these concepts are interlinked, yet little research had considered them in combination. Moreover, despite the influence of a strong culture and the particular social context on these practices, the number of in-situ studies was limited, usually investigating a single aspect, for example coaching (e.g. Potrac et al., 2002; Cushion & Jones, 2006, 2014). The thesis was therefore concerned with critically examining the experience-based learning and reflection of both professional football players and coaches, within an active professional coaching context. Specifically, the four research questions that underpinned the thesis were:

- (1) How are discourses of reflection and coaching defined and to what extent do they influence player and coach learning?
- (2) What is the influence of culture within a professional football club on the reflective practice and experience-based learning of players and/or coaches?
- (3) What effect does video-based PA have on players' and coaches' reflective practice and experience-based learning?

(4) To what extent is the use of video-based PA influenced by the culture in which it is implemented?

A combination of Gilbert and Trudel's (2001) 'reflective conversation' and Foucault's (1972, 1980, 1988, 1991a, 1991b, 2003) concepts relating to the social construction of power, knowledge and discipline allowed for a comprehensive understanding of both players' and coaches' experiences and the influence of the social environment. Moreover, the research is the first to allow for actions to be located within a wider social context and consider how discourses were constructed that contributed to a disciplinary culture. The players' and coaches' relationships, and the power relations that existed between them, were also considered in the context of their respective actions. The lenses through which players and coaches reflected on their experience were also examined critically as were factors that influenced reflection (e.g. Cotton, 2001; Fendler, 2003; Fejes, 2008, 2013).

Findings showed that the experiences of both players and coaches were interconnected and dialectic in a complex network of interactions. Their respective actions and reproduction of discourse manufactured an all-encompassing culture of surveillance and discipline in which players' interpretations and behaviour were manipulated through a process of normalisation. Data evidenced that disciplinary mechanisms were implemented on a regular basis at the club in order to ensure that discourses were adhered to (see Chapter Six, p. 309). Disciplinary mechanisms took the form of maintaining strict control and surveillance over players' daily training sessions, gym sessions and video-based PA sessions so that their behaviour

could be constantly assessed in relation to expected standards (Cushion & Jones, 2006; Mills & Denison, 2013). The discourse generated acted as social rules and occupied the role of an invisible club handbook or set of guidelines that players and coaches used to place their experiences into context (see Chapter Six).

Coaches had established imbalances in power relations, and data showed that it was their discourse that informed these guidelines (see Chapter Six, p. 279-280). These unwritten rules were underpinned by an institutionally reproduced performance discourse, as seen in previous research in professional football (e.g. Cushion & Jones, 2006, 2014), where 'being winners' defined players' existence as professionals (Chapter Four, p. 176-177 & Chapter Five, p. 219). As a result, players experienced little control and autonomy in their own learning and interpretation of situations (see Chapter Four, p. 171-172). In this context the club aligned itself with the underlying function of the disciplinary institution (Foucault, 1991a, p.256).

The findings relating to research question one showed that the ability to introduce and establish discourse regarding certain aspects of practice (i.e. coaching) and how individuals should behave within an organisation require imbalances in power relations (Foucault, 1980, 1991a). Foucault (1991a) suggested that discourse held by individuals who are deemed to be powerful gain legitimacy as a result of their powerful positions. Therefore "power and knowledge directly imply one another" (Foucault, 1991a, p. 27). This interconnectedness between power, knowledge and the ability to generate "truths" was evident through the socialisation and acceptance of discourses that were introduced by the club's management team, and in particular *The*

*Gaffer (Steve)* (Chapter Five, p. 222-223). Although discourses primarily referred to the social roles that individuals should fulfil within the club's structure, discourse relating to reflection, coaching and the role of video-based PA within players' and coaches' post-match routines were also socially constructed (see Chapter Four, p. 185-186 & Chapter Five, p. 227-228). By tactfully manipulating the environment and social dynamic in which various 'games of truth' occurred between players and coaches (Foucault, 2000a), *The Gaffer (Steve)* and his staff were able to dominate the playing out of discourse and impose their beliefs onto the players.

Data showed that the actions, interpretations and responses of both players and coaches at the club were underpinned by an institutionally ingrained performance discourse (see Chapters Four & Five). As in Cushion and Jones (2014) where within a professional football club's youth Academy 'winning' and the importance of 'being winners' determined coaches' conduct and players' willingness to try to fulfil their coaches expectations (p. 291); coaches in this case appeared to have embodied and reproduced this discourse following a previous professional football career (Chapter Five, p. 219). The coaches had been socialised into these 'cultural values' as players (see Chapter Five) where an imbalance in power relations between coach and player are typically formed (Foucault, 1980) (cf. Cushion & Jones, 2014).

As a result, younger players attempt to show the 'right attitude' (Cushion & Jones, 2014) and embody this discourse through a willingness to do almost anything in the pursuit of 'winning'. This discourse is then replicated, reproduced and embodied throughout players' professional

careers (see Chapter Four). Within professional football this continual process of socially reproducing an institutionalised performance discourse places the reproduction of other club specific or less prominent discourses into context (see Chapter Six).

Unsurprisingly, the data in this case showed that both players and coaches continually referred to this discourse (see Chapters Four & Five). As a result, players and coaches failed to challenge the use of strategies or techniques that they believed could contribute to them being 'winners' (see Chapter Four, p. 167-168). This performance discourse was constantly reaffirmed and embodied on a daily basis through the delivery of strictly controlled and disciplinary oriented training sessions, gym sessions and video-based PA sessions to the club's players (Cushion & Jones, 2014). These findings add significant data to the literature in understanding how knowledge is socially reproduced in professional football. Moreover, it is the first study to establish how performance discourses were reproduced and played out in the reality of elite professional sport.

The findings demonstrated that notions of 'reflective practice' remained unchallenged and unquestioned and were viewed through the lens of a performance discourse contributing to the goal of 'winning', and with this end in mind, data showed that reflection was seen as of paramount importance (see Chapter Five, p. 226-227). This discursive understanding of reflection directly influenced reflective practice, which was typically conducted, and tended to be accentuated, following poor performances. The effective use of disciplinary power meant that the coaching staff sought to reproduce and embody the discourse of reflection (see Chapter Six).



Data showed that as a result of their positions of power within the club, coaches experienced relative autonomy and freedom within their own reflection and interpretation of their own experiences. Because of this, coaches initiated periods of reflection independently and in response to dilemmas that they deemed worthy of reflecting upon (within the confines of the overarching culture). Coaches primarily relied on *Joint Construction* and *Creative Thought* as strategies to address potentially puzzling situations. Their preference for *Joint Construction*, a process that is proposed to involve “mutually developed strategies with one or more peers, ideas are tossed around and discussed in a two-way relationship” (Gilbert & Trudel, 2001, p.24) also provided an insight into their social roles. Primarily, the level of trust that coaches had in each other reflected the interdependency that was required in maintaining a ‘united front’ to the players. This was in contrast to the experiences of players who rarely sought the opinion of their team-mates or peers in fear of it being used against them and it resulting in punishment (see Chapter Four).

Coaches’ preference for *Joint Construction*, however, also revealed far more subtle imbalances in power relations that existed within the management team (see Chapter Five). *The Gaffer* (Steve) had a preference for *Joint Construction* built on his experiences, and imposed his preference onto the staff through the use of regular coaches’ meetings. He used *Joint Construction* as a technology of power by making his colleagues’ private thoughts public during meetings (Cotton, 2001; Fendler, 2003), but imposing his interpretation of events as the “norm”. As the figurehead of the club, the coaches aligned with and interpreted situations through his ‘lens’ (Foucault,

1988, 2003). Whilst the learning experiences of coaches at East United FC appeared largely self-determined (see Chapter Five), imbalances in power relations within the management structure meant that learning was actually the reproduction of discourse and the normalisation of behaviour (Foucault, 1980, 1991a). The dominant discourses at the club exerted total influence on player and coach learning.

In addressing research question two it was revealed that players' experience-based learning and reflective practice were underpinned by a similar process of socially reproducing discourses of reflection within the context an overarching performance discourse (see Chapter Four, p. 177-178). However, given the distinct difference between players' and coaches' social roles within the club, their respective experiences were markedly different. Coaches had established imbalances in power within the coach-player relationship and as such controlled, or dominated players' reflective conversations. Players subsequently aligned their interpretations with those held by the coaches. As a result, players' reflective practice was used as a technology of power by the coaches in order to attain their compliance and docility (Foucault, 1988, 2003). This resulted in a coach-driven discourse that 'players should respect the manager' and 'players need decisions to be made for them' which was held and reaffirmed by *The Gaffer* (Steve) - see Chapter Six, p. 279-280.

Coaches maintained a disciplinary presence throughout players' reflective conversations by providing "a single gaze to see everything perfectly" (Foucault, 1991a, p. 173) (Chapter Four, p. 196). This power resulted in players' behaviour being normalised by their coaches and

reproduced discourse that 'the manager is always right' and 'reflection is necessary'. As a result, players sought their coaches' advice more often than using any other strategy to deal with a given dilemma (see Chapter Four, p. 165). Moreover, players used video-based PA to align their responses and future strategies with those expected by their coaches in order to avoid punishment and enhance their chances of success (i.e. being picked for the team).

In considering reflection in this way, this is the first study in sport to critically analyse the role of reflection and consider it as a disciplinary mechanism capable of normalising behaviour and reproducing social norms. In addition these findings contribute to the existing literature providing a detailed analysis of how discourses of reflection are influenced by imbalances in power relations within professional football.

The findings also showed that various 'support mechanisms' such as the use of GPS, video-based PA and physical testing were capable of assimilating large amounts of data and maintaining surveillance over players. Used as a means of control by *The Gaffer* (Steve) they represented technologies of power that were underpinned by culturally reproduced discourse and sought to normalise players behaviour through constant surveillance (Foucault, 1988, 2003). The strict control held over the spatial, temporal and organisational components of activities that players were involved in on a daily basis (e.g. training sessions, gym-based sessions, video-based PA sessions) allowed for these 'support mechanisms' to provide direct surveillance over their actions in line with expected norms (Mills & Denison, 2013). Given the multiple mechanisms that were employed (i.e.

GPS, video camera, coaches' gaze), they represented oligopticon surveillance (Latour, 2005; Manley et al., 2012) which "made it possible to see induce effects of power and in which, conversely, the means of coercion make those on whom they are applied clearly visible" (Foucault, 1991a, p.171). The assimilation of performance data and the constant presence of systems of measurement (i.e. GPS unit, video camera) within this strictly controlled environment allowed the necessary stages of hierarchical observation, normalising judgements and examination (Foucault 1991a; Allan, 2013) to occur in establishing and maintaining social control over the players. This reinforced imbalances in power relations and aided the reproduction of discourse. As a result, players could be punished when they failed to demonstrate compliance and docility (see Chapter Six). It was this underlying disciplinary agenda and surveillant culture that determined that reflection and experience-based learning was another opportunity for players' behaviour and interpretations to be normalised.

In response to research questions three and four it was found that video-based PA was one of the most prominent technologies of power at the club (Foucault, 1988, 2003). All games were filmed and coded in relation to both technical and physical performance (see Chapter Six, p. 295). *The Gaffer* (Steve) delivered feedback monologues that did not actively involve the players in dialogue (see Chapter Six). This discouraged player contribution and created a "normalising gaze" that ensured compliance (Lang, 2010; Groom et al., 2011). By determining the video content that was delivered during analysis sessions and by making players sit in front of him in a regimented fashion, *The Gaffer* (Steve) was able to maintain surveillance over

their responses and judge their reactions based on the information he was presenting to them. Players' silence was deemed as acceptance of *The Gaffer's* (Steve) knowledge and as a result, collective silence within group sessions created a collective gaze that judged and assessed the players (see Chapter Six). This ensured that players' interpretations, reflections and future responses were normalised in line with the established coach-led social norms.

Players' own independent interactions with video-based PA (as part of *Creative Thought* strategies) occurred in the belief that they should try to align their interpretations of match play situations with those held by their coaches. Players typically failed to acknowledge that group sessions delivered by *The Gaffer* (Steve) had influenced their reflective practice and in doing so revealed that the prominent influence of video-based PA within their experience-based learning was normalising and disciplinary in nature instead of being empowering (Fejes, 2008, 2013). The coaches described that they used video-based PA in a largely unstructured and inconsistent manner at various points across their respective reflective conversations (Schön, 1983). The main function that they believed it served was to illustrate and complement the delivery of their pre-match game plan to the players, instead of it aiding their ability to recall incidents and place their interpretations into context. Thus, as with the players, issues that were deemed worthy of reflecting upon did not arise as a result of video-based PA. In short, the effect that this resource had on coaches' and players' reflective practice and experience-based learning was limited and irregular.

These findings provide an alternative critical narrative to the present positive and politically benign view of sports science provision, such as video-based PA (e.g. Court, 2004; Carling et al., 2005; O'Donoghue, 2006; Wright et al., 2012; Reeves & Roberts, 2013). Moreover it is the first study in professional football to show the role of video-based PA as structured and implemented in order to ensure the normalisation of behaviour and reinforcement of cultural discourse; with the end goal being to ensure that a manager's instructions are successfully carried out (see Chapter Six).

The findings established that players' compliance and docility in response to being subjected to varying technologies of power (e.g. reflection, GPS monitoring, video-based PA, physical testing) also contributed to the overarching culture of surveillance and discipline (see Chapter Six). A dialectic relationship existed between the actions and beliefs of both players and coaches and the construction of the culture. Discourses, initiated and introduced by *The Gaffer* (Steve) and his coaches (see Chapter Six, p. 279-280), were underpinned by an institutional performance discourse and a willingness to control players' decision-making and enhance the teams chances of winning (Cushion & Jones, 2014). Whilst technologies of power maintained surveillance over the club's players and established imbalances in power between coaches and players, the coaches' positions of power resulted in their discourse having legitimacy and being reproduced and embodied by the players. It is in this context that video-based PA was used at the club. The club's culture of maintaining surveillance, issuing punishment and normalising behaviour directly informed the role and function of video-based PA as a disciplinary mechanism aimed at influencing players' future actions.

Therefore the manner in which video-based PA is implemented, is significantly influenced by the culture in which it is used.

Taken together the findings add to the existing literature by developing an understanding of how a 'culture' within a professional football club is socially constructed. Moreover, It draws specific attention to the complexity and fluidity of social interactions that constitute the culture. It is also the first study to consider how discourses of reflection and video-based PA create and influence the culture at a professional football club.

## **7.1 Implications for Professional Practice**

### *7.1.1 How Coaches Use Reflection*

The findings critically challenge commonly held assumptions relating to reflection (e.g. Clarke & Otaky, 2006; Akbari, 2007; Dimova & Loughran, 2009; Parra et al., 2014). The impact of culture has been down-played or omitted in understanding reflective practice while the evidence in this case suggests that culture has a significant influence on an individual's experience. Therefore, coaches are encouraged to consider the culture and environment that they create and to question critically their understandings of reflection, particularly how their discourse of reflection is constructed, and how it influences their athletes. This includes their understanding of how reflective practices are a result of previous experiences as a coach or athlete, and are therefore driven by habit or tradition.

In order to educate coaches about more ethical coaching practices that they may wish to adopt (Mills & Denison, 2013), governing bodies may seek

to encourage them to attend coaching seminars and share experiences as part of 'communities of practice' (Lave & Wenger, 1991; Wenger, 1998). Within this knowledge-sharing environment they could exchange ideas and discourse relating to various aspects of coaching, including the role of reflection. When discussing their experiences and ideas about best practice, coaches could challenge each other by asking how they would feel if they were an athlete in their session, bearing in mind the conditions required for learning to occur. Similarly, Foucauldian interpretations of proposed best practice could be presented to coaches in order for them to see their own practice from another perspective and to encourage them to consider applicable alternative approaches (Mills & Denison, 2013, 2014). This would hopefully raise awareness of the often subtle but significant disciplinary connotations that are associated with traditional and autocratic coaching styles (Lyle, 2002).

Coaches could encourage and provide opportunities for their athletes/players to engage in small, perhaps position-specific 'communities of practice' (Lave & Wenger, 1991; Wenger, 1998) within their club/organisation. In this environment athletes would have the opportunity to reflect between themselves on their performances, in line with what they believed to be important and discuss their reasons why. By reducing the level of direct coach input into how athletes reflect on their performances, and affording them more autonomy, coaches would be engaging in far more ethical practices (Mills & Denison, 2013). Such an approach would provide athletes with more control over how they interpreted their own experiences and in doing so would encourage more athlete-led, positive and longstanding



changes to future behaviour than can be generated by merely agreeing with their coach in the short term to avoid punishment.

It was found in this research that coach-led discourses promoted compliance and resulted in players being actively discouraged from making decisions. This is in contrast to calls for 'decision-making players/athletes' as coaching practice continues to evolve (Kidman, 2010). Coaches, therefore, should consider the extent to which they allow their athletes to make decisions autonomously (Denison, 2007). Approaches to promoting independent athlete reflection, include providing them with elements of control within decision-making processes such as the content of their training and how they should evaluate their performances. In doing so, athletes may attribute more importance or meaning to the experience and be more inclined to engage in a process of self-development through reflection. For this to occur, however, a 'fear-free' environment is required in which athletes are encouraged to make decisions in the knowledge that they will not be reprimanded.

#### *7.1.2 How Coaches Engage with Video-Based PA*

Coaches are encouraged to adopt a critical mind-set that challenges the underlying rationale for using video-based PA and reflect on the social consequences associated with different modes of use. It could be argued that monologues, that include video-based PA, delivered to a large group, with no athlete input, are the least effective strategy for athlete learning. Instead, individual or small-group sessions are advocated in which players have some say regarding the content of the session that then acts as a point of genuine discussion with either a coach or their peers. Engaging players in genuine

dialogue within smaller groups or during individual sessions can minimise the normalising effects of coaches' and teammates' 'collective and critical gaze' (Foucault, 1991b). Such an approach could enable video-based PA to empower individuals during the reflective process and inform their own independent experience-based learning. However, this would need to occur within a supportive context and culture to ensure that players felt comfortable in reflecting on their performances rather than trying to fulfil the expectations of others.

