# THE CONSTRUCTION OF KNOWLEDGE AMONGST EXPERT GOLF COACHES FROM EUROPE, WORKING AT ELITE LEVEL

By

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# **ABSTRACT**

At the elite level, expert coaches are expected to work with and understand a wide range of subject knowledge. However, as coaching seeks to be considered a profession, there appears little research into the "required knowledge/ expertise necessary for effectual practice" (Brewer & Jones, 2002, p.139). It has been proposed that to be expert in any domain requires extensive deliberate practice (Ericsson & Charness, 1994; Schempp et al., 2006b). Within the field of expertise, and specifically golf coaching, little is known of the tasks (or activities) used by golf coaches to acquire and construct their knowledge (Schempp et al., 2008).

Five expert coaches who have worked at elite level for a number of years were interviewed using semi-structured interviews. An interpretive, constructivist stance was taken in analysing the data that emerged from the interviews.

The findings of this study conclude that the five expert coaches developed along very idiosyncratic routes and appear to utilise a number of similar activities previously documented in research on expert coaches in other sports.

Learning was a very socially orientated endeavour, where most knowledge was constructed through interactions with other coaches, students and players of the game whilst actively engaged in a coaching environment. The coaches demonstrated a deep approach to learning and appear to view knowledge as having multiple constructs.

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## **Chapter 1: INTRODUCTION**

#### 1.1 Introduction to the Chapter

The purpose of this chapter is to outline the background information that justifies the need for this present study. It will provide a brief summary of the current position in this field and discuss briefly the research questions that are being asked. It will introduce the methodology being employed and provide an overview of how the thesis is laid out.

# 1.2 Outline of the Study

At the elite level, expert coaches are expected to work with and understand a wide range of subject knowledge (Lyle, 2002; Knowles et al., 2005). That is in-part because, "the coach has to organise practice sessions; develop techniques, skills and tactics for competition; ensure optimal physical preparation, and guide the performer or team throughout the season" (Nash & Collins, 2006, p.466). However, as coaching seeks to be considered a profession, "central to the development of sport and the fulfilment of individual potential" (Sports Coach UK, 2004, p.1), there appears little research into the "required knowledge/ expertise necessary for effectual practice" (Brewer & Jones, 2002, p.139).

It has been proposed that to be expert in any domain requires extensive deliberate practice (Ericsson, 1993; Ericsson & Charness, 1994; Ericsson, 2006; Schempp et al., 2006b), with research suggesting "that expert performance is acquired gradually and improvement of performance requires the opportunity to find suitable training tasks that the performer can master" (Ericsson, 2006, p.692). Werthner & Trudel (2006) defined tasks (or activities) relevant to coach learning as taking place in one of three situations; mediated, unmediated and internal, none of which necessarily holds precedence over the

other. Within the field of expertise, and specifically golf coaching, little is known of the tasks (or activities) used by golf coaches to acquire and construct their knowledge (Schempp et al., 2008).

#### 1.3 Introduction to the Research Questions

Werthner & Trudel (2006) call for further study to be carried out into the learning processes of coaches. Despite some past research (Schempp et al., 1999a; Schempp et al., 2007) suggesting the predominant learning activities of golf coaches, little is known about their approach to learning, their conception of the construction of knowledge and how the mix of mediated, unmediated and internal learning activities have shaped their learning. Therefore, the purpose of this study was to answer the research question, 'How do elite level, expert golf coaches approach the construction of knowledge and from which activities do they draw learning?'

The study proposed to identify from the participant's viewpoint, which activities had played a significant role in developing knowledge that has subsequently led to them gaining expertise in the field of golf coaching. Furthermore, this study sought to establish the type of approach used by expert coaches in gaining knowledge.

Questions were drawn from an analysis of previous research and literature in the area of sports coaching, as well as from the researcher's knowledge of the sport and intimate relationship with the field of golf coaching. This previous knowledge and relationship with golf coaching are addressed as part of the methodology chapter. The main questions and prompts listed in Appendix A acted as the catalyst for enquiry.

#### 1.4 Methodological Background

In the past, research into the construction of knowledge and analysis of learning activities valued by coaches has used both qualitative (e.g. Salmela, 1995; Jones et al.,

2003; Irwin et al., 2004) and quantitative (e.g. Gould et al., 1990; Gilbert et al., 2006; Erickson et al., 2007) methods. This study sought to understand why coaches became involved in different activities that they later acknowledged as influential in their development. Furthermore, this research wanted to address the approach taken to constructing knowledge by expert coaches. To achieve this, Jones et al (2004) suggest research should "embrace the personal dimensions of coaching, and the ways that coaches' previous career and life experiences shape both their views on coaching and the manner in which they set about it" (Jones et al., 2004, p.1). Therefore a qualitative approach was taken, grounded in constructivism. Semi-structured, in-depth interviews were used to gain a more participant-centred view of the development of coaching expertise.

#### 1.5 An Overview of the Thesis

This initial chapter introduces the purpose of the thesis and summarises its focus. Chapter 2 reviews the relevant literature for this subject area and includes references to the key theoretical frameworks which have shaped the direction of this thesis. Chapter 3 provides a rationale for the research methods employed and documents clearly each phase of the research process. Chapter 4 provides discussion of the findings, linking them to recent research and relevant theoretical frameworks. The final chapter draws conclusions on the study, addresses implications for the practice of golf coaching and highlights potential research matter for the future.

# 1.6 Chapter Conclusion

As justification for this present study, this chapter has outlined the background information pertinent to the field of research. It has provided a brief synopsis of some of the relevant issues in this field and introduced the research questions around which the

study is based. It also introduced the methodology employed and provided an overview of the thesis structure. The next chapter will provide an overview of literature relevant to this study.

## **Chapter 2: <u>LITERATURE REVIEW</u>**

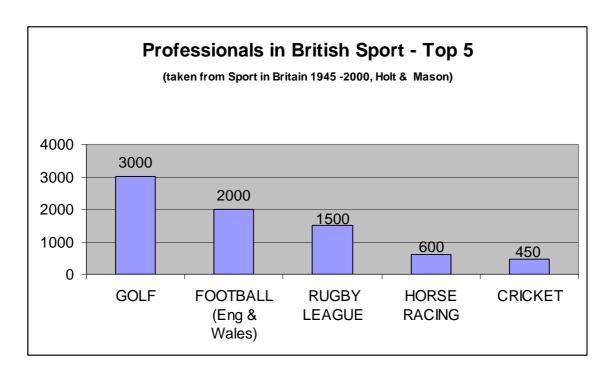
#### 2.1 Introduction to the Chapter

The purpose of this chapter is to review the literature related to the development of a coach and in particular the studies which have offered an insight into the sources of coaching knowledge used by expert coaches in the construction of knowledge. Relevant literature in golf coaching will be presented, as well as research that has presented its findings in conjunction with theoretical frameworks.

In order to better understand the historical and cultural developments surrounding golf coaching, this chapter begins by providing some important background information on golf and how a person has traditionally gained a qualification to coach golf.

# 2.2 Golf Coaching – a Brief History

People have played at golf clubs in the United Kingdom (UK) since the early eighteenth century (Henderson & Stirk, 1982), however, it was not until the turn of the twentieth century that golf became one of the most popular leisure pursuits of the time, with over 3000 golf clubs in existence by 1914 (Vamplew, 2008). The majority of clubs employed a Golf Professional and in fact during the early twentieth century more people earned a living from professional golf than just about any other sport (Vamplew, 2008). This was still apparent in a survey carried out by the Sports Council in 1996, when they examined the number of Professionals per sport in Britain (Holt & Mason, 2000) - (See Table 1).



**Table 1 – Professionals in British Sport, Holt & Mason (2000, p.83)** 

As well as playing the game to earn money, many Professionals taught the members of the club to play. Now as then, teaching subsidises the Professional's weekly wage from the club. According to Young et al. (1999), who studied the various roles undertaken by Golf Professionals in Ireland, this role is still a key function.

In the first half of the twentieth century the Professional received no training to be a coach and therefore they would teach the student the method which had worked for them as a player. This was because the Association that the Professionals belonged to, The Professional Golfers' Association (PGA), did not provide any training or coach education at that time (Phillpots, 2007). The PGA was formed in 1901, to look after the welfare of the Professionals by: promoting the game; helping members find jobs; holding meetings and hosting tournaments; provide funds for any member who may retire early due to ill health, or misfortune; and developing business opportunities (Vamplew, 2008). Nowhere in the constitution was reference made to the training of members to be better Golf Professionals or golf coaches. It was not until 1961 that a

Teaching Advisory Committee was formed to address the training requirements of Trainee Professionals (Holt et al., 2002). Prior to that trainees were employed by the Head Professional and the quality of their education was determined by the amount of time the Head Professional wished to invest in his assistant. This was not out of step with the rest of sport, because until the mid to late 1950's few governing bodies of sport provided coach education programmes (Campbell & Crisfield, 1994). Initially, the Advisory Committee introduced a voluntary, formal education system, but moved to a compulsory training programme in 1970 (Young et al., 1999). From a teaching and coaching perspective, the curriculum covered the basic technical and tactical knowledge required to teach and was delivered by the best teachers of the day. The course was approximately eight days long and included examinations at the end of it. This, alongside the more informal day to day tutelage of the Head Professional, shaped the early years of learning for every PGA Professional.

An overhaul of the training programme came in the early 1990's, where it was recognised that the information being taught was limited to a very simplistic coaching model (Mathers, 1997) that emphasised fundamental golf technique, but did not take into account the growing body of information being gathered within the fields of sports science. Changes were implemented and it is acknowledged that currently the PGA Professional receives a far more rounded introduction to the important skills of the coaching process (Jenkins, 2007).

Across Europe the game has evolved at a volatile rate. In 1990, the 'PGAs of Europe' was formed and one of its main goals was to ensure that the training standards which had largely been set by the PGA of Great Britain and Ireland were upheld by the rest of Europe. This led to the drawing up of minimum training standards criteria that each European PGA had to reach (Holt et al., 2002). In 1994, Great Britain and Ireland,

Italy, France and Sweden became the first countries to have their programmes recognised, enabling Professionals qualified in these countries to work in the other countries as Club Professionals, or Teaching Professionals (coaches), without the need to re-train.

As already stated, according to Holt & Mason (2000) the number of people earning a living from sport was highest in golf, and a UK survey - Sports Coaching in the UK (Sports Coach UK, 2004) showed that the breakdown of full time /part time coaches in golf is diametrically opposed to the majority of other sports, with golf having the highest percentage of coaches working in a full time capacity – 96% (see table 2).

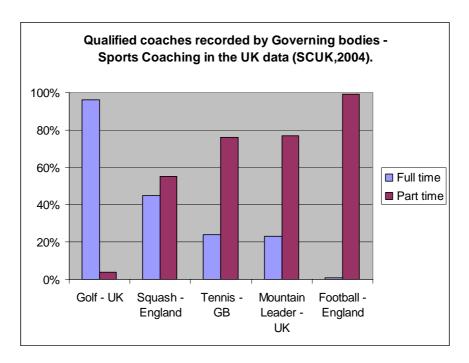


Table 2 – Full time vs. Part time coaches, SCUK (2004, p.54)

This can be attributed in large part to two main factors. The first is the 2,723 golf courses across the UK (KPMG, 2007), most of whom engage a Golf Professional to undertake the coaching in the club for them. The second is a ruling from the game's governing body, the Royal and Ancient (R&A), which can be traced back to as early as 1913 (Vamplew, 2008). It states that a person will lose their amateur status should they

receive payment for giving golf instruction. This meant that any golfer forfeiting their amateur status could not participate in numerous activities at their golf club including playing competitively, so the PGA Professional was left to service the demand for instruction unchallenged (Phillpots, 2007).

#### 2.3 Developing Knowledge as a Golf Coach

The majority of published research that has addressed the development of the golf coach has been undertaken by scholars in North America. In particular Schempp and McCullick have contributed to various papers over a long period of time (e.g. Baker et al., 1999; Schempp et al., 1999a; Schempp et al., 1999b; McCullick et al., 2006; Schempp et al., 2006a; Schempp et al., 2007). The majority of this research has been with members of the Ladies Professional Golf Association (LPGA) in America, or through an American golf magazine's 'Top 100' list. The criteria to be eligible for these studies has been either: nomination by fellow Professionals and later selection by an expert panel (Schempp et al., 2007); a minimum of six years experience of teaching; achieving LPGA certification; recognition of coaching ability, or playing success of their students (Baker et al., 1999; Schempp et al., 1999a; Schempp et al., 1999b; McCullick et al., 2006). A mixture of methods was used to extract information from golf instructors. These varied between: written responses to questions (McCullick, 1999; Schempp et al., 1999b; Schempp et al., 2007), a battery of tests to observe the function of working memory (McCullick et al., 2006), selection of various topic-cards with limited dialogue between the coaches and the researchers (Schempp et al., 1999a) and videotaping instructors as they gave lessons to novice golfers, followed up with an interview (Baker et al., 1999).

Schempp et al. (1999a) investigated key sources of knowledge of eleven expert golf instructors. They found that 'other instructors' and their own 'teaching experience' were the two most significant sources of knowledge. The interactions with fellow instructors took place either when they were working together, or through discussion at coaching workshops. The teaching experience gave the instructors' communication skills and they noted how they benefited from the direct feedback of students. In contrast, amongst the least important sources of knowledge was formal education. This was put down to the lack of relevance it offered instructors once they began coaching. Schempp went on to conclude that these expert instructors had "a vast amount of knowledge" (Schempp et al., 1999a, p. 301) which had been gathered from a wide array of sources. Although the findings provide a useful insight into some of the activities used by expert golf coaches to gain knowledge, due to the methods used in this study (i.e. choosing from 11 pre-determined cards), it seems that certain activities may have been left undiscovered, as the coaches were unable to highlight sources they deemed to be beneficial to them if they were not included on the cards. Furthermore, there is no evidence of why these activities were of particular importance to the individual and whether the level of importance given to a specific activity was related to a specific time in the coach's development.

More recently Schempp et al. (2007) studied the strategies employed by golf coaches to improve their knowledge and teaching. Using written responses from 31 expert coaches, a variety of different actions to improve performance were found. Some coaches sort out experts in other fields to broaden and deepen their knowledge whilst some visited seminars or other classes to hear the latest presentations from leading Professionals in their field. The use of video technology to monitor their own performance was also mentioned, as well as reading to reinforce, or learn, new

knowledge that would impact on student learning. Overall, coaches were motivated to take control of their own learning, rather than as a result of having to do something for the purposes of certification. However, participants were once again limited in their feedback, being allowed to identify just 6 potential activities they believed had been beneficial. To date, and within the sport of golf, there has been little published research that has used in-depth interviews to delve into the detail of some of these findings. Furthermore, there is a paucity of published research that exists on golf coaches from outside North America.

#### 2.4 Expert & Elite Level Coaching

#### 2.4.1 Expert Coaching and Player Development

To critically analyse the effectiveness, or expertise, of any coach, the context within which that coach works has to be understood (Bloom, 1985; Lyle, 2002; Trudel & Gilbert, 2006; Côté et al., 2007). Only when the context is understood can a judgement be made that defines appropriate knowledge and coaching competencies. Various frameworks have been suggested to define the pathway taken by participants through stages of development. However, the same level of analysis of coach development has not been closely studied to date (Erickson et al., 2007).

Bloom (1985) studied 120 individuals from different domains, including swimming and tennis, breaking down career development into early, middle and later years. Bloom found that at each stage, athletes had different needs and were exposed to different coaches who provided the appropriate coaching environment in which the athlete could flourish. For example, in the early years, athletes were involved in a playful relationship with their coach, the aim being to keep the athlete interested, whereas by contrast, in the later years preparation for competitive play dominated the

coach/ athlete relationship. Côté (1999) also provided a framework for sports participation which identified three developmental phases of an individual: sampling years, specialising years and investment years. His findings suggested many similarities to those of Bloom, although Côté's work only analysed the period from 6 -18 years of age, whilst Bloom's work was done over the lifetime of the participant in their sport. Lyle (2002) segmented participants into either participation, developmental or performance activity.

Each author provided detail of the type of coaching knowledge and coach behaviour that would be appropriate for the specific developmental stage of the participant. Côté et al. (2007) concur with these views, suggesting that different athlete requirements and emphasis on competition at various stages of development dictate the type of skills required by a coach to meet the needs of the athlete. This sets the context by which it can be determine whether a coach is demonstrating expert practice. They stress that this research was a starting point and as such did not address the possibility of a coach working through those levels and acquiring the skills to be seen as an expert coach working with all types of athletes in varied environments. This possibility is suggested by Salmela (1995) and Schempp et al. (2006b), who argue that because of the repertoire of knowledge and skills built up over an extensive period of time, "expert coaches are able to coach more athletes to higher levels of success in a greater variety of environments in a shorter amount of time than less expert coaches" (Schempp et al., 2006b, p.155).

Previous research (e.g. Ericsson & Charness, 1994; Bloom, 2002; Schempp et al., 2006b) suggests that expertise is developed over time and not simply a birthright, although some research (e.g. Tan, 1997; Singer & Janelle, 1999) has indicated that genetics may play a role. As part of their armoury an expert coach will have developed

an extensive knowledge of the subject in which they practice (Schempp et al., 2006b), through the utilisation of a wide range of resources over a prolonged period of time. Where coaches uncover a subject of relevance they seek to gain an understanding of it, with the intention of putting it into practical delivery (Schempp et al., 1998). Due to the extensive knowledge and years of experience, experts may sometimes seem to be operating from pure instinct (Berliner, 2004; Nash & Collins, 2006; Schempp et al., 2006b).