Coach education plays a role in developing more critical coaches who promote discourses that support learning, and understand the conditions necessary for reflection, and the potential uses of video-based PA, as effective non-disciplinary tools (Denison & Mills, 2014). However, this would require a coach education that is more than 'additive', but critically transformative and that challenges existing assumptions and the 'taken-for-granted' by exposing the social consequences of current conceptions of practice.

## **7.2 Limitations of the Research**

The limitations of the thesis are tied to those of case study research (Stake, 1995; Yin, 2003). Irrespective of players' and coaches' references to experiences that they had encountered at other clubs, the findings represent only one professional football club. However, the discourses identified within this case resonate with those located at other professional football clubs (e.g. Cushion & Jones, 2006; Roderick, 2006a, 2006b; Cushion & Jones, 2014) and in doing so demonstrate the potential transferability of these findings.

Since video-based PA sessions were recorded during data collection it could be argued that if conversation or discourse analysis (e.g. Kumpulainen & Wray, 2002; Mercer 2010) had been used to examine the specific language used by *The Gaffer* (Steve), it may have provided more context as to how video-based PA was specifically used. It could also be argued, however, that the underlying themes and topics that were discussed during analysis sessions, coupled with coaches' and players' experiences, aligned themselves with the prominent disciplinary use of video-based PA that was reported, irrespective of any additional discourse analysis. Moreover, the rationale supporting the potential use of discourse analysis in the future to examine analysis sessions has occurred primarily as a result of this original research.

### **7.3 Future Directions**

Future research is required that examines critically the assumptions that underpin reflection in sport. Social theory offers potential to do this in order to contextualise individual's experiences and reflective practice. Investigating the use of reflection in a variety of contexts and cultures should also be considered in order to understand the degree of influence of different situations or cultures. With this in mind methodologies that foreground, rather than play down, the culture and environment are required. These should include in-situ approaches as they position reflection as a situated activity.

Further research is required that considers the social influences on the use of video-based PA (Groom & Nelson, 2012). Research needs to investigate the assumptions associated with sequential and idealistic

portrayals of video-based PA and its role in the applied setting. These should include specific research questions that focus on the social function that video-based PA serves. Moreover research concerning the suitability and function of video-based PA should also be considered, since players' and coaches' experiences in this thesis have contradicted much previous research.

Lastly, discourse and knowledge regarding 'best practice' in coaching and its reproduction should be considered. Where does this knowledge originate? How is it transferred? To what extent is it informed by empirical research? How does it remain unchallenged? How does power add legitimacy to certain types of knowledge, and what is the outcome of this in practice? The process of socially reproducing knowledge held by powerful individuals may vary in different environments and cultures. Therefore, research in sport should consider the origin and socialisation of discourses in order to further understand the creation of institution-specific knowledge.

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## **Appendices (Publications & Proceedings as a Result of the Thesis)**

- (1) Mackenzie, R., & Cushion, C. (2013). Performance analysis in football: A critical review and implications for future research. *Journal of Sports Sciences*, 31(6), 639-676.
- (2) Mackenzie, R., & Cushion, C. (2013). Performance analysis in professional soccer: Player and coach perspectives. In D. M. Peters & P. O'Donoghue (Eds.) *Performance Analysis of Sport IX* (pp. 23-31). New York: Routledge.
- (3) Mackenzie, R., & Cushion, C.J. (2012, July). *Performance analysis in professional football: Player and coach perspectives*. Paper presented at World Congress of Performance Analysis of Sport IX. Worcester, England.
- (4) Mackenzie, R., & Cushion, C.J. (2012, May). *Performance analysis in professional football: Cultural considerations & implications for practice*. Paper presented at Third World Conference on Science and Soccer. Ghent, Belgium

## Performance analysis in football: A critical review and implications for future research

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### Abstract

This paper critically reviews existing literature relating to performance analysis (PA) in football, arguing that an alternative approach is warranted. The paper considers the applicability of variables analysed along with research findings in the context of their implications for professional practice. This includes a review of methodological approaches commonly adopted throughout PA research, including a consideration of the nature and size of the samples used in relation to generalisability. Definitions and classifications of variables used within performance analysis are discussed in the context of reliability and validity. The contribution of PA findings to the field is reviewed. The review identifies an overemphasis on researching predictive and performance controlling variables. A different approach is proposed that works with and from performance analysis information to develop research investigating athlete and coach learning, thus adding to applied practice. Future research should pay attention to the social and cultural influences that impact PA delivery and athlete learning in applied settings.

**Keywords:** *performance analysis, football, notational analysis, learning*

### Introduction

Performance analysis (PA) is firmly positioned as an integral part of the coaching process (Carling, Williams, & Reilly, 2005; Groom, Cushion, & Nelson, 2011; Hodges & Franks, 2002; Lyle, 2002; Stratton, Reilly, Williams, & Richardson, 2004), and there has been a significant increase in the volume of performance analysis research (Lago, 2009). The application of video and computer technology in sport and the implementation of video review sessions into weekly training programmes (Groom & Cushion, 2004; Guadagnoli, Holcomb, & Davies, 2002), has led to the belief that PA “is now widely accepted among coaches, athletes, and sport scientists as a valuable input into the feedback process” (Drust, 2010, p. 921). Moreover, the development of computer and video aided analysis systems (such as Sportcode©, Focus X2©, ProZone and Sport Universal Process AMISCO Pro© match analysis systems) has enhanced accessibility to resources in order to analyse sporting events objectively (Carling et al., 2005), and as a result, research frequently utilises these data. For example, video analysis software has been used with a multitude of purposes

in both individual and team based sports (Di Salvo, Gregson, Atkinson, Tordoff, & Drust, 2009; Jenkins, Morgan, & O’Donoghue, 2007).

Performance analysis specifically in team sports originated in the United States with American football and basketball analysing competitive performance using coded notes in the 1960’s (Carling et al., 2005; Hughes & Franks, 2003). Racquet sports adopted this approach before it was applied more widely to football (Carling et al., 2005). However, the past three decades have seen the growth in the use of PA, the development of PA systems, and PA research specifically for football (Hughes & Franks, 2005). Moreover, professional football around the world pursues PA of some kind (Carling et al., 2005; James, 2006) and professional clubs employ individuals to directly provide PA or access PA data (Carling et al., 2005; Groom & Cushion, 2004). Given these developments and taking into account that football is the most popular sport worldwide (Dvorak, Junge, Graf-Baumann, & Peterson, 2004) the focus of this paper is on the substantial body of PA research undertaken in relation to football. The direction and scope of the this research has primarily focussed on key performance indicators such as possession and passing patterns prior to goals

being scored (e.g. Dawson, Appleby, & Stewart, 2005; Hughes & Franks, 2005; James, Jones, & Mellalieu, 2004) in attempts to predict successful future performance. Other common research endeavours have investigated technical and physical comparisons across different leagues (e.g. Bloomfield, Polman, & O'Donoghue, 2004; Coelho e Silva, Figueiredo, Sobral, & Molina, 2004; Kan et al., 2004) and statistical analyses of goal scoring probabilities (e.g. Armatas, Yiannakos, & Sileloglou, 2007; Ensum, Pollard, & Taylor, 2004; Pollard & Reep, 1997). This research activity has made some contribution to developing and furthering a more systematic understanding of football performance.

However, despite these positive developments a number of issues and questions remain around the progress of the field and the assumptions underpinning the research. Embedded within the coaching process and therefore reflective of it, the questions PA research has posed, like coaching, have been shaped by the methods and assumptions of the positivist paradigm (Brustad, 1997; Cushion, 2007; Smith 1989), a key determinant in shaping the research process. A core concept of the positivist paradigm is reductionism, which is an attempt to understand the functioning of the whole through an analysis of its individual parts (Brustad, 1997). By its nature, this approach views human behaviour as measurable, causally derived and thus predictable and controllable (Smith, 1989). In addition, the positivist paradigm structures the types of questions asked by researchers (Brustad, 1997). This epistemological approach has not only impacted PA research but resulted in the wider coaching process being portrayed as a series of steps to be followed as an unproblematic process, and assumed knowledge as transmitted from coach to athlete, thus downplaying the complex and social aspects involved (Cushion, 2007; Cushion, Armour, & Jones, 2006). In the case of PA particularly, the research has been driven to establish causal relationships between isolated performance variables in an attempt to predict outcomes. For the purpose of this article, the term 'isolated performance variable' refers to an independent variable that is directly associated with match outcome in isolation without acknowledging potentially confounding variables or providing sufficient context to the variable itself. As a result, it could be argued that existing PA research consistently reduces the complexity of performance by presenting it in overly descriptive, systematic and unproblematic ways mirroring much coaching research (Cushion, 2007). Whilst mirroring coaching, these assumptions also appear to impact the application of PA research where the PA process is assumed to be a known, linear, and unproblematic sequence. This is reflected in the literature with the use of

performance analysis depicted via flow charts and schemas and often illustrated with a simplistic shift from performance, observation, planning, training and practice (e.g. Carling et al., 2005; Hughes & Franks, 2004; O' Donoghue, 2006).

While this approach has seen a substantial growth in PA research, arguably little attention has been paid to the applicability of performance 'variables' that are now being analysed in the context of complex sporting performances. Indeed, it could be argued that variables have been measured as a result of availability rather than to develop a deeper understanding of performance. As a result, the field appears skewed with areas of PA seemingly neglected by research, such as its use for athlete recruitment and opposition analysis (Groom et al., 2011), the dissemination and use of PA research in applied settings, and crucially the impact PA has on athlete learning and information retention as part of performance feedback. Consequently, despite the emergence of PA, it would appear that there has been little evolution in the research, nor a development of the research areas within the PA research landscape.

Importantly, the test of the utility and value of research to a community is the extent to which its findings are (a) used as recommended practices in the preparation of practitioners, and (b) incorporated by practitioners in everyday practice (Cushion, 2007; Ward & Barrett, 2002). There are examples of PA research influencing football practice/behaviour. For example Charles Hughes in England and Egil Olsen in Norway drew on the work of Reep and Benjamin (1968) and developed their own analysis in formulating direct styles of play (Hughes, 1990; Olsen & Larsen, 1997). However, these seem isolated cases and beyond these there is little or no recent evidence for the systematic application of PA findings in coaching practice, in terms of either methodology or results. This appears somewhat alarming for an applied field and could be accounted for in two ways.

First, perhaps the findings offer little in the way of transferability and second the questions asked by scholars, and the subsequent research undertaken is arguably of little help to practitioners producing a 'theory-practice' gap. This paper explores these two issues by critically reviewing existing PA research in football, particularly the work of notational analysis as a means of data collection. In exploring these, and in going some way to understand some of the issues already discussed, the review considers the applicability of the research findings and methodological issues. This includes a consideration at the level of variables being measured to broader issues of the foundations of the research such as questions of basic versus applied science. The importance of the work lies in developing an overview of where the field 'sits' enabling gaps to be identified, problem areas and

issues to be identified and the understanding of the 'progress of the field' (Silverman & Skonie, 1997, p. 301). That is, where the field has been and, importantly, where it may look to evolve in the future, thus directing or re-directing researchers efforts.

The purpose of the paper is to provide a critical review (see for example Hodges & Franks, 2002) rather than a systematic review of research undertaken. In response to the importance placed on researchers making their philosophical stances known (McNamee, 2005; Nelson & Groom, 2011), any consideration of the literature requires us to be transparent and recognise our assumptions about PA and its research. Indeed, these assumptions need to be set out at the outset as a prelude to the more in-depth analysis that will follow later in the review. We are in agreement with calls that "the findings from research need to be accepted and adopted by the athletes, coaches and sport-science staff at whom they are targeted" (Bishop, 2008, p.255) and subsequently support an applied science research agenda for PA.

To ensure the transparency and replicability of the literature search (Holt & Tamminen, 2010) and illustrate the elements of the search strategy, principles of a systematic review were utilised (Egger, Juni, Bartlett, Hoenstein, & Sterne, 2003). To ensure the review was encompassing, search terms and criteria were used to search peer reviewed articles (Culver, Gilbert, & Trudel, 2003; Holt & Tamminen, 2010) and included 'notational analysis', 'performance analysis', 'match analysis', 'motion analysis' linked to 'football' or 'soccer'. Specific football variables such as 'crossing' and 'passing' were added and also searched. In addition to electronic databases, specific journals were searched where research related to PA and football has been published (e.g. International Journal of Performance Analysis in Sport, Journal of Sport Sciences). Inclusion/exclusion criteria were applied and any article that had football in the title but did not directly apply to association football, i.e. Gaelic Football (King & O'Donoghue, 2003) or professional rugby league football (Eaves & Evers, 2007), were omitted from the review as was any study that did not involve the direct assessment of performance variables (technical or physical) in relation to football performance. The outcome of this process was a total of 60 articles spanning 24 years (44 technical and 16 physical articles, see Tables VI and VII in Appendix 1).

### **Applicability of research findings**

#### *Investigating isolated variables without context*

Sporting performance is multifaceted, complex and largely unpredictable. Football is particularly

susceptible to unpredictability and inherent match specificity and as such, signature behaviours will not be consistent where performance indicators are influenced by player-opponent interactions (e.g. Bloomfield, Polman & O'Donoghue, 2005; Harris & Reilly, 1988; McGarry, 2009; Tenga, Holme, Ronglan, & Bahr, 2010). Similarly, Reep and Benjamin (1968) concluded that "chance does dominate the game and probably most similar ball games" (p.585). McGarry, Anderson, Wallace, Hughes, and Franks (2002) support this notion as descriptive research attempting to break games down into more manageable segments is suggested to not accurately reflect what goes on in the unaccounted for segments (cf. Hodges, McGarry, & Franks, 1998; McGarry & Franks, 1994; 1996). In addition, retrospective analysis is only relevant to the time in which it was recorded (O'Donoghue, 2001). However, PA research into football seems to have largely ignored these issues and generally remained consistent (McGarry, 2009) in investigating aspects of the game in isolation. These include possession and passing patterns associated with successful and unsuccessful teams (e.g. Jones, James & Mellalieu, 2004; Redwood-Brown, 2008; Scoulding, James & Taylor, 2004), the activity profiles of footballers (e.g. Lago-Peñas, Rey, Lago-Ballesteros, Casais, & Dominguez, 2009; O'Donoghue, 2002), comparisons across major tournaments (e.g. Armatas et al., 2007; Luhtanen, Belinskij, Häyrynen, & Vääntinen, 2001), goals analyses (e.g. Garganta, Maia, & Basto, 1997; Johnson & Murphy, 2010; Lanham, 1993; Redwood-Brown, 2008), and the assessment of differing playing styles (e.g. Bate, 1988; Hughes, 1990; Hughes & Franks, 2005; Pollard & Reep, 1997; Yamanaka, Hughes, & Lott, 1993).

In 25 years this approach to research has changed very little, with simple, descriptive and isolated variables investigated and similar methodologies utilised resulting in contemporary research (e.g. James et al., 2004) appearing to do the same as older studies (e.g. Church & Hughes, 1987) (see Tables VI and VII in Appendix 1). This is despite suggestions that analysing the frequency of occurrences (i.e. notational analysis) may not be the most applicable way to differentiate between effective and less effective performance (Borrie & Jones, 1998; Borrie, Jonsson, & Magnusson, 2002).

In addition, there appears a lack of context to the research carried out. For example, Tenga, Holme (2010) argue the importance of including the opposition in team analysis. Yet of the 44 technical articles reviewed, 36 (81%) do not specifically take the opposition into account (see Table I). Similarly, out of 27 articles that investigated games held at non-neutral venues, 19 articles (70%) did not differentiate between match locations in their results (i.e.

Table I. A summary of research that investigates isolated variables without context.

Context	Yes (=n)	Authors	No (=n)	Authors	N/A (=n) - i.e. at a neutral venue (tournament)	Authors
<i>Research Concerning Technical Variables</i>						
Are the opposition specifically taken into account in the results section?	8	Gerisch & Reichelt (1993); Yamanaka et al. (1997); Tenga & Larsen (2003); Lago (2007); Lago & Martin (2007); Szczepanski (2008); Taylor et al. (2008); Lago (2009)	36	Church & Hughes (1987); Harris & Reilly (1988); Hughes et al. (1988); Olsen (1988); Pollard et al. (1988); Jinshan et al. (1993); Lanham (1993); Luhtanen (1993); Yamanaka et al. (1993); Garganta et al. (1997); Pollard & Reep (1997); Luhtanen et al. (2001); Hughes & Wells (2002); James et al. (2002); Ensum et al. (2004); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Scoulding et al. (2004); Taylor et al. (2004); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Taylor et al. (2005); Tucker et al. (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); Cullinane (2009); De Baranda et al. (2008); Redwood-Brown (2008); Boscá et al. (2009); Tenga et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)	0	
Is there a differentiation between match locations in the authors' results?	8	Gerisch & Reichelt (1993); Yamanaka et al. (1997); Tucker et al. (2005); Lago & Martin (2007); Taylor et al. (2008); Boscá et al. (2009); Lago-Peñas et al. (2010)	19	Church & Hughes (1987); Harris & Reilly (1988); Pollard et al. (1988); Lanham (1993); Yamanaka et al. (1993); Garganta et al. (1997); James et al. (2002); Tenga & Larsen (2003); James et al. (2004); Jones et al. (2004); Taylor et al. (2004); Taylor et al. (2005); Cullinane (2009); Redwood-Brown (2008); Szczepanski (2008); Tenga et al. (2009); Johnson & Murphy (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)	17	Hughes et al. (1988); Olsen (1988); Jinshan et al. (1993); Luhtanen (1993); Pollard & Reep (1997); Luhtanen et al. (2001); Hughes & Wells (2002); Ensum et al. (2004); Hughes & Churchill (2005); Scoulding et al. (2004); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); Lago (2007); De Baranda et al. (2008)

(continued)



Table I. (Continued).