#### 2.4.2 Expert Coaches at Elite Level

One of the first studies of elite level coaches (Gould et al., 1990) was also one of the largest. The study used questionnaires to discover how 130 coaches from over 30 U.S. Olympic sports had developed their coaching style and the activities that they had pursued. They also wanted to ascertain the perceived educational requirements for preparing a coach to work at elite level. They discovered that experience of doing the job and observing other successful coaches had mainly contributed to the development of a coaching style. Over 95% of the coaches acknowledged that attending courses and reading books or journals had contributed to the development of their knowledge. Although the findings are of interest, closer inspection of the sample suggests that only a small percentage of these coaches were potentially expert, with only 23% of the sample been full-time national coaches. Furthermore, only 61% of coaches identified coaching as their primary form of employment. The general lack of detail about the coaches' ability to coach will be addressed later in the text. The authors use of a questionnaire, incorporating open ended questions was also highlighted as problematic, in that answers were deemed "at times, extremely difficult to identify" (Gould et al., 1990, p.344). The

ability to be able to follow up and gain clarification with coaches is vital if a study is to produce results with depth to them.

One other finding of interest in this study was that only half the coaches believed any key coaching principles and concepts existed around which they could shape their coaching. Unfortunately, Gould et al. (1990) did not clearly define what they believed them to be at the time. However, they did call for coaching models to be utilised to represent the principle bodies of knowledge used by elite coaches.

Côté et al. (1995) were amongst the first to propose a coaching model, basing it on in-depth interviews with 17 expert gymnastics coaches (see figure 1). A grounded theory approach was taken which meant that the model emerged from the interview data. They attempted to identify the types of knowledge gymnastics coaches drew from when creating a mental model of a gymnast's current ability level and possible progression to a higher level of performance. They went on to define a structure which they hoped could connect past, present and future research. The core of the model focussed around the application of three fundamental bodies of knowledge that a coach worked with: a knowledge of organisation, competition and training matters. Peripheral components that were also identified included: the coach's own characteristics, the characteristics and developmental level of the gymnast, and contextual issues.

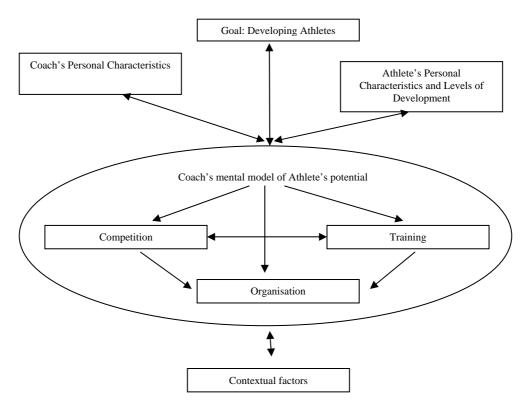


Figure 1 – The Coaching Model, Côté et al. (1995, p.10)

Taking into account the views of Schempp et al. (2006b), it might be expected that as expert coaches, the sample group were at times coaching quite intuitively, which would bring into question the completeness of the model, with regard to each coach having an awareness of all the knowledge bases that they were utilising at the time of the data collection. Abraham et al. (2006) identified this complication during their attempt to validate a coaching schematic (see Figure 2). Armed with this knowledge they decided to use a two part process: initially using open-ended questions to discuss the coaching process with 16 expert coaches from 13 sports, and followed by presentation of the schematic to the coaches, to determine whether they thought it acknowledged the required areas of expertise and accurately reflected the coaching process. The coaches agreed that the schematic accurately reflected the required knowledge, decision making and thought processes that they deemed important. To

develop knowledge of these areas a number of various learning activities were identified.

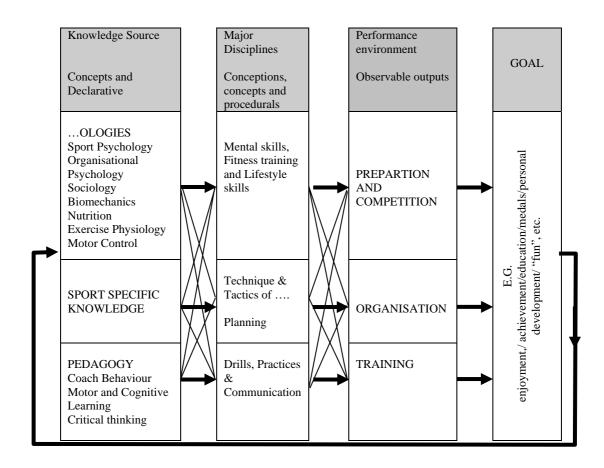


Figure 2 – The Coaching Schematic, Abraham et al. (2006, p.555)

# 2.5 Learning Activities

Previous research (Salmela, 1995; Abraham et al., 2006) suggests that expert coaches engage in the pursuit of further knowledge at every stage of their career in the belief that as a coach they need to continually source information from wherever and whoever possible. To develop knowledge and improve their coaching ability, observing the practice of other coaches (Gould et al., 1990; Salmela, 1995; Jones et al., 2004), as well as the actual act of coaching (Gould et al., 1990; Jones et al., 2004; Irwin et al.,

2004; Abraham et al., 2006), were mentioned as two activities from which expert coaches benefited considerably.

#### 2.5.1 Observing other Coaches

Coaches in different studies (Jones et al., 2004; Abraham et al., 2006) have suggested that by observing coaches they learnt the 'tricks of the trade' which are handed down from generation to generation of coach within the sport. As well as learning from observing good practice, coaches often acknowledged that they learnt as much from observing poor coaching practice (Salmela, 1995; Jones et al., 2004; Irwin et al., 2004).

# 2.5.2 Coaching Experience

Having observed other coaches it was identified by one coach (Jones et al., 2004) that through coaching practice they became better. "I'm convinced the way to improve is to just keep coaching, and thinking about your coaching. I know I've improved as a coach simply because I'm doing it regularly" (Jones et al., 2004, p.35). This quote also highlights the role reflection plays in combination with gaining experience, a subject that will be addressed later on in this chapter. Experience was beneficial especially where no formal education had been given (Irwin et al., 2004), although it was identified that "using trial and error, and learning from mistakes" (Irwin et al., 2004, p.431) was not an ideal model to pursue. This is reinforced by others (e.g. Abraham et al., 2006).

Fleurance and Cotteaux (1999), cited by Wright et al. (2007), identified seven main influences on the progression of ten coaches of various French team and individual sports towards the level of expert coach. They included mentoring, formal education and playing experience amongst them.

#### 2.5.3 Mentor Coaches

The help of other coaches through formal, or informal, mentoring schemes was identified by researchers (Salmela, 1995; Irwin et al., 2004) as being of benefit to coaches. Early experiences were guided by mentor coaches who were generally club based, but where new coaches perceived that they could not get the appropriate information they were not afraid to move further afield. These relationships often resulted in mentor coaches drawing attention to new lines of enquiry which the coach might otherwise not have considered (Salmela, 1995). As coaches became more competent it appears they became more reflective of the guidance which was offered (Irwin et al., 2004). Trudel and Gilbert (2006) point out that while there is strong evidence that the personal selection of a mentor has undoubted benefits, not enough is known about the effectiveness of more formalised mentoring schemes where a mentor is assigned to a specific coach by a third party.

#### 2.5.4 Formal Coach Education

The influence of coach education has received mixed responses, suggested as the key to coach development (alongside mentoring) by some expert coaches (Salmela, 1995) and beneficial by others for setting up practices, developing organisational skills (Irwin et al., 2004) and generally providing a good foundation from which to begin coaching (Jones et al., 2003; Jones et al., 2004) through good content and delivery (McCullick et al., 2002). Coaches also benefited from meeting other coaches in a similar position to themselves and some left the course with greater self efficacy (Malete & Feltz, 2000).

In contrast, courses have been criticised for been too theoretical, of poor quality and content (Irwin et al., 2004), as well as lacking relevance and being "about five years

out of date" (Jones et al., 2004, p.111) by expert coaches. Coaches at a competitive level have viewed them as an unwelcome obstacle where courses have been made a prerequisite to coach at that specific level. Indeed, participation in qualifications and formal courses should in no way be used as a tool to measure coaches satisfaction in coach education, because in some countries attendance is compulsory and linked to certification (Erickson et al., 2007), where as in other parts of the world formal qualifications are not required to practice as a coach (Gilbert et al., 2006).

#### 2.5.5 Participation in Sport

Participation in sport prior to taking a coaching role has often been discussed in previous research (e.g. Salmela, 1995; Schinke et al., 1995; Jones et al., 2003; Irwin et al., 2004; Trudel & Gilbert, 2006; Erickson et al., 2007). Trudel & Gilbert (2006) stated that although over 90% of elite level coaches have previously been competitive participants in the sport they coach, there is no conclusive link between a person's playing ability and ability to coach at the highest level. The benefits of participating in sport have however been well documented.

Using a life story approach, Jones et al. (2003) explained how a football coach had drawn on his previous playing experiences in dealing with players under his control. They pointed to the socialisation process that influenced the coach's behaviour, starting from his initial involvement in football as a player. Salmela (1995) discovered that all the expert coaches he studied had an early involvement in a number of sports as participants, although not always competing at the highest level. Other studies (Schinke et al., 1995; Erickson et al., 2007) have reached a similar conclusion, noting that the level of success achieved is secondary to participation in the sport that you coach. Perhaps of greatest interest is the argument Salmela (1995) makes regarding 'the

benefit' of mediocrity as an athlete on the later development as a coach. He suggests that: "by not having the natural gift as performers, they were forced to deeply analyse the structure of the game" (Salmela, 1995, p.5), resulting in a greater understanding of it. So while the level to which a coach has previously played appears to be of lesser importance, the understanding developed of the skills, rules and tactics of the game, as well as being able to draw on previous coach – player relationships, in which they understood how it felt to be a player are considered vital. These experiences "are channels through which the traditional accepted methods of coaching become integrated into the behaviour of aspiring young coaches" (Coakley, 1978, p.241). However, there may be exceptions, as Salmela (1995) found at least one coach in his sample had not played the sport they now coached. How a person enters the coaching arena, including the transition from player to coach, has also interested researchers in the field of sports coaching.

# 2.5.6 Stages of Athlete/Coach Development

Using in-depth interviews, Salmela (1995) traced the development of expert team coaches from basketball, volleyball, ice hockey and field hockey and broke down their participation in sport into 'Early Involvement in Sport', 'Early Career Coaching' and 'Mature Career Coaching'. The research of Schinke et al. (1995) proposed a 7 stage career model for the six elite Canadian basketball coaches that they studied. The 7 stages included: early sport participation, national elite sport, international elite sport, novice coaching, developmental coaching, national elite coaching and international elite coaching. It was common for the participants to have started coaching whilst still competing to a high level. As they progressed, coaches were picked to be assistants and were mentored by the head coach. At national level these coaches were appointed, in

their words, 'as much by chance as anything'. Finally at international level the coaches noted a change in philosophy as they were more answerable for results at this level. Despite the development of a model, it must be noted that all coaches had taken very different pathways through the 7 stages. Furthermore, it failed to explain how they went through each individual stage or whether they shortcut through some stages.

More recently, Erickson et al. (2007) used quantitative research methods to analyse the varied experiences of high performance coaches in Canadian University sport. From their findings they proposed a 5 stage developmental process towards becoming a high performance coach. Those stages were defined as: 'Diversified early sport participation'; 'competitive sport participation'; 'highly competitive sport participation /intro to coaching'; 'part time early coaching' and finally 'high performance head coaching'. The route through these stages was also seen to be highly individual, but the majority did pass through these stages at some point. Erickson et al. compared the pathway with the framework of sports participation mentioned previously by Côté (1999) and it shared a number of traits with the Sampling, Specialising and Investment phases of the model. Despite studying coaches with apparently lower levels of expertise, the stages related favourably with the career phases previously proposed by Schinke et al.(1995).

When analysing these findings it must be remembered that all of these studies were carried out in North America and the coach education, certification and coach selection policies of the US and Canada may well have influenced the results. Little published work has been carried out in this area in the rest of the world. However, one such study (Jones et al., 2004) featuring 8 expert coaches from the UK and Australasia suggested that nearly all the coaches began coaching whilst still playing to a high level

and that often the initial foray into coaching was more by accident than design. They did not produce any sort of diagrammatical pathway findings

In highlighting their findings, Jones et al. (2004) emphasised the situated nature of coach development; drawing on social learning theories; including reference to concepts such as 'Communities of Practice' (COP). Having studied expert coaches, other authors have also used conceptual and theoretical frameworks such as: experiential learning (Gould et al., 1990; Salmela, 1995), reflective practice (Irwin et al., 2004) and Moon's theoretical framework, 'the generic view of learning' (Werthner & Trudel, 2006) to position their findings. These are addressed in the following section.

# 2.6 Frameworks Used to Explain Coach Learning

# 2.6.1 Situated Learning Theory

Situated learning theory is borne from the perspective that an individual is engaged in learning, which is situated in social practice, set in social settings (Kirk & Macdonald, 1998). However, situated learning is more than just experiences of people's daily lives, rather there is an "emphasis on comprehensive understanding involving the whole person rather than "receiving" a body of factual knowledge" (Lave & Wenger, 1991, p.33). The key concepts of situated learning include Communities of Practice and Legitimate Peripheral Participation (LPP).

#### 2.6.1.1 Communities of Practice

COP's have been a much researched topic recently (e.g. Trudel & Gilbert, 2004; Culver & Trudel, 2006; Cassidy & Rossi, 2006; Trudel & Gilbert, 2006) although little analysis has been completed on elite level, expert coaches. Seen as integral to Wenger's situated learning theory, COP's are defined as a collective of people, who have a

common interest; who wish to interact with one another and who share amongst other things a common language (Lave & Wenger, 1991). Interestingly, at youth sport level it was discovered that coaches, especially those who coach teams that compete against each other, rarely engage in an exchange of ideas beyond the mundane (Lemyre et al., 2007). It is theorised that this is due to opposing teams' coaches being viewed as 'the enemy'. This is in contrast to the majority of expert coaches interviewed by Jones et al. (2004), who although at the top of their field and involved in competitive sport, highlighted the interaction with other coaches as integral to their learning.

# 2.6.1.2 Legitimate Peripheral Participation

LPP in its simplest terms refers to the involvement of individuals within the COP, reflecting the "process by which newcomers become a part of a community of practice" (Lave & Wenger, 1991, p.29). This view of participants, initially operating on the periphery, engaging with those who are wiser, and more established in a domain, conjures up the concept of apprenticeship (Cassidy & Rossi, 2006) and indeed Lave & Wenger were attracted to apprenticeship as it "captures very well our interest in learning in situated ways – in transformative possibilities of being and becoming complex, full cultural-historical participants in the world" (Lave & Wenger, 1991, p.32). This transformation brings with it all the inherited culture, rules and practices, as the participant moves from the periphery of the group to become a full integrated member (Wikeley & Bullock, 2006).

Much of the research carried out on how coaches learn to coach suggests this type of 'education' has been served by many (e.g. Salmela, 1995; Bloom, 2002; Jones et al., 2003). Culver & Trudel (2006) do however make a distinction between a COP, where individuals meeting willingly and share a desire to learn more about a certain

subject, and an informal knowledge network (IKN) where people are acquainted with one another, but "discussions are loose and informal, because there is no joint enterprise that holds them together" (Culver & Trudel, 2006, p.101).

Due to the lack of description regarding the nature of interactions between coaches in the literature previously noted, it is impossible to accurately know if coaches have been involved in COP's or IKN's. One of the consequences of adopting a view that learning is situated in the real world is that formal coach education courses cannot in all probability help anyone learn to coach as they are set away from the coaching environment (Cassidy & Rossi, 2006). The engagement in practical activity rather than accumulating knowledge in a social vacuum is also synonymous with Experiential Learning Theory and Reflective Practice.

#### 2.6.2 Experiential Learning Theory and Reflective Practice

A number of researchers (Gould et al., 1990; Salmela, 1995; Irwin et al., 2004; Knowles et al., 2005) have cited experiential learning as being critical in coach development. Gilbert and Trudel (1999) cite the work of Kolb and Schön as the most influential authors to have added to the early theories of Dewey on experiential learning theory. Dewey's work, and that consequently of Kolb (1984) and Schön (1991), stems from the belief that "knowledge construction is dependent on reflecting on problems or dilemmas encountered in the activity" (Gilbert & Trudel, 1999, p.2). This definition can be broadened to include the coaches own participation in various activities as an athlete. Indeed, according to Irwin et al.(2004), the ability for elite gymnastics coaches to use their own previous experiences as a gymnast and the chance to compare and reflect on the coaching they were giving, made up for the deficit they felt they had due to a lack of formal education.

Kolb's theory of experiential learning (1984) is commonly illustrated by an ongoing cycle denoted as: 'concrete experience', participation in actual experience; 'reflective observation', reflections the actual experience; conceptualisation', the drawing together of theoretical ideas for further action; and 'active experimentation', the testing of the theory in a practical setting, resulting in 'concrete experience' once again. Whilst experience is essential to the process of developing knowledge in coaching, purely gaining experience in no way defines expertise (Tan, 1997; Gilbert & Trudel, 2001). It has been suggested (Gilbert & Trudel, 2001; Cassidy et al., 2004; Gilbert & Trudel, 2006) that how the coach reflects on their experiences is perhaps more critical than having a lot of experience without reflection: "Ten years of coaching without reflection is simply one year of coaching repeated ten times" (Gilbert & Trudel, 2006, p.114).

Gilbert & Trudel (2001) provide a good overview of the work of Schön (1991), highlighting a sequence of 6 events which define reflective practice. During practice a coach initially confronts a 'coaching issue'; this issue is deemed to be pertinent due to each individual's approach to coaching, described as their 'role –frame'. The coach goes on to decide exactly why this coaching issue is of interest, described as 'issue setting', before entering into a phase of 'strategy generation', which would precedes 'experimentation' of the strategies. The concluding stage involves the coach undertaking an 'evaluation' of the strategies and their effectiveness.

The timing of the actual moment a coach engages in the reflective process was also discussed within their research. They highlighted how reflection, either in the middle of a coaching activity, known as 'reflection in action'; immediately after that activity, known as 'reflection on action'; or at the end of a season, where it is labelled 'retrospective reflection on action', could be used to help coaches draw meaning from

their experiences. In short, the role of reflection in heightening the awareness of learning through experience is critical (Moon, 2004; Trudel & Gilbert, 2006; Knowles et al., 2005). Gilbert & Trudel have since gone on to address the variability and depth of reflection amongst coaches and provide strategies to enhance coach development (Gilbert & Trudel, 2008). Further information on reflective practice will be highlighted further on in this literature review.