Context	Yes (=n)	Authors	No (=n)	Authors	N/A (=n) - i.e. at a neutral venue (tournament)	Authors
Is there specific information relating to the assessed variables? (i.e. where on the pitch passes are made or where goals are scored from)	19	Harris & Reilly (1988); Hughes et al. (1988); Olsen (1988); Jinshan et al. (1993); Luhtanen (1993); Yamanaka et al. (1993); Garganta et al. (1997); Yamanaka et al. (1997); James et al. (2002); Ensum et al. (2004); Konstadinidou & Tsigilis (2005); Taylor et al. (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); De Baranda et al. (2008); Szczepanski (2008); Taylor et al. (2008); Lago (2009); Tenga et al. (2009)	24	Church & Hughes (1987); Pollard et al. (1988); Gerisch & Reichelt (1993); Lanham (1993); Pollard & Reep (1997); Luhtanen et al. (2001); Tenga & Larsen (2003); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Scoulding et al. (2004); Taylor et al. (2004); Hughes & Franks (2005); Tucker et al. (2005); Armatas et al. (2007); Lago (2007); Lago & Martin (2007); Cullinane (2009); Redwood-Brown (2008); Boscá et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)	1	Hughes & Wells (2002)
<i>Research Concerning Physical Variables</i>						
Are the opposition taken into account?	3	Erdmann (1993); Rampinini et al. (2007); Kan et al. (2004)	12	Ohashi et al. (1988); Yamanaka et al. (1988); O'Donoghue (2002); O'Donoghue et al. (2005); Di Salvo et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)	1	Asami et al. (1988)
Is there a differentiation between home/away teams or match locations in the authors' results?	2	Kan et al. (2004); Carling & Bloomfield (2010)	13	Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)	1	Asami et al. (1988)
Is there specific information relating to the assessed variables? (i.e. positional breakdown or in possession vs. out of possession etc.?)	11	Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); O'Donoghue et al. (2005); Di Salvo et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)	4	Ohashi et al. (1988); Kan et al. (2004); Rampinini et al. (2007); Carling & Bloomfield (2010)	1	Asami et al. (1988)

home or away). Specific contextual information also appears lacking in that more than half of the articles (24/43; 55%) did not provide specific information relating to the variables assessed (i.e. where on the pitch passes were made or where goals were scored from (see Table I). Given research has suggested that time spent in the attacking, middle or defensive thirds is influenced by match status and match location (Lago, 2009), as are technical and tactical behaviours (Taylor, Mellalieu, James, & Shearer, 2008; Tucker, Mellalieu, James, & Taylor, 2005), the omission of such information is surprising yet appears common.

Although the evidence suggests a problem relating to a lack of context in the majority of PA research, there are positive examples where context is provided. Lago (2009) for instance, when analysing possession strategies during 27 games in Espanyol's 2005/06 season, accounted for match location, quality of opposition, and match status in his results. Moreover, context relating to the possessions themselves were provided as the time spent in the defensive, middle and attacking thirds was reported in the authors' results. Taylor et al. (2008) provided similar context in their research spanning 40 games during the 2002/03 and 03/04 seasons. An approach mirroring Lago (2009) was adopted in that match location, quality of opposition, and match status were considered but in relation to technical performance rather than possession alone.

Table I demonstrates that issues relating to a lack of context are also apparent in PA research concerning the physical demands of football. Of the 15 applicable articles that were reviewed, 12 (80%) did not acknowledge the opposition that players faced despite its direct influence on the physical demands of a game. In addition, 13/15 articles (87%) did not differentiate between match location in their results irrespective of its influence on performance (Taylor et al., 2008; Lago, 2009). One of the few articles to do this was Kan et al. (2004) who, in their analysis of players' movement, considered the opposition and made reference to match location, albeit with a sample size of only two games. Overall, more context tends to be provided by physical articles than technical articles in relation to specific information about variables being assessed (i.e. out of possession vs in possession, positional breakdowns) as 11/15 articles (73%) considered this in their results. One example of this is Gregson, Drust, Atkinson, and Di Salvo (2010) who investigated match-to-match variability of high-speed activities in the English Premier League (EPL). As part of their research and in order to bring context to their sample, the authors categorised their participants into different positions and also reported variables such as high speed running distance both when in and out of possession.

This level of information arguably allows for more meaningful interpretations of data given that more is known about the data's origins.

The potential applicability of findings of research that use simple, descriptive and isolated variables in relation to tactical preparation or training content can be problematic due to the uncontrollable nature and myriad of confounding variables impacting performance (Christensen, 2009). For example, greater or less possession alone does not necessarily equate to performance success (Jones et al., 2004). It could be asked how much research of this type has actually furthered our understanding of performance. Indeed, lack of contextual information impacts across the 25 year range of research (e.g. Pollard, Reep, & Hartley, 1988; Redwood-Brown, 2008). This lack of context that appears to surround the results of PA research is concerning given the variables that could have influenced the outcome (see Table I). These variables and the relevant information that accompanies them, such as, where on the pitch the incidents occurred and their impact on match outcome, often remain unstated and thus their impact un-investigated. For example, Redwood-Brown's (2008) research does not present information such as the location of the passes, the opposition's resulting pattern of play following possession turnover, and consequences to the team who had lost the ball following the turnover. This lack of context accompanying results could be considered a limiting factor in the applicability of the findings. Similar issues relating to applicability and lack of context in descriptive research appear common within current PA literature (see Table I).

The notion of context can be applied more broadly to encompass specific events such as one-off tournaments (see Table II) where retrospective research has been found to be applicable to the event in question, with limited transferability to other competitions (McGarry, 2009). Furthermore, the structure of international tournaments lends itself to non-representative scenarios. Teams of distinct quality differences (that are often not accounted for in the research) play each other in knock-out games and in the group stages more successful teams that have already qualified approach subsequent games differently. Despite these concerns, work has continued to investigate isolated competitions without acknowledging or dealing with these issues. For example in 19/44 (42%) of the technical articles reviewed use samples from one off tournaments (see Table II). What is more, of the 24 articles that investigated competitions with different stages (i.e. group stage followed by knock-out group), only five authors (21%) differentiated between the different stages in their results section; the remainder leaving the exact sources of their data unidentified. Of the technical

Table II. A summary of the sample types used.

Context	Yes (=n)	Authors	No (=n)	Authors	N/A (=n) – i.e. one domestic league sample	Authors	
Research Concerning Technical Variables							
Is the research from a one off tournament (s)? (i.e. FIFA World Cup)	19	Hughes et al. (1988); Olsen (1988); Pollard et al. (1988); Jinshan et al. (1993); Luhtanen (1993);Yamanaka et al. (1993); Pollard & Reep (1997); Luhtanen et al. (2001); Hughes & Wells (2002); Ensum et al. (2004); Hughes & Churchill (2005); Scoulding et al. (2004); Hughes & Franks (2005); Konstadimidou & Tsigilis (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); Lago (2007); De Baranda et al. (2008)	25	Church & Hughes (1987); Harris & Reilly (1988); Gerisch & Reichelt (1993); Lanham (1993); Garganta et al. (1997); Yamanaka et al. (1997); James et al. (2002); Tenga & Larsen (2003); James et al. (2004); Jones et al. (2004); Taylor et al. (2004); Taylor et al. (2005); Tucker et al. (2005); Lago & Martin (2007); Cullinane (2009); Redwood-Brown (2008); Szczepanski (2008); Taylor et al. (2008); Boscá et al. (2009); Lago (2009); Tenga et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)			
Does the research include data from across seasons/ tournaments?	9	Pollard et al. (1988); Lanham (1993); Garganta et al. (1997); Hughes & Wells (2002); James et al. (2002); Hughes & Franks (2005); Armatas et al. (2007); Taylor et al. (2008); Boscá et al. (2009)	35	Church & Hughes (1987); Harris & Reilly (1988); Hughes et al. (1988); Olsen (1988); Gerisch & Reichelt (1993); Jinshan et al. (1993); Luhtanen (1993); Yamanaka et al. (1993); Pollard & Reep (1997); Yamanaka et al. (1997); Luhtanen et al. (2001); Tenga & Larsen (2003); Ensum et al. (2004); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Scoulding et al. (2004); Taylor et al. (2004); Konstadimidou & Tsigilis (2005); Taylor et al. (2005); Tucker et al. (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Lago (2007); Lago & Martin (2007); Cullinane (2009); De Baranda et al. (2008); Redwood-Brown (2008); Szczepanski (2008); Lago (2009); Tenga et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)			
Are differentiations made between competitions/ competition stages? (i.e. knock out vs group game, friendly vs. qualifier or EPL vs FA Cup)	5	Pollard et al. (1988); Gerisch & Reichelt (1993); Lanham (1993); Lago (2007); Boscá et al. (2009)	19	Hughes et al. (1988); Olsen (1988); Jinshan et al. (1993); Luhtanen (1993); Garganta et al. (1997); Pollard & Reep (1997); Luhtanen et al. (2001); Hughes & Wells (2002); James et al. (2002); Tenga & Larsen (2003); Ensum et al. (2004); Hughes & Churchill (2005);	20	Church & Hughes (1987); Harris & Reilly (1987); Yamanaka et al. (1997); James et al. (2004); Jones et al. (1997); (2004); Scoulding et al. (2004); Taylor et al. (2004); Taylor et al.	

Continued

(continued)

Table II. (Continued).

Context	Yes (=n)	Authors	No (=n)	Authors	N/A (=n) – i.e. one domestic league sample	Authors
<i>Research Concerning Physical Variables</i>						
Is the research from a one off tournament (s)? (i.e. FIFA World Cup)	0		16	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)	Hughes & Franks (2005); Konstantinidou & Tsigilis (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); De Baranda et al. (2008); Szczepanski (2008)	(2005); Tucker et al. (2005); Lago & Martin (2007); Cullinane (2009); Redwood- Brown (2008); Taylor et al. (2008); Lago (2009); Tenga et al. (2009); Johnson & Murphy et al. (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
Does the research include data from across seasons/ competitions?	9	Asami et al. (1988); Yamanaka et al. (1988); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Di Salvo et al. (2009); Carling (2010); Clark (2010); Gregson et al. (2010)	6	Ohashi et al. (1988); Erdmann (1993); Rampinini et al. (2007); Lago-Peñas et al. (2009); Carling & Bloomfield (2010); Carling et al. (2010)	1	O'Donoghue (2002) – not published
Are differentiations made between competitions/ competition stages? (i.e. knock-out vs group game or EPL vs FA Cup or reported in separate seasons)	3	Asami et al. (1988); Yamanaka et al. (1988); Kan et al. (2004)	6	O'Donoghue et al. (2005); Di Salvo et al. (2007); Di Salvo et al. (2009); Carling (2010); Clark (2010); Gregson et al. (2010)	7	Ohashi et al. (1988); Erdmann (1993); O'Donoghue (2002); Rampinini et al. (2007); Lago- Peñas et al. (2009); Carling & Bloomfield (2010); Carling et al. (2010)
Potentially unaccounted for skewed data? (i.e. more home than away games, more EPL games than Champion league games etc. that are directly communicated by the author in the sample)	5	Asami et al. (1988); Di Salvo et al. (2007); Carling (2010); Carling et al. (2010); Clark (2010)	11	Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling & Bloomfield (2010); Gregson et al. (2010)		

research reviewed only 9/44 articles (20%) used samples that spanned across different seasons or different competitions despite O'Donoghue's (2001) proposal that retrospective analysis is only relevant to the time in which it was recorded. Boscá, Liern, and Martinez (2009), however, is a paper that has attempted to address concerns surrounding the type of sample used (see Table II). The authors provided contextual detail when comparing defensive and offensive efficiency of both Italian and Spanish teams across three different seasons (2000/01, 2001/02 and 2002/03) whilst making separate reference to the teams in the study. Moreover, the differences in offensive and defensive performance over time were acknowledged as the data were reported both season-by-season and across seasons.

In summary, to enhance the quality of future research, researchers engaging in research concerned with attributing performance outcomes to performance variables should be mindful of contextual issues. Specifically, researchers could consider the limitations, with specific reference to generalisability, associated with the competition they are investigating. Moreover, pertinent information such as the period of the season the data were collected, the quality of the opposition faced and match location should arguably be provided in order to bring context to research data and its subsequent conclusions. Similarly, if essential information relating to the variable under investigation, such as the location on the pitch the action(s) occurred in, the type of action, the distance the action accrued and subsequent consequences, are to be incorporated into future reporting of data a more holistic understanding of the influence the variable may have had on the outcome may be achieved.

## Methodological issues

### *Assumptions of the research*

No studies in the review were explicit about the paradigmatic assumptions or principles underlying them. There also seems to be a lack of clarity as to the explicit scientific approach underpinning PA research undertaken, i.e. whether the research aligns itself with basic science or applied science principles (Funtowicz & Ravetz, 1993). For example, the purpose of basic science is to discover new knowledge and information often without the primary concern of how the knowledge created might be used (Page, 2002). Much of the PA research reviewed could be viewed in this way. However, it is common for researchers to attempt to draw applied science conclusions from their work, thus inferring that the research is aligned with applied science principles (e.g., Chapman, 2011; Gilbert, Nater, Siwik, &

Gallimore, 2010; Streat & Roberts, 1992; Weinberg, 1989). Basic science approaches appear to be adopted to establish causal relationships between isolated performance variables in an attempt to predict outcomes, yet authors are then drawing applied conclusions from their data (e.g. Boscá et al., 2009; Harris & Reilly, 1988; Johnson & Murphy, 2010; Szczepanski, 2008; Yamanaki, Liang, & Hughes, 1997). Therefore, researchers arguably are currently investigating PA from a basic science approach but attempt to make applied claims from the research. This leads to a lack of conceptual clarity about the scientific origins of the work and its desired outcome.

Within these implicit methodological frameworks, the consistent use of notational analysis and the analysis of computer generated data by software such as ProZone<sup>®</sup> match analysis system (e.g. Di Salvo et al., 2007; Di Salvo et al., 2009; Gregson et al., 2010) or AMISCO Pro<sup>®</sup> (e.g. Carling & Bloomfield, 2010; Carling, Espié, Le Gall, Bloomfield, & Jullien, 2010) has highlighted two significant and unresolved methodological issues. First, sample sizes from which generalisations are made and second, a lack of transparent definitions from which results have been derived.

### *Sample sizes*

There appears to be little agreement in the existing research about what constitutes a representative sample size from which to generalise (James, 2006). From one off tournaments (e.g. De Baranda, Ortega, & Palao, 2008; Jinshan, Xiakone, Yamanaka, Matsumoto, 1993; Luhtanen, 1993; Luhtanen et al., 2001; Olsen, 1988; Scoulding et al., 2004) general claims about football are made from particular findings (see Table II). Moreover, investigating the same variables over different periods of time often yields different results (O'Donoghue, 2001). Regardless of the context, much of the research has used very small samples. Of the 44 technical articles reviewed, only 10 (22%) investigated samples that consisted of 100 games or more. This is against a context of a season that could consist of 380 games or more. Of the 33 articles that did not investigate 100 matches or more, 22 articles used less than 36 games and 6 articles investigated less than 10 games. In the context of a full season or even an isolated tournament, it could be questioned as to how representative are these samples, and how meaningful are their findings? (Refer to Tables VI and VII in Appendix 1).

For example Lago and Martin (2007) investigated the determinants of ball possession using data from a seemingly impressive 170 matches during the 2003/2004 Spanish Professional Football season.



However, all of the games were played within the first 17 days of the season. Clearly, for such a volume of games to have been analysed in such a short period, the games must have included teams from a multitude of standards (different leagues) although the authors make no reference to this. It is unclear what differences between leagues exist, thus calling into question their common sense finding of “the worse the opponent, the greater the possession of the ball” (p. 969). Are 17 days representative of a whole season, irrespective of the apparent face validity of findings? (Le Grange & Beets, 2005). More positive examples, however, include Lanham (1993), Bosca et al. (2009) and Lago-Peñas, Lago-Ballesteros, Dellal, and Gomez (2010) who examined sample sizes of 479, 2280 and 380 games respectively; inferring a greater level of generalisability within their results (refer to Appendix 1 for details).

The issue of generalisable sample sizes also impacts the work considering the physical demands of football performance (e.g. Asami, Togari, & Ohashi, 1988; Carling et al., 2010; Clark, 2010; Di Salvo et al., 2009; Erdmann, 1993; Yamanaka et al., 1988; *inter alia*— see Tables II and III). Of the 16 physical articles reviewed, 9 articles (56%) drew conclusions from research that involved less than 50 different players. Moreover, 11 of the 16 articles (69%) used players from less than 36 games. Table II highlights that this is not an isolated case as it emerged in the review that a third (5/16) of the physical articles used samples that had unaccounted for skewed data (i.e. more home than away games). Specific examples such as Taylor et al. (2008) and Carling (2010) used different sample sizes investigating the influence of situational variables on technical performance and activity profiles when running with the ball respectively (see Tables II and III). Both used samples spanning two seasons; thus assuming the variables remained constant over this extended time period. Moreover, Carling (2010) used a skewed sample of 19 home and 11 away matches from just a single professional club.

It could be suggested that the reliability and generalisability of these research approaches pose questions about the overall contribution of this work. Di Salvo et al. (2009) and Gregson et al. (2010) on the other hand arguably used far more representative samples as they investigated 563 and 485 players respectively across three English Premier League seasons (2003/04 to 2005/06). However, sample sizes such as these are not common (see Table III).

In order to address issues relating to sample size and generalisability, authors engaging in research of this nature could consider reporting the power calculations and processes that have been undertaken in order to ensure that the sample size used is representative of the population in question (see

Vincent, 2005). It is suggested that such an approach would provide an opportunity to assess the individual merits of each study and provide a basis to evaluate sample sizes.