#### 2.6.3 Generic View of Learning

Werthner & Trudel (2006) proposed a new theoretical framework to explain how coaches learn. Moon's generic view of learning (Moon, 2004) is a theoretical framework which views the process of learning in two distinct ways. In the first instance, the metaphor of building a brick wall is given, where individuals collect "bricks of knowledge" (Moon, 2004, p.16) which are given to them through the instructions of a tutor, or similar individual, who is deciding what the appropriate knowledge might be for each individual. Werthner & Trudel (2006) have observed this type of learning in sports coaching courses, where the demands to meet specific assessment criteria mean that coaches are expected to regurgitate information, deemed relevant by the sport's governing body, during assessment and in the same identical manner in which it was delivered. Where inappropriate knowledge is shown, it is expected that the tutor (or assessor) recognises this and replaces it with the knowledge deemed appropriate for that particular coaching situation.

The second view of learning describes a "network" (Moon, 2004, p.16) of ideas, feelings, knowledge and understanding that are described as the 'cognitive structure' of an individual. The network is clusters of ideas and knowledge that are sometimes closely linked to each other, but are sometimes isolated with little connection being

made between one piece of knowledge and other areas of knowledge within the same network. This cognitive structure is generally in a state of flux, as the learner seeks out new knowledge from many different sources, including activities that happen on a daily basis without the aid of a formal tutor (Werthner & Trudel, 2006). In contrast to the brick wall approach, the learner sets the agenda for learning they deem to be most relevant to them. The coach's cognitive structure acts as somewhat of a filter for assessing the type of information that they chose to pay attention to and learn from; it may well include previous playing experiences or coaching experiences. This concurs with Cushion et al. (2003) who describe previous experiences as acting like "a screen or filter .....for all future expectations" (Cushion et al., 2003, p.218) which go on to "provide a continuing influence over perspectives, beliefs and behaviours" (Cushion et al., 2003, p.218) during a coach's career. Moon identifies this process as coming from a constructionist perspective, with learning guided by the individual's view of the world and the processes used by them to develop their own knowledge. It allows for a multiple of realities to be acknowledged in the learning process.

## 2.6.3.1 Internal and External Experiences

The cognitive structure is altered through various external and internal experiences. External experiences are defined as all things (objects, ideas, images, etc) that are currently outside of our experiences and therefore are not part of our current cognitive structure. Internal experience refers to the experiences that a person brings to the present moment, and as such is viewed as part of the current cognitive structure. Crucially, an external experience can initiate an internal experience, such as reflection, which may possibly offer a much greater learning experience for the person. These

experiences take place in a variety of learning situations and have the potential to change or adapt the current cognitive structure.

# 2.6.3.2 Learning Situations

The various situations where coaches develop their knowledge are defined as: mediated learning situations, where the learning situation has been instigated and directed by another person, such as a tutor; unmediated learning, where the coach decides the agenda of what they want to learn about, often this is determined by issues pertinent to their current experiences in coaching, and internal learning, where the coach will reflect on information or experiences that they have amassed, in an effort to derive new meaning from them. This particular action is also referred to as 'cognitive housekeeping', where re-ordering of current knowledge is carried out internally.

Other key considerations in viewing the acquisition of knowledge and understanding the learner's approach to that acquisition come from further areas written about by Moon.

#### 2.6.3.3 The Approach to Learning

The approach taken by the individual to learning is highlighted as either being surface, deep or strategic. Moon (2004) describes a learner with a surface approach as someone who gains new knowledge by memorising it and who consequently struggles to remember the information in anything other than the context in which it was originally learnt. A deep approach is taken from someone who is keen to understanding the underlying principles to a particular piece of knowledge. They will try to associate it with other similar knowledge previously gathered and question the merits of it before deciding how this information may best be integrated into their network of knowledge. A learner who adopts a strategic approach will switch between the surface and deep approaches, usually based on their desire to gain various levels of knowledge and

understanding to pass some sort of assessment. Associated with the approach to learning taken by the learner, is the conception of the structure of knowledge that the learner has.

## 2.6.3.4 Structure of Knowledge

Moon (2004) notes various frameworks that have been used to illustrate this point. From the field of educational psychology, the work of William Perry is briefly discussed. Research using Perry's framework by Belenky et al. (1986) and Baxter Magolda (1992; 1994; 1996) is noted by Moon, but the limitations of this thesis restrict closer analysis of the work by these researchers. However, the work of King & Kitchener (1994) on a seven stage development framework of reflective judgement will be highlight. This work is chosen, as it noted that the research was carried out on subjects who were dealing with situations that were "ill structured, have no "right or wrong" answer, but require reasoning and personal judgement " (Moon, 2004, p.35). The coaching process has been described in a similar vein by researchers (Jones et al., 2002; Cushion et al., 2003; Cassidy et al., 2004; Jones et al., 2004) in the past.

King & Kitchener's findings are summarised by Moon as follows:

In the pre-reflective stages:

"Subjects did not acknowledge that there was the possibility that knowledge could be uncertain"

"There is an assumption that authorities carry the truth"

In a quasi-reflective stage:

"There is the acknowledgement that some problems are ill structured and that there may be situations of uncertain knowledge"

"Everyone is seen as having a right to their own opinion, the reasoning of others who disagree with them must be wrong"

In the final two stages where reflective judgement is evident:

"People understand that knowledge is not given but constructed and that claims of knowledge are related to the context in which they are generated"

"There is a tendency to develop judgements on the basis of internal considerations"

At the highest level of reflective judgement:

"Intelligence is reflected as a skilled and sensitive ability to work with the complexities of a situation, with imagination that is used in the proposition of new possibilities and hypotheses"

"The processes of reasoning influence the response that she makes"

King & Kitchener (1994, p.47 cited in Moon, 2004, p.36)

The approach taken to learning and the conception of the structure of knowledge are pivotal in influencing the type of experience that a person has in any given learning situation. Indeed, it can be concluded that two people, supposedly at the same level of a certification programme, or who operate at the same level in a sport, may well have different approaches to learning, different understandings of the structure of knowledge and who begin with varied cognitive structures, will gain very different learning experiences from the same learning situation. From this standpoint it can be concluded that neither formal, nor informal learning should be prioritised (Werthner & Trudel, 2006) and that the certification level of a coach should not be the deciding factor in assessing how knowledgeable a coach maybe.

# 2.7 Chapter conclusion

This chapter began by giving background information on the game of golf, highlighting the cultural upbringing of the golf coach, how a person gains a qualification to coach and some demographics for golf coaching in the UK. It went on to review the literature relevant to golf coaching. The chapter also reviewed the literature related to the development of a coach and in particular offered insights into the studies which have identified the types of activities used by expert coaches to gain coaching knowledge. Key theoretical frameworks have also been identified that have a relevance to this field of study.

In summary the information provided in this chapter provides an overview of relevant research to date, against which the findings of this study can be compared and contrasted.

# **Chapter 3: METHODOLOGY**

## 3.1 Introduction to the Chapter

The purpose of this chapter is to introduce the chosen methodology, provide a rationale for the research methods used in conducting the study and give a step by step account of the processes that were used to gather, analyse and interpret the data. It also introduces the participants in the study and their backgrounds; the researcher and his background, and discusses the potential challenges of researching a field in which one works.

#### 3.2 Methodological Paradigm

Since 1970 the field of sports coaching research has heavily lent towards quantitative research (Gilbert, 2002). However, the role of qualitative research has begun to evolve with over 30% of all studies using qualitative methods in 2000-2001. During the same time period more inquiry has focused on how coaches learn to coach, rather than how they coach or what they coach (Gilbert, 2002).

One of the fundamentals of qualitative research is that it seeks an "appreciation of the perspectives, culture and "world-views" of the actors involved" (Allan, 1991, p.178). We are warned that due to the filtered lens with which an individual views themselves "all they will be able to offer are accounts, or stories about what they did and why" (Denzin & Lincoln, 2000b, p.19). However, these stories are viewed as meaningful by researchers looking to understand how knowledge is constructed by individuals through their daily experiences in life. According to Creswell (1998) all qualitative research is carried out by researchers who bring with them "a basic set of beliefs that guide their inquiries" (Creswell, 1998, p.74). Those beliefs reflect the

researcher's relationship with the people and the area being studied (Epistemology), the interpretations and views held by the researcher about the subject area (Ontology) and how the process of research should be carried out (Methodology). They will affect the questions the researcher asks and the interpretations that they find in the stories of the participants. For these reasons this chapter includes a section on the background of the researcher.

#### 3.3 Rationale for Research Method

In seeking to understand the experiences, motives and perspectives of actors in the world of golf coaching, a constructivist, interpretive approach was taken. Researchers using this type of approach (e.g. Potrac et al., 2003; Irwin et al., 2004; Jones et al., 2004) do not look to prove, or disprove a set of beliefs, but rather to observe how the participants interpreted, reacted and set about constructing their knowledge, based on activities they deemed to be of relevance at varying times throughout their lives (Denzin & Lincoln, 2000b; Gerson & Horowitz, 2002; Krane & Baird, 2005). They accept that data may not be the actual reality of the original experience, rather a reconstruction of the experience (Charmaz, 2000). With the emphasis from previous research on expert coaches pointing heavily towards activities grounded in experiential learning and the social practices of situated learning, Potrac et al (2003) identify interpretive methods as crucial to any study looking at the progressive development of a coach's journey, in this case towards expertise.

Furthermore, the researcher aligned himself with a fundamental principle of constructivism, that learning in the world is socially constructed and that part of "the task of the researcher is to uncover the multiple social constructions of meaning and knowledge" (Robson, 2002, p.27). The possibility of multiple constructions occurs

where people draw different learning, sometimes from the same specific event, based on their current values and previous experiences (Amis, 2005).

To understand how a coach builds their knowledge bases, Jones et al. (2003) suggest that "we need to know more about their lives" (Jones et al., 2003, p.214). Previous research in this area had used in-depth interviews, generally semi-structured, to elicit detailed information from coaches (Côté et al., 1995; Salmela, 1995; Schinke et al., 1995; Jones et al., 2003; Irwin et al., 2004; Jones et al., 2004; Lemyre et al., 2007; Wright et al., 2007). Interviews can be of great benefit to the researcher, as they allow the skilled interviewer to broaden, as well as deepen, the knowledge gained from the interview participant, providing they have the flexibility to change tact as facts emerge during questioning (Crouch & McKenzie, 2006). They have also been identified as beneficial for studying amongst other things, "relatively unexamined topics and identifying patterns and themes" (Gould et al., 2007, p.20). Although not the only way to elicit information, the use of interviews allows the participants to express their story in their words (Macdonald et al., 2002) and keeps the participant at the centre of the interview process rather than the agenda of the researcher (Jones et al., 2004). In previous research on expert coaches, Bloom & Salmela (2000) make the point that this format of interview guards against the researcher guiding answers towards a previously postulated framework. However, it is acknowledged that the resulting findings are likely to be affected in some way by the questions asked by the researcher (Crouch & McKenzie, 2006; Denzin & Lincoln, 2000b), indeed Fontana & Frey (2000) state that conducting interviews is not simply an exercise where data is gathered, but an "interaction between two (or more) people leading to negotiated, contextually based results" (Fontana & Frey, 2000, p.646). Acknowledging that the background of the

researcher may influence the analysis and selection of examples from the interview text (Warren, 2002), a short biographical account of the researcher is provided.

#### 3.4 The Researcher

The researcher has played golf for twenty six years, worked as a golf coach for twenty years and been involved in coach education for the PGA for six years. He has been recognised by the PGA as someone who has spent time developing his own coaching knowledge through various activities and has worked with players at elite level. As a coach educator he has also been involved in delivery and development of coach education programmes for the PGA at foundation degree and under-graduate degree level, as well as the four levels of the United Kingdom Coaching Certificate (UKCC).

Growing up, he played tennis to county standard, up to the age of 14; football to school and county representative standard; cricket to school representative standard and many other sports such as badminton, rugby and squash as an enthusiastic participant. Moving house with his family at aged 14, he began playing golf with his new found friends and quickly became consumed by the game, leaving tennis, football and the other sports to spend time on the golf course.

Leaving school at 16, he went to catering college initially, lasting less than one year, before the chance to undertake a golf apprenticeship through the PGA programme was a chance too good to miss. His first Professional was an enthusiastic coach, one of the best in the area, and quite quickly a fascination with playing the game, became a fascination with wanting to help people learn to play the game. The researcher was guided and influenced by three Professionals during his apprenticeship, each of them enthusiastic teachers with varying degrees of knowledge.

On qualifying as a PGA Professional in 1989, the researcher went to Germany, coaching there full-time for 8 years. He spent on average 45 hours a week, for 8 months of the year coaching players of all standards. During this time, a lot of time and money was spent on developing his knowledge by visiting other coaches, attending workshops and seminars, and buying books and videos, predominantly from the USA.

In 1997, he came back to England, working for a very knowledgeable Professional in Essex. He also spent time with a Teaching Professional who had influenced him greatly during his time in Germany. This man was one of the most influential coaches of the nineties in Europe. His thirst for knowledge was mirrored by that of the researcher, who was also still heavily influenced by the Professional who had been his first employer. This man had now developed a reputation as one of the most knowledgeable Professionals in the world and he and the researcher have regular contact which often provides a catalyst for further enquiry on the part of the researcher. Having taken up a role as a PGA tutor on the training courses for Apprentice Professionals during his time in Essex, the researcher was asked to apply for the role of coach education executive at the PGA 6 years ago. As explained at the outset, the researcher has been working in coach education for the PGA since that time.

#### 3.4.1 Researcher Bias

The researcher's background helped create a strong awareness of the subject area and allowed him to anticipate some of the potential activities that the coaches may have experienced. Indeed, it has been suggested that through this immersion into the same field as the participants of the study, the level of awareness gained by the researcher's position will enhance the type of follow up questions offered (Amis, 2005), as well as the quality of the findings (Chambers, 2000; Sands, 2002), providing "rich, contextual

information that can increase the depth of our knowledge about particular subjects" (Chambers, 2000, p.862). However, the researcher was equally aware that his own personal and professional background, as well as the relationship with the participants may be viewed by others as biasing the findings; potentially only representing the best practices of the culture to which he has an association (Chambers, 2000; Fontana & Frey, 2000). Janesick (2000) encourages qualitative researchers to acknowledge their "social, philosophical and physical location" (Janesick, 2000, p.389) relative to the study and its participants. Section 3.4 highlighted much of these criteria, but the philosophical stance taken by the researcher is highlighted here.

The time spent in the field of golf coaching has led the researcher to believe that knowledge is developed by participation in numerous activities over a prolonged period of time. The aspiration to be an expert, elite level coach in his own right and personal involvement with many expert coaches has highlighted that they seem to have many strategies through which they gain excellent results with a variety of students. As such, this postgraduate study provided the chance to ask expert coaches more specific questions about how they gained their knowledge and was approached as an opportunity for the researcher to continue his own journey of development and learning. From that perspective, the researcher was keen to learn more about his subjects and had no specific agenda to work to.

In acknowledging that the findings of this study are in part down to the subjective analysis that any qualitative researcher brings with them, this researcher has attempted to be as objective as possible in undertaking this research. Indeed as already stated, the familiarity with which the researcher enters this study has hopefully provided a wider appreciation of the subject matter than may have been possible for a non-golfer to attain.

## 3.5 Pilot Study

Prior to work on the main thesis being undertaken, and in line with recommendations by Robson (2002), a pilot study with 2 expert coaches who work at elite level was carried out. One of the main benefits of a pilot study was the chance to rehearse the planned format of the main study and learn lessons from it. Johnson (2002) suggests that in-depth interviews are perhaps as close as researchers come to talking to interview participants as if they were 'old friends'; however, the fact that the researcher is looking for data of a certain kind means that they control the direction of the conversation more so. With the conversations being recorded it meant that the researcher had a chance to analyse their style of questioning to ensure that as much as possible they allowed the voice of the participant to emerge rather than the agenda of the researcher (Robson, 2002). The questioning technique was analysed and notes made to ensure open-ended questions were initially asked at every opportunity. With this evaluation process, changes were made to the delivery of the questions, slight modifications were made to the main questions and additional prompts were included. It was also decided to include a short statistics sheet that could provide data on the amount of time the participants had spent coaching.

## 3.6 Research Design

# 3.6.1 Participants – Sampling

Denzin & Lincoln (2000a) identify that different sampling methods are strongly linked to the research paradigm being assumed by the researcher. In this study the researcher wanted to ensure that the participants were all expert coaches who worked at the elite level of golf. In keeping with research methodology guidance (Robson, 2002; Amis, 2005), and the constructivist approach taken to this research, purposive sampling

was used to select the coaches. Targeting samples of subjects who are known to be typical of the group being investigated, and who it is known will be able to offer particular insights into the research question are two of the main principle of purposive sampling (Robson, 2002; Amis, 2005). Where a particular collective or issue is being studied, Creswell (1998) also recommends purposeful (or purposive) sampling in selection of a sample population. Miles & Huberman's 'Typology of sampling strategies in Qualitative Inquiry' (1994) is also presented by Creswell, from which this researcher identified the sampling process as fulfilling both the 'Criterion' and 'Convenience' definitions. The various criteria for the sample are explained in-depth in Section 3.6.2 and the convenience of the sample came about due to the situation of the researcher within the field of study as explained in Section's 3.4 and 3.4.1.

Interestingly, analysis of the pertinent research previously carried out with expert coaches has failed to identify the specific type of sampling methods being employed, except on the very rare occasion (e.g. Irwin et al., 2004). It can be deduced from the research text that most researchers have chosen their sample from a range of criteria, but further analysis of the processes used to assemble the sample would be at best, educated guesswork, indeed Gilbert, (2002), suggests as much when remarking that "the coaching science database *appears to be* (researcher emphasis) based on convenience sampling" (Gilbert, 2002 p.31)

The selection of the five coaches for this study was based on the same process as the majority of previous research on expert coaches, namely the matching of a coach's status, experience, achievement and perceived effectiveness against the sample criteria.