As will be discussed in detail in the next section, this research also often fails to publish the definitions for analysis of the data leaving much to interpretation (see Table IV). In addition, there is a lack of consistency with the classifications used, notably in papers investigating the physical demands of football. Having acknowledged issues associated with inconsistent sample sizes, to develop the research more stringent measures should be considered in order to ensure that future work utilises statistically acceptable sample sizes. In short, researchers should be encouraged, where appropriate, to publish power calculations that have been completed to ensure their sample is generalisable.

### *Definitions/classifications*

Evidence from the review reveals that there seems to be a lack of transparency and published operational definitions in scholars' work (James, 2006). Of the 44 technical articles that were reviewed, 35 (79%) did not fully define the variables that they were analysing (see Table IV). Of those 35 only 16 partially defined variables, with 4 making reference to the development of definitions without publishing them. Finally, 14 articles (31%) provided no definitions. Subsequently, it would be difficult to compare these studies or replicate them, despite suggestions that “it is essential for system operators and the eventual consumers of the information generated by performance analysis to have a shared understanding of the variables used” (O'Donoghue, 2007, p. 36) (see Table IV).

One specific example to highlight this trend is Szczepanski (2008) who measured the effectiveness of strategies and attempted to quantify players performance, yet provided no definitions to supplement the playing tactics that were investigated, such as “long forward pass” (p.56). Furthermore, no explanation for what constituted being pressed or not pressed is provided, thus leaving the variable “type of possession” (p.60) as ambiguous with a lack of transparency (i.e. it would be difficult to repeat this study). Similarly, there was no definition to explain the analysed term “running with the ball” (p.56) which may lead to a misinterpretation of the results. In another example, Scoulding et al. (2004) investigated passing patterns in the 2002 World Cup and while they did classify information relating to passing (i.e. to feet or to space) there was no definition of a pass provided (see Table IV). This may appear trivial, however, given that the term may include goal kicks, free kicks and throw-ins to feet or space then

Table III. A summary of sample sizes used.

Context	Yes (=n)	Authors
<i>Research Concerning Technical Variables</i>		
Games Investigated:		
1	2	Gerisch & Reichelt (1993); Tenga & Larsen (2003)
Less than 10 (2–9)	4	Church & Hughes (1987); Yamanaka et al. (1997); Scoulding et al. (2004); Szczepanski (2008)
10–35	16	Harris & Reilly (1988); Pollard et al. (1988); Pollard & Reep (1997); Luhtanen et al. (2001); James et al. (2002); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Taylor et al. (2004); Konstadinidou & Tsigilis (2005); Taylor et al. (2005); Tucker et al. (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Cullinane (2009); Lago (2009)
36–99	11	Hughes et al. (1988); Olsen (1988); Jinshan et al. (1993); Luhtanen (1993); Yamanaka et al. (1993); Garganta et al. (1997); Ensum et al. (2004); Lago (2007); De Baranda et al. (2008); Taylor et al. (2008); Johnson & Murphy (2010)
100–200	7	Hughes & Franks (2005); Armatas et al. (2007); Lago & Martin (2007); Redwood-Brown (2008); Tenga et al. (2009); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
200–300	0	
300+	3	Lanham (1993); Boscá et al. (2009); Lago-Peñas et al. (2010)
Not published	1	Hughes & Wells (2002) – 129 penalties
<i>Research Concerning Physical Variables</i>		
Individuals Investigated:		
0–10	2	Ohashi et al. (1988); Carling & Bloomfield (2010)
11–20	3	Asami et al. (1988); Erdmann (1993); Clark (2010)
21–30	2	Carling (2010); Carling et al. (2010)
31–40	1	Kan et al. (2004)
41–50	1	Yamanaka et al. (1988);
51–60	0	
61–70	0	
71–80	0	
81–90	0	
91–100	0	
101–200	1	Lago-Peñas et al. (2009)
201–300	4	Rampinini et al. (2007); O'Donoghue (2002); O'Donoghue et al. (2005); Di Salvo et al. (2007)
301–400	0	
401–500	1	Gregson et al. (2010)
500+	1	Di Salvo et al. (2009)
Games Investigated:		
1	2	Erdmann (1993); Carling & Bloomfield (2010)
Less than 10 (2–9)	3	Ohashi et al. (1988); Yamanaka et al. (1988); Kan et al. (2004)
10–35	7	Asami et al. (1988); O'Donoghue (2002); Di Salvo et al. (2007); Lago-Peñas et al. (2009); Carling (2010); Carling et al. (2010); Clark (2010)
36–99	0	
100–200	1	O'Donoghue et al. (2005)
200–300	0	
300+	2	Di Salvo et al. (2009); Gregson et al. (2010)
Not published	1	Rampinini et al. (2007)

the results may not be as clear or straightforward as assumed. Similar research (e.g. Johnson & Murphy, 2010) also used passing and possession as the primary variable of investigation, again, with no definition of a pass. Whilst not investigating passing in isolation, Cullinane's (2009) research on the technical comparison of positional roles in professional football across 18 games (3 teams x 6 games) gives no operational definitions for the variables analysed nor did Tenga and Larsen (2003) for terms such as "counter attack" (p.93) despite it being a key variable.

The issue of classification and definition also occurs in research of activity profiles of professional footballers. Although definitions are often provided (11/16 articles (69%) – see Table IV), problems include classifications that are too simplistic with O'Donoghue, (2002) and O'Donoghue et al. (2005) for example using just two classifications (see Table IV). Across the 16 reviewed articles there were six alternative combinations of categories/thresholds used to measure similar physical activities in football. Competing information providers such as ProZone<sup>®</sup> and AMISCO Pro<sup>®</sup> have common detailed

Table IV. A summary of definitions/classifications used.

Context	Yes (=n)	Authors	No (=n)	Authors
<i>Research Concerning Technical Variables</i>				
Are the variables analysed fully defined?	9	Harris & Reilly (1988); Gerisch & Reichelt (1993); James et al. (2002); Ensum et al. (2004); James et al. (2004); Jones et al. (2004); Lago & Martin (2007); Redwood-Brown (2008); Lago (2009)	35	Church & Hughes (1987); Hughes et al. (1988); Olsen (1988); Pollard et al. (1988); Jinshan et al. (1993); Lanham (1993); Luhtanen (1993); Yamanaka et al. (1993); Garganta et al. (1997); Pollard & Reep (1997); Yamanaka et al. (1997); Luhtanen et al. (2001); Hughes & Wells (2002); Tenga & Larsen (2003); Hughes & Churchill (2005); Scoulding et al. (2004); Taylor et al. (2004); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Taylor et al. (2005); Tucker et al. (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); Lago (2007); Cullinane (2009); De Baranda et al. (2008); Szczepanski (2008); Taylor et al. (2008); Boscá et al. (2009); Tenga et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
Are the variables partially defined? (i.e. descriptions of variables are provided but potentially ambiguous & undefined terms are used, i.e. a pass, a centre or fast moving attack)	16	Church & Hughes (1987); Olsen (1988); Pollard et al. (1988); Luhtanen (1993); Garganta et al. (1997); Pollard & Reep (1997); Tenga & Larsen (2003); Scoulding et al. (2004); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Seabra & Dantas (2006); De Baranda et al. (2008); Tenga et al. (2009); Johnson & Murphy (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)	28	Harris & Reilly (1988); Hughes et al. (1988); Gerisch & Reichelt (1993); Jinshan et al. (1993); Lanham (1993); Yamanaka et al. (1993); Yamanaka et al. (1997); Luhtanen et al. (2001); Hughes & Wells (2002); James et al. (2002); Ensum et al. (2004); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Taylor et al. (2004); Taylor et al. (2005); Tucker et al. (2005); Yiannakos & Armatas (2006); Armatas et al. (2007); Lago (2007); Lago & Martin (2007); Cullinane (2009); Redwood-Brown (2008); Szczepanski (2008); Taylor et al. (2008); Boscá et al. (2009); Lago (2009); Lago-Peñas et al. (2010)
Reference made to developments of definitions but not published?	4	Taylor et al. (2004); Taylor et al. (2005); Tucker et al. (2005); Taylor et al. (2008)	40	Church & Hughes (1987); Harris & Reilly (1988); Hughes et al. (1988); Olsen (1988); Pollard et al. (1988); Gerisch & Reichelt (1993); Jinshan et al. (1993); Lanham (1993); Luhtanen (1993); Yamanaka et al. (1993); Garganta et al. (1997); Pollard & Reep (1997); Yamanaka et al. (1997); Luhtanen et al. (2001); Hughes & Wells (2002); James et al. (2002); Tenga & Larsen (2003); Ensum et al. (2004); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Jones et al. (2004); Scoulding et al. (2005); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); Lago (2007); Lago & Martin (2007); Cullinane (2009); De Baranda et al. (2008); Redwood-Brown (2008); Szczepanski (2008); Boscá et al. (2009); Lago (2009); Tenga et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
Insufficient definitions provided?	14	Hughes et al. (1988); Jinshan et al. (1993); Lanham (1993); Yamanaka et al. (1993); Yamanaka et al. (1997); Luhtanen et al. (2001); Hughes & Wells	30	Church & Hughes (1987); Harris & Reilly (1988); Olsen (1988); Pollard et al. (1988); Gerisch & Reichelt (1993); Luhtanen (1993); Garganta et al. (1997); Pollard & Reep (1997); James et al. (2002);

(continued)



Table IV. (Continued).

Context	Yes (=n)	Authors	No (=n)	Authors
		(2002); Hughes & Churchill (2005); Yiannakos & Armatas (2006); Lago (2007); Cullinane (2009); Szczepanski (2008); Boscá et al. (2009); Lago-Peñas et al. (2010)		Tenga & Larsen (2003); Ensum et al. (2004); James et al. (2004); Jones et al. (2004); Scoulding et al. (2004); Taylor et al. (2004); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Taylor et al. (2005); Tucker et al. (2005); Seabra & Dantas (2006); Lago & Martin (2007); De Baranda et al. (2008); Redwood-Brown (2008); Taylor et al. (2008); Lago (2009); Tenga et al. (2009); Johnson & Murphy (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
N/A (i.e. goal does not require definition)	1	Armatas et al. (2007)	43	Church & Hughes (1987); Harris & Reilly (1988); Hughes et al. (1988); Olsen (1988); Pollard et al. (1988); Gerisch & Reichelt (1993); Jinshan et al. (1993); Lanham (1993); Luhtanen (1993); Yamanaka et al. (1993); Garganta et al. (1997); Pollard & Reep (1997); Yamanaka et al. (1997); Luhtanen et al. (2001); Hughes & Wells (2002); James et al. (2002); Tenga & Larsen (2003); Ensum et al. (2004); Hughes & Churchill (2005); James et al. (2004); Jones et al. (2004); Scoulding et al. (2004); Taylor et al. (2004); Hughes & Franks (2005); Konstadinidou & Tsigilis (2005); Taylor et al. (2005); Tucker et al. (2005); Seabra & Dantas (2006); Yiannakos & Armatas (2006); Armatas et al. (2007); Lago (2007); Lago & Martin (2007); Cullinane (2009); De Baranda et al. (2008); Redwood-Brown (2008); Szczepanski (2008); Taylor et al. (2008); Boscá et al. (2009); Lago (2009); Tenga et al. (2009); Johnson & Murphy (2010); Lago-Peñas et al. (2010); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
<i>Research Concerning Physical Variables</i>				
Are the categories analysed fully defined? (i.e. specific criteria/speeds provided for each activity category)	11	Ohashi et al. (1988); Erdmann (1993); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)	5	Asami et al. (1988); Yamanaka et al. (1988); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005)
1 Category used? (excl. overall total distance)	3	Ohashi et al. (1988); Erdmann (1993); Kan et al. (2004)	13	Asami et al. (1988); Yamanaka et al. (1988); O'Donoghue (2002); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)
2 Categories/variables used? (excl. overall total distance)	2	O'Donoghue (2002); O'Donoghue et al. (2005)	14	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); Kan et al. (2004); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)

(continued)

Table IV. (*Continued*).

Context	Yes (=n)	Authors	No (=n)	Authors
3 Categories/variables used? (excl. overall total distance)	0		16	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)
4 Categories/variables used? (excl. overall total distance)	3	Asami et al. (1988); Rampinini et al. (2010)	13	Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010); Gregson et al. (2010)
5 Categories/variables used? (excl. overall total distance)	5	Yamanaka et al. (1988); Di Salvo et al. (2007); Lago-Peñas et al. (2009); Carling & Bloomfield (2010); Carling et al. (2010)	11	Asami et al. (1988); Ohashi et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Rampinini et al. (2007); Di Salvo et al. (2009); Carling (2010); Clark (2010); Gregson et al. (2010)
6 Categories/variables used? (excl. overall total distance)	2	Di Salvo et al. (2009); Gregson et al. (2010)	14	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010)
7 Categories/variables used? (excl. overall total distance)	1	Clark (2010);	15	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Gregson et al. (2010)
Are ProZone thresholds adopted?	4	Di Salvo et al. (2007); Rampinini et al. (2010)	12	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Clark (2010)
Are Amisco thresholds adopted?	4	Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010)	12	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Clark (2010); Gregson et al. (2010)
Are independent thresholds adopted?	8	Asami et al. (1988); Ohashi et al. (1988); Yamanaka et al. (1988); Erdmann (1993); O'Donoghue (2002); Kan et al. (2004); O'Donoghue et al. (2005); Clark (2010)	8	Di Salvo et al. (2007); Rampinini et al. (2007); Di Salvo et al. (2009); Lago-Peñas et al. (2009); Carling (2010); Carling & Bloomfield (2010); Carling et al. (2010); Gregson et al. (2010)

Table V. A summary of variables suggested to influence success in football.

Context	Yes (=n)	Authors
<i>Research Concerning Technical Variables</i>		
<b>ATTACKING TOTAL</b>	<b>48</b>	
- Effective/Organised offensive play	2	Yiannakos & Armatas (2006); Boscá et al. (2009)
- Converting shots to goals	2	Luhtanen (1993); Hughes & Churchill (2005)
- Shots on goal	3	Church & Hughes (1987); Lago (2007); Lago-Peñas et al. (2010)
Shooting with instep	1	Jinshan et al. (1993)
- Shots within 16 m	1	Olsen (1988)
- 1 <sup>st</sup> time shots	1	Olsen (1988)
- Creating high quality chances	1	Ensum et al. (2004)
- Long passing	3	Hughes & Franks (2005); Yiannakos & Armatas (2006); Johnson & Murphy (2010)
- Short passing	1	Konstadinidou & Tsigilis (2005)
- Shooting/Attacking from central areas	2	Hughes et al. (1988); Konstadinidou & Tsigilis (2005)
- Passing	3	Luhtanen et al. (2001); Tenga & Larsen (2003); Redwood-Brown (2008)
- Passes in offensive areas	1	Yamanaka et al. (1997)
- Counter Attacks	3	Yiannakos & Armatas (2006); Tenga, Holme et al. (2010); Tenga, Ronglan et al. (2010)
- Crosses (for & against)	2	Ensum et al. (2004); Lago-Peñas et al. (2010)
- Possession	5	Church & Hughes (1987); Lanham (1993); Hughes & Churchill (2004); Lago & Martin (2007); Lago-Peñas et al. (2010)
- Length of individual possessions (long)	3	Hughes et al. (1988); James et al. (2004); Jones et al. (2004)
- Short passing sequences	3	Olsen (1988); Pollard et al. (1988); Garganta et al. (1997)
- Limited players involved in build up	1	Garganta et al. (1997)
- Players receiving ball in opposing penalty box	2	Yiannakos & Armatas (2006); Szczepanski (2008)
- Runs with ball/one on ones	3	Gerisch & Reichelt (1993); Yamanaka et al. (1997); Luhtanen et al. (2001)
- Effective Set Plays	3	Jinshan et al. (1993); Konstadinidou & Tsigilis (2005); Yiannakos & Armatas (2006)
- Effective penalty taking from an even run up (4, 5 or 6 paces taken) or hit with 100% power & with accuracy	1	Hughes & Wells (2002)
- Creating space	1	Harris & Reilly (1988)
<b>OTHER TOTAL</b>	<b>8</b>	
- Venue	5	Tucker et al. (2005); Lago & Martin (2007); Taylor et al. (2008); Lago (2009); Lago-Peñas et al. (2010)
- Opposition	2	Taylor et al. (2008); Lago (2009)
- Work rate	1	Harris & Reilly (1988)
<b>DEFENDING TOTAL</b>	<b>6</b>	
- Effective/balanced defensive play	2	Boscá et al. (2009); Tenga, Holme et al. (2010)
- Pressing players in & around box	2	Harris & Reilly (1988); Szczepanski (2008)
- Tackling	1	Luhtanen et al. (2001)
- Regaining possession in own final 1/3	1	Garganta et al. (1997)
<b>N/A</b>	<b>10</b>	Yamanaka et al. (1993); Pollard & Reep (1997); James et al. (2002); Taylor et al. (2004); Taylor et al. (2005); Seabra & Dantas (2006); Armatas et al. (2007); Cullinane (2009); De Baranda et al. (2008); Tenga et al. (2009)
<b>No Differences</b>	<b>1</b>	
- Passing	1	Scoulding et al. (2004)

classifications but set different thresholds to represent high intensity activity thus offering different data. For example, from the physical articles reviewed four utilised ProZone thresholds (Di Salvo et al., 2007; Di Salvo et al., 2009; Gregson et al., 2010; Rampinini et al., 2007), four adopted Amisco's thresholds (Carling, 2010; Carling &

Bloomfield, 2010; Carling et al., 2010; Lago-Peñas et al., 2009) and eight articles adopted their own thresholds independent of both ProZone and Amisco (Asami et al., 1988; Clark, 2010; Erdmann, 1993; Kan et al., 2004; O'Donoghue, 2002; O'Donoghue et al., 2005; Ohashi, Togari, Isokawa, & Suzuki, 1988; Yamanaka et al., 1988).