## 3.6.2 Sample Criteria

Researchers in the field of coaching often fail to clarify the status, or standing of the coach being studied (Gilbert, 2002). As recommended by Creswell, (1998) and Gilbert & Trudel (2004), a clear criteria for selection has been established. Studies on expert, or elite coaches, have used differing criteria by which to categorise these particular groupings. Previous authors (e.g. Côté et al., 1995; Salmela, 1995; Schempp et al., 1999b; Irwin et al., 2004; Schempp et al., 2006a; Côté et al., 2007) have suggested various criteria which have included: a minimum of 10 years coaching experience, usually citing the varied works on expertise by researchers such as Chase & Simon (1973) and later Ericsson & Charness (1994); current involvement in national coaching activities; coaching at least one student that reached national or international level in performance; appropriate qualifications or certification; nomination from peers to a "top 100" list and recognition by either the national governing body or the head coach of the national team.

Lemyre et al. (2007) highlighted a distinction between elite coaches and expert coaches, indicating that elite coaches worked at the highest level of performance, beyond recreational and developmental stages of performance. Expert coaches are defined by longevity at national or international level and with a good winning record. Côté et al. (2007) disagree, suggesting that an expert coach is someone able to identify the needs of the participant and understand the context within which they are coaching and then demonstrate behaviour appropriate to the training, competition and organisational requirements of the participant. In this way a coach can be seen as expert whilst working at recreational level and all elite level coaches must not automatically be deemed to be expert.

This study identified the coaches on their ability to coach (expert) and the general setting in which they operated (elite). Although they have shown effectiveness at the other levels of participation their ability to work with elite level golfers was one of the key criteria for this study.

Beyond that a multiple criteria was applied that dictated that each coach must have: at least ten years experience as a coach, had coached players who went on to achieve success at an international level, been identified by the professional governing body as working at elite level, and have completed their professional qualifications in Europe. The final criteria was included because to date most published research on golf coaches has been completed on those working in North America (Schempp et al., 1999a; Schempp et al., 2006a; Schempp et al., 2007, Schempp et al., 2008).

## 3.6.3 Coach Demographics

Each of the 5 coaches in the study was given a pseudonym, in compliance with the researcher's promise to protect their anonymity and maintain confidentiality. A brief vignette is given to contextualise in some way the background of each coach in the following section. Prior to the start of the interview a one page form (see Appendix B) was completed by each coach, detailing information that is summarised in Table 3.

	Paul	Michael	Derek	Kevin	Stephen	Average
Age at which you first played?	10	12	12	13	12	12
Best handicap as an amateur?	0	1	1	3	2	1
What year did you start to give lessons?	1990	1975	1969	1974	1985	n/a
Year you joined PGA?	1999	1975	1968	1974	1984	n/a
Total years spent coaching?	17	30	27	32	22	26
Estimated hours coaching?	19400	48000	32350	18730	33435	30383

**Table 3 – Coach Demographics** 

The 5 coaches that were interviewed were all male. The average age of the coaches was 48.6 years of age; they had been coaching for an average of almost 26 years and given on average, an estimated 30,383 hours worth of coaching (see Table 3 above). Due to the nature of the coaching undertaken by these coaches this number could well be higher, as time spent with a player at a tournament is more difficult to quantify than when a coach stands on the practice ground and gives a regimented number of lessons per day. All the coaches interviewed had worked with players of varied abilities over the course of their careers to date; however, 3 of the 5 coaches spent a large part of their coaching career with only elite level players. The other 2 had coached players at all levels for a longer time, although their clientele had generally become a higher standard of player over time. This is in contrast to the findings of Erickson et al. (2007) whose research into coaches working in 9 different sports found that coaches working at elite level did not generally work with recreational level individuals. This may be due to the deployment of golf coaches in Europe versus Canadian university sport, something not clear from their research data.

## 3.6.4 Brief Vignettes of the Coaches

#### 3.6.4.1 Derek

Derek began golf whilst his family lived abroad. When they returned to England he joined a local club and within 18 months he was the Assistant Professional. He was a successful player throughout his career, and initially his playing was interspersed with jobs as a Club Professional, which is where he began coaching. He played, and won at the highest level in world golf before retiring and becoming a national coach. He works with elite level amateur and professional golfers on an on-going basis.

#### 3.6.4.2 Kevin

Kevin was introduced to the game aged 13 years and went on to represent his county at age 16. After leaving school he also became an Assistant Professional, giving lessons from the outset. He competed on the European Tour for a number of years, before retiring to a number of club jobs where coaching was a major part of his day to day duties. He began coaching at county and regional level, before becoming a national coach. Throughout this time, he was coaching elite amateur and elite professional players. He is currently dividing his time between coaching professionals and more elite level amateurs.

#### 3.6.4.3 Michael

Michael started to play golf aged 12. He was able to play representative golf for the county, but never won anything of significance as an amateur. Having turned Professional, he won a county U-23 event which made him decide to focus on a playing career. Having earned little money playing, he returned to a golf club role and began teaching. Having gained somewhat of a reputation for teaching he was offered the

chance to go to America. His initial role was as Director of Instruction, before he became Lead Instructor for a leading golf school that provide golf instruction for golfers of all abilities around the world. He is currently a Director of Instruction working with players from both the elite amateur and Professional levels, as well as some recreational golfers.

#### 3.6.4.4 Paul

Paul is the only one of the sample born and raised away from the UK mainland, but is European. Like the other coaches he played a number of other sports as a child. He is the only coach to have undertaken a coaching qualification whilst still an amateur. As an amateur golfer he competed at national level, and then went to a Physical Education college after leaving school. Through this education he became involved in the national coaching programme for junior golfers. Paul went on to be national coach in two countries and deals exclusively with elite level amateur golfers now, although he has also worked with numerous Professionals in the past.

## 3.6.4.5 Stephen

Stephen was perhaps the most talented all-round sportsperson in the group representing his county at javelin and cricket, whilst being a schools representative at a number of other sports. Following a similar pattern to the rest in getting into the Professional game, he spent a number of years coaching professionals on the European Tour. He would return occasionally to the UK to do some coaching of amateur golfers. Currently, he splits his time between Teaching Professionals and amateurs, providing coach education for coaches and working in the media.

#### 3.7 Pre Field Work

Each of the coaches who participated in the study was known by the researcher, either personally or professionally, or both. As Hammersley & Atkinson (1995) suggest, such relationships mean that little effort is required in establishing rapport. In ethnographic terms the researcher could be considered to be an insider, someone who has spent an extensive period of time becoming a part of the culture which they are now researching (Pink Dandelion, 1995; Sands, 2002). Sands (2002) believes this time is crucial, because as rapport grows between members of the same culture, a greater degree of familiarity and trust between the researcher and the participant can develop, which in turn suggests that the information they divulge may be more extensive. At the same time the researcher was aware that his role was not to become a "spokesperson for the group studied, losing his distance and objectivity" (Fontana & Frey, 2005, p.708).

## 3.8 Ethical Considerations

The coaches were initially contacted by telephone and the purpose of the study was explained to them. Following on each coach was sent an 'Informed Consent' Fact Sheet, (see Appendix C) which outlined the research that was being undertaken and gave guidance as to the exact nature of their involvement (McFee, 2006). As such this put them in a position to be 'informed' about what was being asked of them and by recognising their rights to anonymity and confidentiality throughout the process, as well as making sure they were aware of their right to withdraw from the study at any point, they were able to 'consent' freely and voluntarily (McFee, 2006).

All explanations complied with the ethical guidance given by the BSA – relationships with research participants' guidance: No's 13 - 30, (British Sociological Association, 2004) and BERA – responsibilities to participants' guidelines: No's 8 - 29,

(British Educational Research Association, 2004). All the coaches approached subsequently agreed to be interviewed. Research involving people brings with it ethical considerations at each stage (Robson, 2002).

Key ethical issues are highlighted within the context they occurred throughout the rest of the methodology.

#### 3.9 Data Collection

#### 3.9.1 Interview Content

It has been suggested that the aim of a successful, in-depth interview revolves around the interviewer's skill at eliciting a fully rounded perspective from the participant on their views of the chosen subject matter, rather than clinical individual answers to a series of unrelated questions (Gerson & Horowitz, 2002). In accordance with the guidance of Jones (1993) and Robson, (2002), a semi-structured interview guide was developed for the purpose of this study. This allowed the researcher to ask fundamentally the same questions to each participant, but follow up on unique information gleaned from the initial answers of the coach that may have been pertinent to the study, a key criteria for an in-depth interview (Robson, 2002; Culver et al., 2003). This had the added advantage of allowing the participants to express themselves in their preferred manner, while retaining the systematic nature of data collection between participants (Biddle et al., 2001).

Amis (2005) suggests that it is imperative that the researcher has "a sound, up-to-date understanding of the relevant literature that underpins the study" (Amis, 2005, p.115) in order that questions are pertinent to the subject area. The majority of the interview guide was theoretically derived from previous research in this area (e.g. Gould et al., 1990; Schempp et al., 1999a; Irwin et al., 2004; Jones et al., 2004; Werthner &

Trudel, 2006; Wright et al., 2007). In addition, the background of the researcher lent itself to having an understanding of the some of the activities that a golf coach may have undertaken.