Weston, Castagna, Impellizzeri, Rampinini, and Abt (2007) observed that “substantial differences in the methodologies the authors used to classify HIR (high intensity running) made direct comparisons between the results of the present study and those previously reported within the literature impossible” (p. 395). Contemporary research does adopt stringent thresholds to represent high intensity activity, but dissimilarities between the thresholds contribute to difficulty when attempting to transfer and compare different data sets. For example, Carling and Bloomfield (2010) and Carling et al. (2010) set five detailed classifications to investigate the work rate of substitutes and the effect of an early dismissal on player work rate. However, Carling (2010) changed to four classifications instead of five when investigating the activity profiles of players when running with the ball, having combined both high intensity running and sprinting despite “running with the ball showed that actions are most commonly undertaken at high running speeds” (p. 324), inevitably losing some sensitivity to the upper levels of activity profiles, i.e. high intensity running and sprinting as opposed to them both combined (see Table IV).

In summary, the review demonstrates methodological concerns relating to sample sizes, a lack of operational definitions, and conflicting classifications of activity that appear to lack consideration and specific detail (see Table IV). It is proposed that for future research to be more comparable and replicable, authors should consider including comprehensive operational definitions, which explain the variable(s) under investigation more clearly. In addition, research investigating the physical aspects of football performance especially, should seek to establish comparable thresholds that are utilised to assess physical performance in order to enhance our knowledge and allow meaningful comparison across studies.

### Utility of research findings

In discussing the implicit assumptions underpinning PA research there seems to be a lack of conceptual clarity about the nature of the science undertaken. While, the majority of the studies reviewed could be considered ‘basic research’ in that they discover new knowledge and information about performance, the evidence from the review suggests they often infer applied conclusions from their results. Basic science should not be seen as simplistic, and/or of less value and has significant a role to play. However, developing new knowledge rather than re-examining the same variables would appear to be the most fruitful way to develop the field. Moreover, re-examining basic variables of performance has arguably produced research that has reflected common sense

footballing ‘truisms’ rather than genuinely furthering our understanding of football performance, which is complex and dependent on a number of variables including chance. Attempting to identify ‘key’ aspects of play seems so far to have had limited success.

For example, from the 44 technical articles reviewed, authors’ have proposed 23 different ‘key’ aspects of attacking play that influence ‘success’ in football (see Table V). The most frequently cited variable is possession, yet it is only cited by 5/44 authors’ (11%). This demonstrates the multifaceted nature of successful football performance and that a combination of all variables contributes to success. Moreover, authors’ have attributed success to other extraneous factors such as; match venue (five citations), or the quality of the opposition (two citations) (see Table V). Four aspects of defending play were proposed to influence ‘success’ in football such as; balanced defensive play (two citations), pressing players in and around the box (two citations), tackling (one citation), and regaining possession in own final third (one citation). To illustrate this Lago-Peñas et al. (2010) found that a team’s total shots, shots on goal, crosses, crosses against, ball possession and the venue that they were playing at discriminated between whether a team won, drew or lost. Similarly, Tenga, Ronglan, and Bahr (2010) found that the number of times a team was able to successfully put the ball into the penalty box “can be used as a proxy scored when comparing the effectiveness of different playing tactics in soccer” (p. 269). Moreover, it was found in a secondary study using the same data set that teams playing against balanced defences yielded less ‘score box’ opportunities than those playing against an imbalanced defence (Tenga, Holme et al., 2010) – see Table V. It was also found that “there were too few goals scored against a balanced defence for a meaningful analysis to be done” (p.253).

This is not a recent issue (see Table V), as findings such as “successful teams were more able to convert shots to goals from most aspects of play” (Hughes & Churchill, 2005, p. 505) or “the study supports previous research that suggests corners occur frequently and provide an opportunity to score” (Taylor, Mellalieu, & James, 2004, p.519), demonstrate something of a lack of evolution in the research base, and are a direct reflection of the descriptive methods implemented and the types of variables analysed. This trend has also continued in more recent, statistical based research that has concluded “putting an attacking player (pressed or not) on the ball in the penalty box should be the aim of any team” (Szczepanski, 2008, p.61). Overall, as these examples illustrate, the research has produced arguably predictable findings and multiple references to what

would be for coaches' well established and commonly accepted 'principles of play'. Therefore we could question, how much does this research actually further our understanding of performance?

### Implications for practice

It would appear that there is a genuine need to broaden research undertaken in the name of PA from both a basic and an applied science perspective in order to impact practice. Nash and Collins (2006) argue that coaches make intuitive decisions based often on tacit knowledge. This knowledge is developed by football coaches, often from extensive playing careers, who may view common sense findings such as these with cynicism and irony, which offer little to inform their practice. Subsequently, the knowledge and understanding generated by basic science needs to align with the requirements and demands of its consumers (Bishop, 2008). Therefore, the relationship between research and practice, and researchers and practitioners needs to be developed. Indeed, PA practice and coaching informed by and informing research is worthy of further discussion.

Hayes (1997), over a decade ago, argued "show me the results of notational analysis, not the notational analysis results" (p. 4), suggesting descriptive and correlative approaches to investigating dynamic, interactive and uncontrollable phenomenon such as performance is insufficient. Concerns have also been raised as to whether current notational analysis approaches to investigating performance

related variables are the most effective way to differentiate between successful and unsuccessful performance (Borrie & Jones, 1998; Borrie et al., 2002). Patton (2002) is also sceptical of objective approaches such as notational analysis as he suggested that "numbers do not protect against bias, they merely disguise it. All statistical data are based on someone's definition of what to measure and how to measure it", as this review has demonstrated an "objective statistic is really made up of very subjective decisions" (p. 574).

The evidence from the review suggests that if research is to continue in this vein, the potential for significantly enhancing our knowledge and understanding of football performance appears limited. Therefore, it is suggested that researchers engaging in this type of research consider adopting more rigorous approaches when designing studies (see Figure 1.) Specifically researchers should address:

1. The nature of the competition that is to be investigated
2. Providing statistical justification for the sample size
3. Context to the sample used (i.e. location, period of season, opposition faced etc.).
4. Comprehensive and published operational definitions for the variable(s) under investigation and ensure specific contextual information is included.
5. When researching the physical aspects of football performance, giving consideration to previous research in order to better inform the

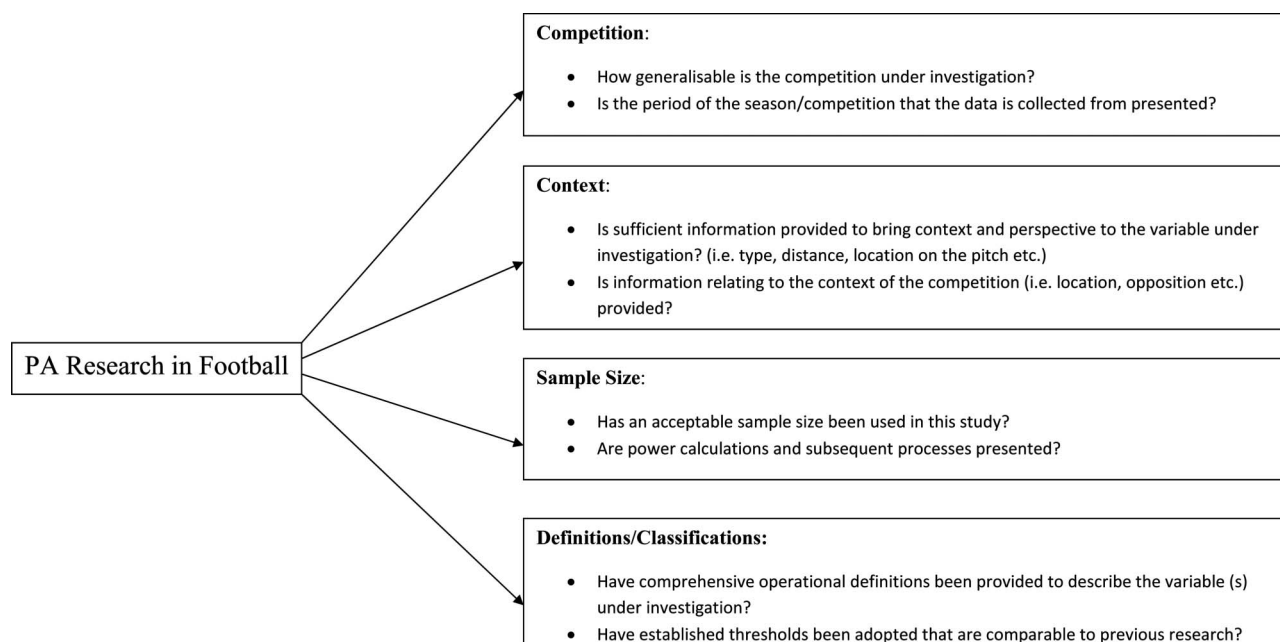


Figure 1. Performance analysis research in football checklist.



thresholds adopted to ensure research that is comparable.

The review has highlighted gaps and issues with existing PA research and identified guidelines to inform future research. There is also an acknowledgement of the paucity of research directed toward applied PA work. We would also suggest a shift in the direction of PA research is warranted. PA as an evaluative feedback tool has arguably received little research attention, as research attempting to describe and predict performance variables have taken precedence. With this in mind, our understanding of the intricacies and dynamics relating to PA as a form of feedback is limited largely due to the lack of research devoted to it. Similarly, there is a surprising paucity of research that has addressed the effectiveness and/or delivery of PA in applied settings leaving much of its purpose and impact unknown (Groom et al., 2011). Subsequently, future research adopting an alternative approach could attempt to bridge the current gaps between the descriptive analysis of performance, the dissemination of analysis information to athletes and its subsequent impact on their learning and performance. If an applied science approach were adopted (Funtowicz & Ravetz, 1993), in that researchers engaged with applied practitioners to establish common issues for research attention, then the potential to positively impact professional practice could be enhanced. Conducting future research in this way would also undoubtedly increase our understanding of the impact that PA has in applied contexts as it addresses the neglected 'analysis – learning-performance' link.

### **An alternative approach for PA research: Feedback, learning and context**

The primary function of video-based performance analysis feedback is to provide information to individuals involved in sporting performances to modify behaviour and improve understanding (Court, 2004; Groom et al., 2011). If an individual is able to retain information effectively and positively affect their future behaviour, performance levels will be impacted. Subsequently, the current research focus on investigating 'predictive' and 'performance-controlling' variables could be broadened. Alternative approaches include both researchers and practitioners attempting to understand what and how coaches and athletes are learning by reviewing performance-analysis information to make sense of their experiences in competition. Therefore, it would appear that the learning processes coaches and players engage in during and post PA exposure are of significant interest and warrant investigation. Despite recent research suggesting that this is an area of importance for

practitioners (see Groom & Cushion, 2004, 2005; Groom et al. 2011), little research has investigated PA from a learning perspective.

It is generally accepted that learning in sporting scenarios is largely a result of experience (e.g. Cushion, Armour, & Jones, 2003; Nash, Sproule, & Horton, 2008; O'Bryant, O'Sullivan, & Raudesky, 2000). For athletes playing the game, in training or match play scenarios, is a form of athletic experience, and yet despite often capturing and analysing performance, PA research has not addressed how elite athletic experience may inform performance expertise (Gilbert & Trudel, 1999). Typically, it is argued that PA should inform 'feedback', however Sharp (1992) suggests that feedback may only be advantageous if the individual understands what has been delivered, and is able to interpret the information correctly. Representing learning from PA as the provision of 'feedback' over simplifies the process which is tied to the construction of meaning, and interaction with complex and interchanging environmental and social inter-dependencies (Cushion et al., 2010). Understanding learning in relation to PA requires a consideration of the learners and the world they inhabit and internalise.

Of the few learning models that have been applied to sport, Schön's (1983) Experiential Learning Theory (ELT) has been proposed as a tool to understand and structure experiential learning to develop domain-specific knowledge in the context of professional practice (Gilbert & Trudel, 2001, 2004). Learning occurs through reflection triggered by practical dilemmas that occur and is governed by a role frame, an individual's frame of reference that is formulated on experiences and perceptions. Role frames will impact coach and athlete attitudes and perception towards PA, as well as impact the way athletes respond to PA sessions. This means that a 'one size fits all approach' to PA will be limited as assumptions about performance information and the use of that information will differ. Some research has examined reflection as a by-product of PA video feedback (Groom & Cushion, 2004, 2005), although there has been no explicit investigation into PA video feedback from a learning perspective. Therefore, the typical way in which PA information is disseminated to athletes i.e. video sessions (Groom & Cushion, 2004) appears to warrant further investigation. Similarly, future research could consider the assumptions of coaches and athletes in the use and delivery of PA given the impact it may have on the process. It is suggested that increased dialogue between scientists and coaches is required in order to design research methodologies that are able to advance our understanding whilst also yielding applicable findings. A widening of data collection methodologies (Denzin & Lincoln, 2000) to include

more naturalistic and qualitative methods such as case studies, ethnography, interviews and mixed methods approaches (Nelson & Groom, 2011) may also be beneficial in developing new knowledge and understanding.

In addition, the dissemination of information in football is a situated activity (Christensen, Norgaard Laursen, & Sorensen, 2010) and is influenced by both social and cultural factors. Despite the recognised socio-cultural influences involved in professional practice in sport (e.g. coaching and delivery philosophy, recipient qualities, session design and delivery process – see Groom et al., 2011) and the unique cultural characteristics inherent within football (Cushion & Jones, 2006; Nesti & Littlewood, 2011; Roderick, 2006), PA research appears to have largely ignored these influences. Again, this offers opportunities to develop PA research investigated from the context of the environment in which it is delivered thus understanding how PA impacts learning embedded within a socio-cultural context.

## Conclusion

The aim of this paper was to critically review PA research undertaken in football and propose an alternative research perspective to expand the conceptual base as well as our knowledge and understanding of PA. The review has raised methodological concerns in relation to the current positivist and key performance indicator driven research that has focussed on attempting to predict successful future performance, despite the inherent problems associated with investigating a multifaceted and often uncontrollable phenomenon. The evidence suggests that researchers should consider providing stronger rationales for conducting their research, illustrating its value, and its potential to further our understanding of performance and impact professional practice. In addition, the field should consider both more challenging and discerning approaches if it is to continue to progress. At the same time, an alternative perspective is proposed, the beginnings of which can be seen in the work of Groom et al. (2011), in which inherent cultural and social influences are considered along with the learning experience that individuals encounter following exposure to PA in an applied context. Finally, given the paucity of literature acknowledging PA as a social process given its integral role in the coaching process (Carling et al., 2005), considering the notion of PA as a tool for learning may provide researchers with a more critical perspective of the PA field and encourage a broadening of the PA research agenda. It is suggested that such an approach will lead to a greater understanding of the discipline and more meaningful impact upon professional practice.

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## Appendix 1

Table VI. Summary of “technical” performance analysis in football journal articles that were reviewed.

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2010	Tenga, Ronglan et al.	European Journal of Sport Science	Scoring opportunities & score box possessions in relation to goals scored	163 Norwegian elite soccer games during 2004 season	Yes (although a pass is not defined in isolation but is heavily involved in the authors' definitions)	Game location was factored into their random sample but no reference is made to location of games or quality of opposition in their results.	Multiple logistic regression analyses showed very similar results when comparing the effectiveness of different offensive tactics, regardless of which outcome was used. Counterattacks were more effective than elaborate attacks in producing goals, scoring opportunities and score box possession. Scoring opportunities and score box possessions (shooting opportunities) can be used as a proxy for goals scored when comparing the effectiveness of different playing tactics in soccer.
2010	Tenga, Holme et al.	Journal of Sports Sciences	Playing tactics on achieving score-box possessions	163 Norwegian elite soccer games during 2004 season	Yes (although a pass is not defined in isolation but is heavily involved in the authors' definitions)	Game location was factored into their random sample but not reference is made to location of games or quality of opposition in their results.	Offensive tactics were more effective in producing score-box possessions when playing against an imbalanced defence than against a balanced defence. Multiple logistic regression found that, for the main variable “team possession type”, counterattacks were more effective than elaborate attacks when playing against an imbalanced defence but not against a balanced defence. Longer passing sequences are a more efficient way of scoring goals compared to shorter passing sequences in elite Australian football. The variables that discriminate between winning, drawing and losing teams were the total shots, shots on goal, crosses, crosses against, ball possession and venue.
2010	Johnson & Murphy	Journal of Science & Medicine in Sport	Passing prior to goals scored	All 84 games from 2007/08 Hyundai A-League games (220 goals)	Short or long passing sequences are defined but no definition as to what a pass constitutes is presented	All games grouped together (no location, success of teams, opposition related information)	Longer passing sequences are a more efficient way of scoring goals compared to shorter passing sequences in elite Australian football.
2010	Lago-Peñas et al.	Journal of Sports Science & Medicine	Game-related statistics in relation to result (total shots, assists, crosses, offside committed and received, corners, ball possession, crosses against, fouls committed and received, corners against, yellow and red cards, and venue	380 games from 2008/09 Spanish Season	Variables are grouped but no definitions are provided	Location was considered, as was the overall result but no information relating to opposition was provided.	The variables that discriminate between winning, drawing and losing teams were the total shots, shots on goal, crosses, crosses against, ball possession and venue.
2009	Boscá et al.	Omega	Offensive and defensive efficiency	All games from 2000/01, 2001/02 and 2002/03 season of Spanish and Italian leagues	A discussion relating to the applicability of the variables used is presented but definitions are not.	Home and away games are considered in the context of the results in relation to league finish.	The Spanish league is more competitive than the Italian league. Defensive efficiency rather than offensive efficiency is most important in the Italian league; the best attack has the best defence. In the Spanish league,

(continued)

Table VI. (*Continued*).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2009	Lago	Journal of Sports Sciences	Possession strategies of one Professional Spanish football team (Espanyol) in relation to match location/ opposition/match status	27 matches from 2005/06 season (17 home and 10 away)	Possession was defined.	Match status, opposition and venue were accounted for as was a background to the team in question.	the best league positions were achieved by teams who had offensive efficiency both at home and away from home. Possession of the ball was greater when losing than when winning or drawing, and playing against strong opposition was associated with a decrease in time spent in possession. Mean percentage time spent in different zones of the pitch (defensive third, middle third and attacking third) was influenced by match status and match location.
2009	Tenga et al.	International Journal of Performance Analysis in Sport	22 multidimensional categorical variables	200 team possessions from 163 Norwegian Professional League games	Yes (although technical variables within the categories such as "passing", i.e. what a pass is specifically, are not defined)	No information relating to venue or opposition is provided in the analysis although pitch zones are considered in the analysis.	Most of the categorical data recorded in this study are a reliable method to characterise team match performance.
2009	Cullinane	3 <sup>rd</sup> International Workshop of the International Society of Performance Analysis of Sport	Analysis of technical variables in relation to position	18 games from 2007/08 season involving 3 times (Arsenal/Liverpool/ Newcastle)	No	No information was provided as to whether they were playing at home/away or the opposition they faced.	Contributions of performance indicators can be associated with positional roles. Arsenal demonstrated the highest team mean execution scores for all variables except shooting, and consistently higher mean positional scores across performance indicators associated to positional role.
2008	De Baranda et al.	European Journal of Sports Science	Goalkeeping performance variables (such as body part with which last part of attack or shot was made, zone of goalkeeper intervention, defensive technical and physical actions of goalkeeper intervention)	34 goalkeepers from 54 matches in 2002 FIFA World Cup	The variables are listed and described but are not all defined specifically (i.e. counter attack).	No differentiation between group or knock-out games is provided. No links are made to effective goalkeeping or the results of the games that GKs played in/in relation to GK behaviour.	The foot was the body part most often used to finish an attack. Most shots came from central zones. Most goalkeepers' defences came in the penalty area and the defensive actions most frequently used were the save, followed by foot control, and then the clear out.
2008	Redwood- Brown	International Journal of Performance Analysis in Sport	Passing patterns before and after goals scored/conceded	285 goals from 120 EPL games in 2004/05 season	Yes	No information relating to venue, opposition, location of passes on pitch or length of pass	Preceding goals the scoring team played a significantly greater % of passes than the average for the half, while the conceding team played significantly less. After scoring goals, scoring teams played less passes and had less pass success rate.
2008	Szczepanski	International Journal of Performance Analysis in Sport	Technical variables preceding shots at goal	4730 actions from 4 International games for the Polish national team	No	Opposition are named but no information relating to venue or type of fixture (e.g.	Pressed players in and around the penalty area are less dangerous than those with time on the ball. Teams

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Table VI. (Continued).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2008	Taylor et al.	Journal of Sports Sciences	Influence of match location, opposition & match status on technical performance	40 games of one professional football team during 2002/03 & 2003/04 seasons	Reference is made to the development of definitions in the research process but they are not published	friendly or tournament qualifier)	should not put their own goalkeepers under pressure and the aim of attacking play should be to get attackers on the ball in the penalty box. Variables that are investigated should be zone specific and be directly linked to goals, or goal scoring opportunities. Log-linear modelling procedures indicated that the incidences of all on-the-ball technical behaviours, with the exception of "set-pieces", were influenced by at least one of the three situation variables, with both independent and interactive effects found. In contrast, logit modelling suggested that there was no general influence of the situation variables on the outcomes of the on-the-ball behaviours.
2007	Armatas et al.	International Journal of Performance Analysis in Sport	Time of goals scored	192 games across 1998, 2002 & 2006 FIFA World Cup Tournaments	N/A	All games included – no differentiation between group/knock-out games or quality of opposition	Statistically significant difference between goals scored in 1 <sup>st</sup> half vs 2 <sup>nd</sup> half at 1998/2002 World Cup (more in 2 <sup>nd</sup> half) but not in 2006. No significant difference in 45/ 15 min analyses between the 3 World Cups.
2007	Lago	International Journal of Performance Analysis in Sport	Performance (shots on/off target) in relation to stage of competition and result	64 games from 2006 FIFA World Cup in Germany	No	League position in group stage is accounted for in analysis but FIFA World ranking or final position in World Cup competition is not referred to	Performance (shots on/off target) is a relevant variable to explain points attained in group stage, but in the knock-out stages performance is less important as there are no statistically significant differences between winners' and losers' performance.
2007	Lago & Martin	Journal of Sports Sciences	Possession in relation to match status, location, opposition (using Real Madrid as a reference) & identities of the team	170 matches of Spanish 2003/04 season	Possession is defined	Games were taken from first 17 days of season. Location, opposition and match status are included in the results.	Home teams have more possession than away teams, teams have more possession when they are losing matches than when winning or drawing, and the identity of the opponent matters – the worse the opponent, the greater the possession of the ball.
2006	Seabra & Dantas	International Journal of Performance Analysis in Sport	Zone of actions occurrence, Action (shot or pass) shot attempt result & team involved	112 shot attempts from 7 matches of Brazil & Germany in 2002 World Cup	SDO (Space of Defensive Occupation) sectors/zones are defined although technical variables, i.e. such	No differentiation is made between group or knock-out games and no reference is made to the specific	SDO is a reliable instrument capable of spatially characterising actions so as to point out differences in team performance.

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Table VI. (*Continued*).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2006	Yiannakos & Armatas	International Journal of Performance Analysis in Sport	Analysis of goals scored in relation to when scored, type of pass preceding the shot, set play, area shot from and type of attack scored from	32 games in Euro 2004 involving 16 different teams	as assist & reception were not defined. Successful/unsuccessful shots were referred to but definitions are ambiguous. No	opposition that Brazil/Germany faced.  All games grouped together = no differentiation between group games or knock out games and opposition team faced is not discussed	More goals scored in 1 <sup>st</sup> half than 2 <sup>nd</sup> half. An organised offence was the attacking style that yielded most goals followed by set plays and counter attacks. Long passes were the most effective pass preceding a goal, corners yielded the most set play goals and most goal attempts materialised in the penalty box. More goals were scored from longer passing sequences than from shorter passing sequences. Teams produced significantly more shots per possession for these longer passing sequences, but the strike ratio of goals from shots is better for "direct play" than for "possession play". An analysis of the shooting data for successful and unsuccessful teams for different lengths of passing sequences in the 1990 FIFA World Cup finals indicated that, for successful teams, longer passing sequences produced more goals per possession than shorter passing sequences. For unsuccessful teams, neither tactic had a clear advantage. Clear differences between playing styles across the four teams, with Norway being the most direct of the four teams. As champions, USA's scoring attempts were mainly executed from the central zones using combinations of small and medium passes with low possession and set plays.
2005	Hughes & Franks	Journal of Sports Sciences	Passing sequences prior to goals scored	52 matches from 1990 FIFA World Cup & 64 matches from 1994 FIFA World Cup	Passing sequences are described but no definition of a pass is provided.	The goal scoring profiles of successful and unsuccessful teams are published. No differentiation is made between group games, knock-out games or the quality of opposition faced.	More goals scored in 1 <sup>st</sup> half than 2 <sup>nd</sup> half. An organised offence was the attacking style that yielded most goals followed by set plays and counter attacks. Long passes were the most effective pass preceding a goal, corners yielded the most set play goals and most goal attempts materialised in the penalty box. More goals were scored from longer passing sequences than from shorter passing sequences. Teams produced significantly more shots per possession for these longer passing sequences, but the strike ratio of goals from shots is better for "direct play" than for "possession play". An analysis of the shooting data for successful and unsuccessful teams for different lengths of passing sequences in the 1990 FIFA World Cup finals indicated that, for successful teams, longer passing sequences produced more goals per possession than shorter passing sequences. For unsuccessful teams, neither tactic had a clear advantage. Clear differences between playing styles across the four teams, with Norway being the most direct of the four teams. As champions, USA's scoring attempts were mainly executed from the central zones using combinations of small and medium passes with low possession and set plays.
2005	Konstadinidou & Tsigilis	International Journal of Performance Analysis in Sport	Teams' offensive play in relation to zone of scoring attempt, source of scoring attempt, ball possession & type of passes.	749 offensive phases from 20 games of the top four sides in the 1999 Women's World Cup	The variables are listed and described but are not defined.	No differentiation is made between group or knock-out games and no reference is made to the opposition that USA/Brazil/Norway/China faced.	More goals scored in 1 <sup>st</sup> half than 2 <sup>nd</sup> half. An organised offence was the attacking style that yielded most goals followed by set plays and counter attacks. Long passes were the most effective pass preceding a goal, corners yielded the most set play goals and most goal attempts materialised in the penalty box. More goals were scored from longer passing sequences than from shorter passing sequences. Teams produced significantly more shots per possession for these longer passing sequences, but the strike ratio of goals from shots is better for "direct play" than for "possession play". An analysis of the shooting data for successful and unsuccessful teams for different lengths of passing sequences in the 1990 FIFA World Cup finals indicated that, for successful teams, longer passing sequences produced more goals per possession than shorter passing sequences. For unsuccessful teams, neither tactic had a clear advantage. Clear differences between playing styles across the four teams, with Norway being the most direct of the four teams. As champions, USA's scoring attempts were mainly executed from the central zones using combinations of small and medium passes with low possession and set plays.
2005	Taylor et al.	International Journal of Performance Analysis in Sport	13 technical variables (such as passes, shots on goal, tackles made etc.) both individually and as units in relation to zone on pitch	22 games of a British Professional team from the 2003/04 season	Reference is made to the development of definitions in the research process but they are not published.	No reference made to location of the games or the opposition faced but the team's strategy was reported	More goals scored in 1 <sup>st</sup> half than 2 <sup>nd</sup> half. An organised offence was the attacking style that yielded most goals followed by set plays and counter attacks. Long passes were the most effective pass preceding a goal, corners yielded the most set play goals and most goal attempts materialised in the penalty box. More goals were scored from longer passing sequences than from shorter passing sequences. Teams produced significantly more shots per possession for these longer passing sequences, but the strike ratio of goals from shots is better for "direct play" than for "possession play". An analysis of the shooting data for successful and unsuccessful teams for different lengths of passing sequences in the 1990 FIFA World Cup finals indicated that, for successful teams, longer passing sequences produced more goals per possession than shorter passing sequences. For unsuccessful teams, neither tactic had a clear advantage. Clear differences between playing styles across the four teams, with Norway being the most direct of the four teams. As champions, USA's scoring attempts were mainly executed from the central zones using combinations of small and medium passes with low possession and set plays.

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Table VI. (Continued).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2005	Tucker et al.	International Journal of Performance Analysis in Sport	12 technical variables and area on the pitch (tactical related behaviour) in relation to playing home or away	30 matches of a top 5 side from 2004/05 EPL season	Reference is made to the development of definitions in the research process but they are not published.	15 home and 15 away games analysed. No reference is made to the 8 games that have been omitted from the season in question and who they may have been against. No reference was made to quality of opposition in the 30 games.	<p>individuals, their respective units and team strategy. Recommendations were made to use this methodology in order to assess individual and unit contributions to team performance in future.</p> <p>Game location effects exist as home advantage was found as the team won more and scored more at home than away. More successful technical behaviours such as tackles, passes and aerial challenges were made at home. More tactical behaviours such as aerial challenges, corners, crosses, passes, dribbles and shots on goal were made at home than when away.</p>
2004	Ensum et al.	Journal of Sports Sciences (conference communication)	Probabilities of goal scoring from shots on goal	93 goals from 37 matches during 2002 FIFA World Cup	Yes	The authors make specific reference to the performance of semi-finals team.	<p>Successful and unsuccessful teams of Pollard and Reep (1997)</p> <p>However, for the 2002 sample, "distance" was half that of the 1986 sample (<math>-0.113</math> compared to <math>-0.219</math>). Brazil's players created the best quality chances in the World Cup (their shots had a mean scoring probability of 13.5%, suggesting that they were the most adept at penetrating defences. Also, 8 of their 18 goals were created from crosses (which have been found to improve the chance of scoring).</p>
2004	Hughes & Churchill	Journal of Sports Sciences (conference communication)	Attacking profiles (10 variables)	30 matches from 2001 Copa America (19 = successful, 11 = unsuccessful)	No	Apart from the team being successful/unsuccessful no information relating to opposition or stage of tournament is provided.	<p>Successful teams were more able to convert shots to goals from most aspects of play. They could keep the ball for longer durations and create shots after possessions of over 20 s more frequently than unsuccessful teams.</p>
2004	James et al.	Journal of Sports Sciences (conference communication)	Possession as a function of successful/unsuccessful teams	24 matches (12 of 3 unsuccessful teams/12 of 3 successful teams) from 2001/02 EPL season	A definition of possession is provided.	Reference is made to teams being judged as successful/unsuccessful on league position but no reference to location of the matches or the opposition that they faced in the 12 matches	<p>Successful and unsuccessful teams differed significantly in the duration of each individual possession. The length of each possession was related to match status as well as the success rate of the teams. Specifically, when drawing and losing games, successful</p>

(continued)

Table VI. (*Continued*).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2004	Jones et al.	International Journal of Performance Analysis in Sport	Possession in relation to score line	24 matches (12 of 3 unsuccessful teams/12 of 3 successful teams) from 2001/02 EPL season	A definition of possession is provided.	Criteria for successful/unsuccessful is provided but no reference to location of the matches or the opposition that they faced in the 12 matches	teams had a significantly higher mean length of possession compared with unsuccessful teams. No significant differences were found when the teams were winning. Additional analyses revealed that both successful and unsuccessful teams had a significantly higher mean length of possession when losing compared to when winning. Successful teams had significantly longer possessions than unsuccessful teams irrespective of match status although both successful and unsuccessful teams had longer possessions when they were losing games compared to when winning. No significant differences between passing of successful or unsuccessful teams.
2004	Scoulding et al.	International Journal of Performance Analysis in Sport	Passing	6 games in 2002 FIFA World Cup (3 successful/3 unsuccessful teams)	Information relating to whether it was a pass to feet or to space is provided but no definition of a pass is provided.	Group games were analysed with no reference to opposition or differences between the group games.	No significant differences in relation to frequencies of technical behaviours between positions although there were also some similarities. Players should be analysed on an individual basis as mean inter-positional averages mask the subtleties of individual performance.
2004	Taylor et al.	International Journal of Performance Analysis in Sport	Frequency of 13 technical variables such as passing, shooting, dribbling, tackling etc. occurring in relation to position	22 games of one British Professional team during the 2002/03 season	Reference is made to the development of definitions in the research process but they are not published.	No reference made to the quality of the team in question. 11 home and 11 away games in the sample but no reference is made to as to how this may have influenced the variables (i.e. any home or away differences). Opposition are not considered.	There were differences amongst Brazil & Norway's attacking play; Norway used more long passes & looked to attack quickly whereas Brazil took more touches on the ball & involved more passes in their attacking play. No differences between the teams' defensive play were reported
2003	Tenga & Larsen	International Journal of Performance Analysis in Sport	Playing styles (analysis of 23 attacking & 18 defending variables)	1 game (Norway vs Brazil)	The term "attack" is defined and parameters/variables are listed with detail. No definitions for the terms used within the descriptions are provided though (i.e. "attacks moving fast")	No context to the type of game this was is presented (i.e. location, friendly/tournament)	One in five penalties are saved, one in fifteen are missed and three in four are scored. Most effective penalties are from an even run up consisting of 4, 5 or 6 paces. No shots above waist height were saved, although 18%
2002	Hughes & Wells	International Journal of Performance Analysis in Sport	Penalty taking success	129 penalties from FIFA World Cups & Champions League Finals	No definitions in relation to how they measured variables involved in the taking of a penalty are presented (i.e. the speed of the ball strike or the takers run up)	No information relating to the dates/time span of the competitions used are provided. Nodifferentiation between the two competitions is provided in	

(*continued*)



Table VI. (Continued).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2002	James et al.	International Journal of Performance Analysis in Sport	Playing strategies (passing & ball entries in different areas of the pitch)	21 domestic & European games of a Professional British team during 2001/02 season	Yes (a pass is defined)	the results & only England and Germany are referred to in relation to success levels.	were missed. The main difference between England and Germany's penalty taking ability was that Germany were able to maintain better accuracy when striking the ball at 100% power.
2001	Luhtanen et al.	International Journal of Performance Analysis in Sport	% completion of game performance variables such as passes, receiving, runs with the ball etc.	31 games from Euro 2000	No	Information provided about the team in question's recent history. No reference made to results of the games that were analysed.	Attacking play occurred more frequently down the right hand side of the pitch in domestic compared to Europe. Variability was also observed between ball possession and passing difficulty made by individual players in each pitch area.
1997	Garganta et al.	Science & Football III	Goal scoring patterns	104 goals scored in 44 matches by 5 European teams (Barcelona, Bayern Munich, Milan, Paris SG & Porto)	Description of the features of play that were notated is provided but components such as passing/shot on target are not defined.	Teams are named and ranked in relation to variables. No differentiation is made between group and knock-out games.	The variable; passing, was attributed as being the most performance determining variables as France was the best team in the performance activity of passes, receiving, runs with ball and tackles.
1997	Pollard & Reep	The Statistician	Measuring the effectiveness of playing strategies	22 matches from 1986 FIFA World Cup	Possession is defined and outcome measures are described but strategies such as long forward pass are not defined.	No differentiation made between stages of tournament, quality of teams in question (or differences between) or opposition faced.	Paris SG, Bayern Munich and Milan won the highest percentage of ball possessions in their attacking third. Porto had its highest percentage in the defensive third and Barcelona in the middle third. 61 to 93% of the actions leading to goals came from movements with no more than 3 passes. In scoring movements, European top level teams often win the ball back in their attacking third, reveal a short attacking reaction time, involve few players touching the ball and perform only a few passes.
1997	Yamanaka et al.	Science & Football III	Playing patterns	8 games from Asian qualification for 1994	No	Area of passing on pitch was considered and context to	Through the adoption of the authors' system it is suggested that the variable; yield, can be used to evaluate both the expected outcome of a team possession originating in a given situation, as well as the actual outcome of the possession. The effectiveness of different strategies occurring during the possession can be quantified and compared. Japan used dribbling tactics more frequently than Saudi Arabia and

(continued)

Table VI. (Continued).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
1993	Gerisch & Reichelt	Science & Football II	One on one situations	2 European cup semi-final matches (Bayern Munich vs. Red Star Belgrade) but only one game is referred to	Yes	the fixtures (i.e. venue and score etc.) were provided. It is not acknowledged that most of Japan's opponents' averages come from only 2 games whereas Japan's is derived from 5 games.	Korea, more passes than Saudi Arabia and tried clearing actions more frequently than did Iraq. Japan outnumbered Saudi Arabia, Iran and Korea with reference to passing in offensive areas. Japan passed the ball more frequently than Saudi Arabia and Iran but less frequently than Iraq. Japan need to establish flexible tactics in structuring its offence and defence.
1993	Jinshan et al.	Science & Football II	Goals Scored	115 goals from the 52 games of the 1990 FIFA World Cup	No	Individual players are referred to as one on ones in relation to chances in the game, however no information is provided as to who the one on ones were directly against or the area of the pitch this was done in.	In the first game, both sides won half of the one to one situations they were engaged in (125; 125). Many subjective conclusions are drawn from individual performances during the game such as "the shortcomings of certain Bayern players were complemented by particularly strong performances by a number of Red Star Belgrade players. Midfielder Prosinecki's performance, generally acknowledged as being outstanding in this match, may serve as an example." (p. 172). Using the instep when shooting yielded most goals scored (28.7%) followed by the inside of the foot (24.4%). Most goals were scored from set plays (37 goals; 32.2% of goals). Most goals were scored in the 2 <sup>nd</sup> half (77 goals; 66.9%)
1993	Lanham	Science & Football II	Number of possessions in relation to goals scored	479 games from 1981-1991	No definition provided	Differences between leagues are presented but averages of possessions prior to goals are taken from a game as a whole rather than specifically before a goal was actually scored. No differentiation is made between home or away games.	Across 479 matches the average number of all lost possessions taken between all teams in total is 181.62 possessions that have been lost and won back before a goal is scored.
1993	Luhtanen	Science & Football II	Offensive actions in final third	47 matches from 1990 FIFA World Cup	Description of the features of play that were notated is provided but components such as "centres" are not	No differentiation made between stages of tournament or opposition faced.	Germany were the strongest team in the World Cup as they had the highest number of attacking trials, the lowest number of lost attacks and the

(continued)

Table VI. (Continued).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
1993	Yamanaka et al.	Science & Football II	Playing patterns	36 games of European ( $n = 12$ ), British Isles ( $n = 12$ ) and South America ( $n = 12$ ) teams compared to Cameroon ( $n = 4$ )	No	Although no direct reference is made to information surrounding the games used, efforts were made to create a balanced sample in their method.	highest number of scoring trials both with shots and headers. Overall teams from the British Isles used goal kicks and long forward passes more than teams in the other groups; they also showed a dominance in the air. European teams played short passes, runs and dribbles in order to reduce the risk of losing possession. South American teams had a higher ratio of shots to crosses with a higher % of crosses coming from the final sixth of the field. Cameroon exhibited similarities to the game patterns of South American teams more so than the European and British Isles' teams. The main differences were attributed to a more defensive emphasis to their game.
1988	Pollard et al.	Science & Football	Playing styles	10 games from 1982 FIFA World Cup & 22 games from the English 1 <sup>st</sup> division during 1984/5 season	Attacking sequences/strategies are described but no definition of a pass is provided.	Specific teams are referred to, but no information as to who they played or the match venue is provided.	Many differences between the two data sets, with long goal clearances having the most marked difference. All World Cup teams were high for short possession play, with France and Brazil using this approach the most, with England and Poland using it the least.
1988	Olsen	Science & Football	Goal scoring strategies	132 goals from 52 games during 1986 FIFA World Cup	Descriptions of variables are provided but information such as a definition of a pass is not provided.	No differentiation made between stages of tournament or opposition faced.	Most goals are scored with one touch on the ball. Very few goals are scored after more than 3 touches of the ball. More than 90% of goals were scored from within a distance of 16 m. Few goals are scored from multi-pass moves; only about 20% of goals are preceded by 5 or more passes. Successful teams played significantly more touches of the ball per possession than unsuccessful teams. Unsuccessful teams ran with the ball and dribbled the ball in their own defensive area in different patterns to the successful teams. The latter played up the middle in their own half, the former used the wings more. This pattern was also reflected in the
1988	Hughes et al.	Science & Football	Patterns of play	52 games from 1986 FIFA World Cup	No	Differentiations are made between successful (semi-finalists) and unsuccessful teams (eliminated at end of first round) although no reference is made to opposition faced or potential differences during different stages of the tournament.	

(continued)

Table VI. (Continued).

Date	Author (s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
1988	Harris & Reilly	Science & Football	Space, teamwork and attacking success	24 first class soccer matches	Yes	No information relating to quality of opposition, location or information relating to who the "first class" soccer teams were.	<p>passing of the ball. The successful teams approached the final sixth of the pitch by playing predominantly in the central areas while the unsuccessful teams played significantly more to the wings. Unsuccessful teams lost possession of the ball significantly more in the final one sixth of the playing area both in attack and defence.</p> <p>Both space and teamwork are important discriminators in relation to attacking success. Results emphasised that team members should concentrate on creating space when attacking and denying it when defending, supporting each other in attack and in defence, and trying to dispossess opponents while they are vulnerable in defence.</p>
1986	Church & Hughes	Communication to First World Congress of Science & Football	Player and team patterns of play	6 Liverpool games from 1985/6 season	Descriptions of variables are provided but information such as a definition of a pass is not provided.	No information relating to quality of opposition, location or stage of the season is provided.	<p>Greater number of passes were attempted when losing than when winning. Possession was lost more often when winning than when losing. Greater number of shots were taken when losing than when winning.</p>

Table VII. Summary of “physical” performance analysis in football journal articles that were reviewed.

Date	Author(s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2010	Carling	Journal of Sports Science	Physical activity when running with the ball	28 players from 30 French Ligue 1 games across 2 seasons (2007/08 and 2008/09)	Yes – 4 categories using Amisco Pro <sup>®</sup> thresholds (light speed, low speed, moderate speed, high speed & sprinting)	19 home games and 11 away games used but no differentiation is made in the results between home or away games. No information relating to whether the players are from one team and their opposition repeatedly or various different teams.	Players ran an average of 191 m with the ball of which 34% was covered at speeds of $> 19.1 \text{ km} \cdot \text{h}^{-1}$ . Mean distance per possession was 4.2 m. Mean time in possession was 53.4 s, mean duration was 1.1 s and 2 touches were used on average per possession. There were differences across positions for all variables.
2010	Carling & Bloomfield	Journal of Science & Medicine in Sport	Work-rate following a dismissal	7 players from one game in French Ligue 1 season 2007/08	Yes – 5 categories used using Amisco Pro <sup>®</sup> thresholds (walking and jogging, low intensity running, moderate intensity running, high intensity running and sprinting) as well as overall distance	Data collected from away team. No information relating to ranking of the teams involved is provided, nor is the result of the game.	Players covered a greater total distance than normal particularly in moderate-intensity activities and had shorter recovery times between high-intensity efforts. There was a significant reduction between game halves for total distance covered at both the highest and lowest running intensities.
2010	Carling et al.	Journal of Science & Medicine in Sport	Work-rate of substitutes	11 midfielders and 14 forwards during 18 matches (15 home and 3 away) from one French Ligue 1 club in 2007/08 season	Yes – 5 categories used using Amisco Pro <sup>®</sup> thresholds (walking and jogging, low intensity running, moderate intensity running, high intensity running and sprinting) as well as overall distance	No information relating to results of the games or the impact that the substitutes had during the games are presented.	No differences in work-rate between first- and second-halves were reported. Non-significant differences existed during the 2 <sup>nd</sup> half. Midfield subs covered greater distances/HI distances than team-mates. Forwards covered less distance than those who started the game.

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Table VII. Summary (*Continued*).

Date	Author(s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2010	Clark	International Journal of Performance Analysis in Sport	Activity profiles of EPL players	20 outfield players using 1 game per player (EPL, FA cup or Champions League). All games took place at the Emirates Stadium	Yes – 7 categories are used (Standing, walking, backing, jogging, running, shuffling, football)	No information relating to whether they played for Arsenal (home) or the opposition (away team) is provided in the results. No differentiation is made between the different competitions that were observed.	Players spent 9.5% of the first half performing high intensity activity compared to 7.8% of the second half. Positional role had a significant influence on the % of match time spent performing high intensity activity with the 13.1% for wide backs being significantly greater than the 8.1% for centre backs and the 8.0% performed by forwards. High intensity activity performed by players was intermittent with 58% of all bursts of high intensity activity being less than 3 s.
2010	Gregson et al.	International Journal of Sports Medicine	Match to match variability of high speed running activities of EPL footballers	485 outfield players from games during 2003/04 to 2005/05	Yes – ProZone <sup>®</sup> categories were used (Total high intensity running distance, total sprint distance and the number and type of sprints undertaken. Total high intensity running distance in possession and without possession of the ball)	Opposition and match location were not referred to.	Match-to-match variability was generally high across all variables with a mean CV (Coefficients of Variation) of $16.2 \pm 6.4\%$ reported for HSR (High-Speed Running) and TSD (Total Sprint Distance) covered during a game. This variability was generally higher for central players (midfielders and defenders) and lower for wide midfielders and attackers. Greater variability was also noted when the team were in

*(continued)*

Table VII. Summary (*Continued*).

Date	Author(s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2009	Di Salvo et al.	International Journal of Sports Medicine	High intensity running activity of elite football players in EPL	563 outfield players in EPL from seasons 2003/04 to 2005/06	Yes – ProZone <sup>®</sup> categories were used (Total high intensity running distance, total sprint distance and the number and type of sprints undertaken. Total high intensity running distance in possession and without possession of the ball)	Team success (of the players in the sample) was taken into account however no differentiation is made between the different seasons and/or the location of the games.	possession of the ball (~30%) than when they did not have possession (~23%). THIR (Total High Intensity Running Distance) was dependent upon playing position with wide midfield and central defenders completing the highest and lowest distance. High intensity activity was also related to team success with teams finishing in the bottom five and middle ten league positions completing significantly more. THIR compared with teams in the top five positions. Both positional differences in high intensity activity and the observed change in activity throughout the game were also influenced by team success.
2009	Lago-Peñas et al.	International Journal of Performance Analysis in Sport	Work-rate/Intensity in relation to position	127 players in 18 Spanish Premier League Games	Yes – 5 categories used using Amisco Pro <sup>®</sup> thresholds (light speed, low speed, moderate speed, high speed, sprinting)	No reference is made to game location or the quality of the opposition.	No difference in total distance from 1 <sup>st</sup> half to 2 <sup>nd</sup> half at sub and maximal intensities. Medium intensity distance was significantly different.
2007	Di Salvo et al.	International Journal of Sports Medicine	Activity profiles of outfield players	300 outfield players from 20 Spanish Premier League and 10 Champions League games	Yes – 5 categories used using Amisco Pro <sup>®</sup> thresholds (walking and jogging, low intensity running, moderate	No reference is made to game location or the quality of the opposition. Similarly no differentiation is made	Results showed significant differences between the different playing positions. Midfield players covered a

*(continued)*

Table VII. Summary (*Continued*).

Date	Author(s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2007	Rampinini et al.	International Journal of Sports Medicine	Physical performance of players in relation to field tests (RSA (Repeated Sprint Ability) etc.)	20 professional players during season & 188 opposing players	Yes – ProZone <sup>®</sup> categories were used; total covered, high intensity running, very high intensity running, sprinting & top running speed	No reference is made to game location	Significant correlations were found between peak speed reached during the incremental field test and total distance. Significant correlations were also found between RSA mean time and VHIR (Very High Intensity Running) and sprinting distance. RSA and incremental running tests are accurate measures of match-related physical performance in top-level professional soccer players.
2005	O'Donoghue et al.	International Journal of Performance Analysis in Sport	Repeated work activity in EPL	226 different players (15 min match play each) from 124 EPL games ranging from 2000–2005	2 categories used (Work and Rest). Emphasis is placed on observer interpretation.	All games across 5-year period analysed together. No information relating to opposition, venue or amount of times individual players were observed is published	Position had no significant influence on the number of periods of work performed during 15 minutes of soccer. Players performed 49 repeated work bouts with a mean of 3.1 periods of work of 2.9 s in 15 min

*(continued)*



Table VII. Summary (*Continued*).

Date	Author(s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
2004	Kan et al.	Journal of Sports Science (conference communication)	Factors affecting running speed in a game	2 games (Japan vs UAE & Sanfrece Hiroshima vs Yokohama Marinos)	No definition is provided for possession and little explanation is given as to how they calculated player speeds.	The domestic game was a J-League game however no information is provided as to the type of international fixture assessed (i.e. friendly, qualifier etc.).	of match play. The change in average running speed of the outfield players on a team was affected by the change in ball speed. On average the Japanese team were quicker than Sanfrece Hiroshima. The team that retained possession of the ball the longest recorded the greatest average distance travelled.
2002	O'Donoghue	International Journal of Performance Analysis in Sport	Time-motion analysis of work-rate in EPL	210 players from 35 EPL matches	2 categories used (Work and Rest). Emphasis is placed on observer interpretation	No reference is made to the season the games are taken from. No reference is made to venue or opposition involved in the games.	There was no significant difference between the duration of the average burst performed by defenders, midfielders or forwards. Midfielders had a significantly shorter recovery between bursts than defenders.
1993	Erdmann	Science & Football II	Kinematics	One Polish third division during 1990/91 season (Comindex Damnica vs Baltyk Gdynia)	Process of quantifying speeds and distances is provided	No information relating to home/away team is provided.	Information relating to distances covered and the displacement of team shape is provided, e.g. during the first 5 min of the match a forward player ran 741 m with a mean velocity of $2.5 \text{ m} \cdot \text{s}^{-1}$ . No generic conclusions are made in relation to performance.
1988	Asami et al.	Science & Football	Movement patterns of referees	6 top class Japanese referees and 7 foreign FIFA referees during 10 Japanese 1 <sup>st</sup> division	4 categories; walking, jogging and running (although no speeds or description of these are	Two groups of referees are acknowledged separately in the results section. No game related information	Variations in distances covered when jogging, walking, running, backward stepping and

*(continued)*

Table VII. Summary (*Continued*).

Date	Author(s)	Journal Published In	Variable(s) Investigated	Sample Size	Operational Definitions Presented?	Context to Sample?	Key Findings
1988	Ohashi et al.	Science & Football	Movement speeds and distances covered	4 players during 2 matches from Japan Soccer League	games and 7 international games.  A description of how they calculated the speed and distance is provided.	provided). Backward step is also included.  No reference is made to the season the games are taken from. No reference is made to venue or opposition involved in the games. No information relating to the players' positions is provided.	total overall distance were small across different 15 min periods. Backward stepping is more important for referees than for players and players spring more than referees.  The triangular surveying methods used in this study are able to precisely measure the movement speeds and distances covered by footballers in a game. Players' distances range from 9303 m to 11,601 m during a game.
1988	Yamanaka et al.	Science & Football	Time and motion analysis during match play	49 players from European-South American Cup/Japan Emperor Cup/Japan Inter-college Soccer Championship	5 categories used; Walking, Jogging, Running, Standing and Sprinting (although no speeds given for each category)	Positions are considered in the analysis and differentiation is made between the 3 different sample groups.	All three groups were very similar and the rank order of activities was; walking, jogging, running, standing, sprinting. 83–88% of time is spent walking and jogging, 7–10% is when running or sprinting and 4–10% is standing.

## CHAPTER 4

# Performance Analysis in Professional Football: Player & Coach Perspectives

Rob Mackenzie and Chris Cushion

### 4.1 INTRODUCTION

Performance analysis (PA) is firmly positioned as an integral part of the coaching process (Hodges and Franks, 2002; Lyle, 2002; Stratton *et al.*, 2004; Carling *et al.*, 2005; Groom *et al.*, 2011). The application of video and computer technology in sport and the implementation of video review sessions into weekly training programmes (Guadagnoli *et al.*, 2002; Groom and Cushion 2004) has led to the belief that PA “is now widely accepted among coaches, athletes and sport scientists as a valuable input into the feedback process” (Drust, 2010, p. 921). Moreover, the development of computer and video aided analysis systems (such as Sportscore, Warriewood, NSW, Australia; Focus X2, Elite sports Analysis, Delgaty Bay, Fife, UK; ProZone, ProZone Sports Ltd, Leeds, UK and Sport Universal Process AMISCO Pro, Nice, France match analysis systems) has enhanced accessibility to resources in order to analyse sporting events objectively (Carling *et al.*, 2005), and as a result, research frequently utilises these data. For example, video analysis software has been used with a multitude of purposes in both individual and team based sports (Jenkins *et al.*, 2007; Di Salvo *et al.*, 2009).

However, PA research in football has tended to focus on the investigation of isolated key performance indicators. This has resulted in a consistent focus on descriptive research examining variables related to ‘successful performance’ such as; possession and passing patterns (e.g. James *et al.*, 2004; Hughes & Franks, 2005), score-box possessions (e.g. Tenga *et al.*, 2010; Tenga *et al.*, 2010) and shooting accuracy (e.g. Lago, 2007). There is, however, a significant lack of research that has investigated the role of PA in the complex, messy and dynamic coaching process (Cushion *et al.*, 2010). Moreover, research has often neglected the perspectives of practitioners who use PA in applied settings, such as professional football. The purpose of this study was to investigate the role of PA in the coaching process at a professional football club and the perspectives of both professional players and coaches in relation to its use.

### 4.2 METHODOLOGY

A case study approach was adopted (Yin, 2003) presenting both ethnographic data, in the form of participant observation and unstructured interviews (Hammersley and Atkinson, 1994) recorded over the period of one full season. Data was

recorded at an English professional football club who play in the FA Championship by the primary researcher who occupied a dual role as 1<sup>st</sup> Team Performance Analyst and full time researcher during his time at the club.. In addition, semi-structured interviews were conducted with both senior professional players (n=8) and members of the senior management team (n=3). The data were subjected to three levels of overlapping analysis using coding techniques (open, axial & selective) taken from grounded theory methodology (Strauss and Corbin, 1998). This allowed for the generation of descriptive themes and concepts relating to the use of PA at the club. A further level of analysis and abstraction allowed the introduction of wider theoretical perspectives. Four main concepts in relation to the use of PA were outlined: *PA as preparation*, *PA as reflection*, *PA as a disciplinary tool* and *PA as a learning resource*.

### 4.3 RESULTS AND DISCUSSION

Analysis revealed that the use of PA at the club was influenced by a number of sociological and cultural factors that until recently have been neglected within the PA literature (Stratton *et al.*, 2004; Groom *et al.*, 2012). Both players and coaches discussed pertinent issues relating to their perceptions of PA, both within the coaching process (Drust, 2010) and as a learning resource. Moreover, the results demonstrated that idealistic and unproblematic representations of PA within the coaching process (e.g. Hughes and Franks, 1997; 2008) are inaccurate as they do not consider confounding variables such as coaches' philosophies of practice (Nash *et al.*, 2008), the underlying culture at the club and perceptions of PA, players' learning preferences and group dynamics.

#### 4.3.1 The Culture

This research revealed that there was an underlying performance culture present at the club, in that the result of matches often influenced individuals' behaviour around the club as well as their perceptions of the value of PA in their practice and process of reflecting on their performance. For example, Player B reveals that if the team is successful, he would not reflect on his own performance and would not seek out PA support even if there were aspects of his performance that he was not happy about:

"It's like one of those where you can do something bad, and like I said earlier, if you win you just sweep it under the rug like "well that happens in football everyone is going to make mistakes" so I think like I say it's a lot of whether you've won or whether you've lost...I mean sometimes you play well and there's not ... you know "Oh I give the ball away a couple of times. I'm not gonna watch a DVD to look at that, do you know what I mean?"

(Player B, Age 22)

Similar sentiments were shared by Player E who described the emphasis that is placed on the result in his post-match evaluation of his own performance. He explained that if the team won the game the intensity with which he assesses his own contribution is diminished; leaving PA redundant in his post-match thoughts:

“That kind of self assessment is very, very important, but it depends ... it really, really depends because we all know it’s a results related, err, business, and it does depend on, on, on the results, how I do assess myself or not.”

(Player E, Age 32)

Given the incentives associated with winning and the negative consequences associated with being unsuccessful in professional football it is perhaps unsurprising that the result has such an influence on individual’s behaviour and reflective thinking (Dewey, 1933). When members of the coaching team were asked how PA was used when they were players, a similar theme emerged in that PA was only used with players by management following poor performances:

“My generation of players the only time you ever watched a game was when the manager said “Well I had to f\*\*\*\*ng sit through it so you are” you have to watch the whole game and watch yourself so it used to be a tool to humiliate people but of course this generation of player now are much more open to it being a teaching tool because that’s how we use it now, although some people I’m sure still use it as a big stick which is why we still get mixed reviews.”

(First Team Coach)

It could therefore be suggested that if players and coaches’ predominantly experience PA only in relation to poor performances when the team is successful it is perhaps deemed as something that they do not necessarily have to engage in, given they achieved their pre match aims. Moreover, the significance of a games’ result appears to have resonated with the players given that they reported a reluctance to actively reflect on their performances following a victory and did not perceive PA to be an integral resource to inform their future decision making. Subsequently, the environment in which PA is delivered and received is pivotal to how individuals perceive its role and function within their own role. This finding challenges the notion of PA being unproblematic, independent of the environment and unaffected by cultural stakeholders (e.g. Franks *et al.*, 1983; Robertson, 1999).

#### **4.3.2 Player Perspectives**

Players’ referred to PA primarily being a feed forward mechanism (Dowrick, 1999) as opposed to a form of performance feedback (Hughes and Franks, 1997). While it could be argued that the clubs distinctive culture may have influenced

players' perceptions of PA's role at the club, it may also represent more common uses of PA in the applied setting. For example, given players commonly referred to PA as having more of an affect prior to performance than post performance, it may be that PA is received more positively when informing decision making before a game. Subsequently, key stakeholders may use it more regularly prior to performance as opposed to following performance. Player A described that he valued pre match presentations at the club more than the debrief (post match) video sessions:

"Maybe the one before, erm, because I suppose it's more of a heads up to what's gonna happen, so, like I say, I can go into a game knowing who is their main header of the ball, who I'm marking is gonna spin round the back on a set piece and I know it's gonna happen, and I can sort of combat that to sort of prevent more chances and goal scoring opportunities"

(Player A, Age 22)

Similar preferences were described by Player G, who placed an emphasis on pre-match video-based PA sessions in his preparation in which information regarding opposing players' playing styles was presented:

"You know, you do PowerPoint presentations, you know, you know everything about the player before you've even ... stepped on to the pitch. So you know before kick off, right, this guy's right-footed, he's gonna, he's gonna try and cut in and shoot with his right. So it affects you where ... when you're in that level you don't, at the bottom, you don't know what they're gonna do, you know."

(Player G, Age 22)

When players were asked about how they perceived PA as a post-match evaluative resource, their responses revealed a club wide approach to PA following performance. Both players and coaches explicitly explained that they deemed video-based PA to be a checking mechanism that allowed them to confirm or dispute their initial interpretation and understanding of the situation that they had experienced:

Interviewer: "For me, video at the minute, the way it's used seems to be as if it's a kind of checking mechanism, i.e. was I right or was I wrong in what I think? So I think, "Right, I should have just played that" and the only reason I'm looking at that is to see ..."

Player: "Yeah."

Interviewer: "Yeah I should have or no I shouldn't, and then I move on. It's as if just by watching it again, I'm able to maybe get it clear in my head ..."

Player: "That's exactly how I use it, yeah, exactly. Like, I'll go back and I'll look at the goal and I think I probably could have done that,

and then next time you, you know, that'll be it. I'd have gone "I probably could have done that and I'll try and make sure that don't happen again." Do you know what I mean? That'll be it, and then I'll go onto the next thing."

Interviewer: "Rather than sitting and critically analysing your own game."

Player: "Yeah, yeah, I'd say it was that, definitely."

With this in mind, players did not report on any novel learning experiences (Cushion *et al.*, 2010) based on critically revisiting their performance as they predominantly used PA to provide an alternative perspective to their initial experience during a pre-determined event as opposed to observing their performance without an agenda. Subsequently, situations where players may have re-observed their performance in order to evaluate their performance and search for unnoticed critical incidents were not reported. In summary, analysis revealed a preference at the club towards using PA as a pre-performance resource in order to prepare specifically for the forthcoming opposition as opposed to as a post performance evaluation method. Moreover, it was found that PA was used to consolidate initial responses to experiences as opposed to being used as a tool to create novel learning experiences (Cushion *et al.*, 2010).

#### **4.3.3 Coach Perspectives**

Members of the management team made reference to a number of variables that influenced the delivery and use of video-based PA at the club. Despite the lack of research that has considered both cultural and sociological factors that may influence pedagogical practice (Stratton *et al.*, 2004), coaches discussed a number of elements that influenced their decision-making. For example, the perceived needs of the group were always at the forefront of the First Team Coach's thinking and had a significant influence on how he delivered video-based PA to the group as well as whether sessions were actually provided for the players:

"Any decisions that are ever made in terms of what we show them and what we don't show them and not because it's "I can't be bothered" it's about what has the best impact on the players and that's the reason why we ever do anything. It's about what's going to help them to play the next game and how we deliver it is about them, not about me or the coaches feeling good about ourselves and it's about what they need. It's always got to be about them."

(First Team Coach)

Subsequently, the dynamics of the group in terms of their personalities and relationships with each other as well as the mood of the players (often influenced by recent results) were considered when deciding upon how the video-based PA sessions would be delivered and the content of the presentations. As the Assistant

Coach described, however, sometimes the potential for individual development would be compromised if the needs of the group outweighed the benefits of providing individual specific feedback in a group scenario:

“The games comes so thick and fast that sometimes you know you might have got beat 2-1 but played quite well and you want to talk about it in the debrief and there might be things in there that you feel as though there’s an individual who can do better but collectively, you feel as though the group needs something different”

(Assistant Coach)

Having established the cultural factors that influenced the decision making of the management team prior to presenting video-based PA to their players, it is important to acknowledge coaches’ perceptions of PA itself as this may undoubtedly influence their choice of delivery (Groom *et al.*, 2011). The First Team Coach demonstrated an in-depth understanding of the inherent limitations associated with 3<sup>rd</sup> party data analysis providers (such as ProZone, ProZone Sports Ltd, Leeds, UK and Sport Universal Process AMISCO Pro, Nice, France match analysis systems) and that this knowledge influenced the importance and emphasis he placed on it within the coaching process (e.g. Lyle, 2002; Cushion *et al.*, 2006). Specifically, with reference to the physical data that is provided by such companies, he cited a lack of specificity in the thresholds utilised to analyse a player’s physical performance as a problem. Due to individual players having different sprint and high intensity thresholds that are not accounted for within the data he was aware that the data is somewhat incomparable and contributed to the lack of emphasis he placed on it within the coaching process:

“I actually think the players are interested in terms of distances and but again, unless you’ve got the individuality of the thresholds even that’s flawed. You know so I understand it and I probably we know a bit more about it than a lot of people who use it and that’s why I don’t use it because you know we need to spend more time proving the players on the training field rather than showing them what they can’t do and show what the opposition do do or can’t do”

(First Team Coach)

Similarly, the manner in which the information by 3<sup>rd</sup> party data analysis providers is distributed to the club was an issue for the First Team Coach as he described the lack of flexibility in what could be analysed coupled with a rigid presentation format as being influential in his cautious approach to PA and its diminished role within his match assessment.

“I want something different to what they are trying to do (3<sup>rd</sup> party data analysis providers). They are trying to show everybody in football what they do and then it’s up to you now to fucking make



that work for you. Well actually its arse about face, it should be “this is what I want and what can they do for me?”

(First Team Coach)

It is evident that the First Team Coach of the club is acutely aware of the limitations inherent with PA presented by 3<sup>rd</sup> part data analysis providers and this has contributed to his caution when using the information. This is in direct contrast to an ignorance or a resistance to PA that may perhaps underpin other First Team Coach’s resistance to fully integrating PA within the coaching process. With this in mind, self-determined video-based PA has taken precedent over statistical PA in the First Team Coach’s own coaching process (e.g. Lyle, 2002; Cushion *et al.*, 2006). His decision-making relating to the delivery and content of video-based PA to the players is underpinned by a consideration of what is right for the players at that specific time point and may in some cases result in no video-based PA actually being presented. This finding further challenges previous representations within the literature of PA delivery and receipt being an unproblematic and linear process (e.g. Hughes and Franks, 1997; 2008).

#### **4.4 CONCLUSION**

This research sought to further an understanding of the role and function of PA within the coaching process at a professional football club. Moreover, the perspectives of both coaches and players were examined in an attempt to examine the impact of PA on their respective practice. The approach adopted in this study attempted to capture the role of PA within the “gritty reality” of the coaching process (Potrac and Jones, 2009, p. 561) within the confines and pressurized environment of a professional football club. The findings from this study revealed that the performance culture at the club, which focussed mainly on the results of matches, significantly influenced how key stakeholders perceived and used PA. It was found that players were reluctant to seek out PA following successful performances and although it was not reported by the players in this study, members of the coaching team made reference to their experiences of PA being primarily used as a disciplinary tool following poor performances. Players at the club did demonstrate a preference for PA as a preparatory tool in contrast to being a post performance feedback mechanism and when players did describe instances where they had used PA following performances its primary role was to act as a checking mechanism to confirm or challenge their thoughts following their initial experience.

This study also revealed that a multitude of factors are considered by the clubs management team when using PA with the club’s players. Coaches explained that their interpretations of the players’ needs underpinned every aspect of their practice and subsequently sociological factors such as the mood of the group; recent results and the characters within the group were considered prior to conducting video-based PA sessions with players. Findings such as these challenge preconceptions of PA delivery being an unproblematic and linear process

(e.g. Hughes and Franks, 1997; 2004; 2008). The First Team Coach demonstrated an in-depth understanding of the limitations associated with the 3<sup>rd</sup> party service provider data that the club received and explained that these shortcomings contributed to its arguably negligible role in his coaching practice. This study has demonstrated the influence of sociological and cultural factors on the use and delivery of PA at a professional football club (Groom *et al.*, 2011). Consequently, future research focussing on the use and delivery of PA should seek to acknowledge these factors in their design and analysis. Furthermore, improved communication between researchers and practitioners (Bishop, 2008) is required in order to ensure that future research is both furthers our knowledge and understanding but is also applicable and relevant to the needs of those working in the applied setting.

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## Performance analysis in professional football: Player & coach perspectives

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Performance analysis (PA) is firmly positioned as an integral part of the coaching process (Carling, Williams & Reilly, 2005; Groom, Cushion & Nelson, 2011; Hodges & Franks, 2002; Lyle, 2002; Stratton, Reilly, Williams & Richardson, 2004). However, PA research in football has tended to focus on the investigation of isolated key performance indicators. This has resulted in a consistent focus on descriptive research examining variables related to 'successful performance' such as; possession and passing patterns (e.g. James, Jones & Mellalieu, 2004; Dawson, Appleby & Stewart, 2005; Hughes & Franks, 2005), score-box possessions (e.g. Tenga et al., 2010; Tenga et al., 2010) and shooting accuracy (e.g. Lago, 2007). There is however, a significant lack of research that has investigated the role of PA in the complex, messy and dynamic coaching process (Cushion et al., 2010). Moreover, research has often neglected the perspectives of practitioners who use PA in applied settings, such as professional football. The purpose of this study was to investigate the role of PA in the coaching process at a professional football club and the perspectives of both professional players and coaches in relation to its use.

A case study approach was adopted (Yin, 2003) presenting both ethnographic data, in the form of participant observation and unstructured interviews (Hammersley & Atkinson, 1994) recorded over the period of one full season. In addition, semi-structured interviews were conducted with both senior professional players (n=8) and members of the senior management team (n=3). The data were subjected to three levels of overlapping analysis using coding techniques (open, axial & selective) taken from grounded theory methodology (Strauss & Corbin, 1998). This allowed for the generation of descriptive themes and concepts relating to the use of PA at the club. A further level of analysis and abstraction allowed the introduction of wider theoretical perspectives. Four main concepts in relation to the use of PA were outlined: *PA as preparation*, *PA as reflection*, *PA as a disciplinary tool* and *PA as a learning resource*.

Data suggested a cultural performance discourse was prevalent at the club, which influenced both player and coach perspectives of PA. In general, players placed a heightened importance on pre match presentations relating to the forthcoming opposition as opposed to post match PA video sessions, which had greater potential to be influenced by social and cultural factors (Foucault, 1972). Coach interview narrative revealed an understanding of the limitations associated with certain forms of PA feedback and suggested that its use in a formal format was often subject to a number of social and contextual factors, such as the dynamic of the group of players at the club, recent results and the 'mood' at the club. This study explored the perspectives of both players and coaches towards PA and demonstrated the influence of cultural and contextual factors on the application of PA in professional sport.

## **Performance Analysis in Professional Football: Cultural Considerations & Implications for Practice**

### **Abstract**

Performance analysis (PA) is firmly positioned as an integral part of the coaching process (Carling, Williams & Reilly, 2005; Groom, Cushion & Nelson, 2011; Hodges & Franks, 2002; Lyle, 2002; Stratton, Reilly, Williams & Richardson, 2004). However, PA research in football to date has focused primarily on the investigation of isolated key performance indicators with a consistent focus on descriptive research. This includes for example, possession and passing patterns (e.g. James, Jones & Mellalieu, 2004; Dawson, Appleby & Stewart, 2005; Hughes & Franks, 2005), score-box possessions (e.g. Tenga et al., 2010; Tenga et al., 2010) and shooting accuracy (e.g. Lago, 2007) in relation to successful football performance. At the same time, little is known about PA's role in the complex, messy and dynamic coaching process or its impact on the learning experiences of players and coaches exposed to it.

The purpose of this study was to understand the processes involved in the delivery of PA and its outcomes. This involved gaining an in-depth understanding of culture, discourses and accepted practices 'in-situ' at a professional football club. A case study approach was adopted (Yin, 2003) presenting both ethnographic data, in the form of participant observation and informal interviews (Hammersley & Atkinson, 1994) recorded over the period of one full season. In addition, semi-structured interviews were conducted with both senior professional players (n=8) and members of the senior management team (n=3). The data were subjected to three levels of overlapping analysis using coding techniques (open, axial & selective) taken from grounded theory methodology (Strauss & Corbin, 1998), similar to Cushion and Jones (2006) and Cushion (2010). This allowed for the generation of themes and concepts describing practice at the club. The data were then analysed using Foucault (1972; 1983) as a theoretical framework, focusing specifically on the concept of power being relational, the development of discourses that influence individuals' experiences (Pringle, 2007) and how power is maintained through forms of discipline and punishment.

Data suggested a cultural performance discourse was prevalent at the club with PA used as a disciplinary device that promoted compliance, affirmed power relations and encouraged players to be self-surveillant in accomplishing what was required of them. Video based PA feedback sessions were often delivered in a 'positive' and well thought out manner, however, delivery was informed and influenced by the underlying power relations that existed at the club. This in-turn impacted how information was received and acted upon by players. This study demonstrated the influence of cultural and contextual factors on the application of PA in applied settings.