#### 3.9.2 Data Collection Process

The interviews took place in a variety of locations, negotiated mainly around convenience for the participants. Previous research has suggested (Hammersley & Atkinson, 1995; Gratton & Jones, 2004) that organising interviews in a setting where the participants will feel comfortable, and being mindful to accommodate the schedule of their busy lives, are all part of good planning on the part of the researcher. Three of the interviews took place at the golf facility where the coach worked; one took place at the home of the coach and the other one in quiet area of a hotel. In each case the researcher ensured that the setting was suitable to hold a conversation where clear audio recording could be achieved and where little or no distraction was likely (Creswell, 1998; Gratton & Jones, 2004). Each participant was asked to allow approximately 2 hours between time of arrival and the need to depart. Due to the nature of the study, the setting was not deemed to be as critical as that of more ethnographic research. Gathering data on previous experiences rather than observing coaching behaviour meant that the interviews could be conducted away from the coaching environment (Hammersley & Atkinson, 1995; Warren, 2002).

Upon meeting the participants, the same process was followed each time. The researcher made the same introductory statements, clarifying again the nature of the interview and the purpose of the study (Robson, 2002). The introductory statements made reference to the fact that because the researcher and the participant knew each other, the participant would be asked to recollect experiences fully and not assume that

the researcher might have an understanding of what they were divulging based on his previous experiences in the same field. This was done to ensure that the participant's story was told as much by themselves as possible, because as (Platt, 1981) points out:

"In so far as one accepts the invitation to draw on one's background knowledge its inevitable biases are unnecessarily introduced...and the interviewer's rather than the respondent's interpretations are imposed." (Platt, 1981, p.79)

The participant's rights and confirmation of anonymity and confidentiality were also re-enforced (Irwin et al., 2004). Completed consent forms were returned at this stage and any questions about the process clearly answered to the full satisfaction of the participant. Each participant filled out a one page form which asked for personal details relating to their first experience playing golf, the best handicap they achieved, when they first joined the PGA and when they first gave a golf lesson. They were also asked to try to estimate the amount of hours they had coached. These statistics were used to give averages for the research sample.

In the past, qualitative interviews have always been recorded on audio tape, indeed videotaping has also been recommended (Warren, 2002). However, there have been concerns that the presence of a machine may alter the respond of the participants to questions. Other researchers (Johnson, 2002; Gratton & Jones, 2004) make the point that for in-depth interviews machines are essential, as the capacity for a human being to remember the level and amount of detail provided is unrealistic. Taking this into account, all interviews were conducted face to face and recorded in their entirety using a digital audio recorder (Panasonic RR US450). This mode of recording data allowed the researcher to fully focus on the participant and only a few brief written notes were taken to ensure that any information of interest that came up in conversation, that needed

further explanation, was not missed (Gratton & Jones, 2004). Throughout the interview, the researcher tried to maintain a 'neutral' stance, conscious that personal relationships and his own previous experiences and knowledge could influence the direction of the interview data. This had to be tempered with the benefits derived from the familiarity that the researcher and participant shared.

The interviews were structured around three main topics, a) the initial experiences of the participant's in golf and how they got in to coaching, b) the types of activities that helped them develop the knowledge they currently have and c) their reasons and motivations for coaching. These three main questions and further ideas for probing were held within an interview guide (Appendix B) by the researcher. The ideas for more probing questions were used to promote discussion where information was not forthcoming, or where an area of interest opened up during dialogue (Jones, 1993; Robson, 2002).

During a semi-structured interview the researcher is encouraged to use various modes of question throughout (Hammersley & Atkinson, 1995; Robson, 2002). Open questions, e.g. 'Please tell me about the type of activities that have helped you develop the knowledge you currently have?' were followed by more probing questions such as, 'Explain why that activity was of such importance?' until saturation was deemed to have occurred on a particular issue (Strauss & Corbin, 1998). The questions were asked in the same order where possible to encourage consistency, however, in order to allow the participants to tell their story in their own words, the researcher adapted the order of questioning to suit the theme brought up at the time (Patton, 1990). The interview finished with a general question to ensure that anything that the coach felt needed to be said, but had not been discussed, could be addressed prior to the conclusion of the session (Côté et al., 1995).

Thereafter, the audio files were digitally transferred on to the hard drive of the researcher's computer which was password protected; the researcher being the only person with knowledge of the password. The interviews were transcribed verbatim on to a Microsoft Word file, using the playback facility in the software provided by the Panasonic instrument, for later analysis. The length varied from 1 hour and 10 mins to 2 hours and 30 mins. They yielded between 14 and 37 single spaced, typed pages. To protect the anonymity and confidentiality of the participant, and in accordance with suggestions offered in Appendix 3 of the Data Protection Act 1998 (SRA and MRS, 2005), each document file was also password protected on the computer, thus doubling the level of security under which the interview data was stored.

#### 3.10 Data Analysis

## 3.10.1 Participant Validation

Before analysis of the interviews began, each interview was returned to the participant for verification that the text was a true reflection of the interviews that had taken place. As Creswell (1998) highlights, this is an important step in adding validity to the findings (a point discussed later). At the same time, the researcher realised that "we cannot assume that anyone is a privileged commentator on his or her own actions, in the sense that the truth of their account is guaranteed" (Hammersley & Atkinson, 1995, p.229) They were told that if there were key facts, or events, which they believed to be critical in their development, but which had been overlooked at the time of the interview, the researcher would schedule a further meeting, or telephone interview with them. The researcher asked the participant to respond either by email or letter with their comments.

On each occasion the participant responded with minimal changes to the text, all relating to the spelling of people or place names. Each participant agreed that the text reflected the interview which had previously taken place and that it accurately reflected the key events in their development as a coach.

#### 3.10.2 Data Analysis Process

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The interviews were individually analysed using an interpretive stance. Gubrium & Holstein (2000) believe this approach "engages both the *how's* and *what's* of social reality" (Gubrium & Holstein, 2000; p.488). Furthermore they suggest it reflects a belief that people construct their own worlds, but not necessarily on their own terms.

Following guidance laid down by previous researchers (Côté et al., 1993; Creswell, 1998) on organising and interpreting unstructured qualitative data, an "open coding strategy" (Côté et al., 1993) was initially adopted. Within the Word document each line was automatically and continuously numbered, which along with the initials of the participant made up the coding used to 'tag' relevant sections of text (e.g. JS 403 – would stand for John Smith interview, line 403). For example the following text was located in the interview with Paul:

# 129 Is there anything in your development as a player that has influenced you as a coach?

Yea, I think more than anything I have been wanting to understand why that happened to me and what went wrong because I think I've got a lot of time for the coaches that I met with and the coaches that helped me. I think they were good coaches but I think what they didn't know and what I didn't have a clue about were things like how does sort of motor learning work in a human performance system and I think if I'd known more about that I would have sort of taken a different route.

This was done to ensure that when the text was separated from the original interview, or de-contextualised, the researcher could still re-locate the wording within its original context if required. The text from each interview was carefully read through line by line; Charmaz (2000) suggests that this type of analysis keeps the researcher in touch with the views of the participant rather than viewing the data from our own position in the world.

As a section of text emerged that communicated a particular idea (sometimes referred to as 'meaning units' (Côté et al., 1993)), it was 'copy & pasted' into an individual worksheet in Microsoft Excel along with the 'tag' mentioned previously. Seeking to create 'categories', each worksheet was assigned an initial label "which capture(d) the substance of the topic" (Côté et al., 1993, p.131).

For example, using the text from the previous example, the tag 'PN-131' was placed in a worksheet labelled "Coaching influenced by playing experiences".

Coach Initials	Line No:	Category	Text from the Interview
PN	131	MISTAKES FROM PLAYING THAT HAVE BEEN REPEATED IN COACHING	I have been wanting to understand why that happened to me and what went wrong because I think I've got a lot of time for the coaches that I met with and the coaches that helped me, I think they were good coaches but I think what they didn't know and what I didn't have a clue about were things like how does sort of motor learning work in a human performance system and I think if I'd known more about that I would have sort of taken a different route

**Table 4 – Example of 'tagged' data** 

Subsequent pieces of text which fell under a category that already existed were placed into the appropriate worksheet, whilst data relating to a new topic of interest went into a new worksheet and received a unique label to distinguish it from the other categories (Côté et al., 1993). The individual pieces of relevant text varied greatly in length. The resulting number of 'categories' were determined by the ongoing analysis of the data, until the interviews had been read through several times and no more categories emerged. "Theoretical saturation" (Côté et al., 1993, p.132) was achieved, as no relevant data existed that was not categorised.

The process of separating data resembles the 'file-card system' described by Côté et al. (1993), although the use of a computer altered the process slightly. Each line was still numbered initially, but in place of file cards, worksheets within Microsoft Excel were set up which represented each major category. The text and the tag were then copied into the worksheet rather than just a note being made of the numbering allocated to each line. Further examples of this system are provided in Appendix D. As Creswell (1998) stresses:

"No longer do we need to "cut and paste" material on to file cards and sort and resort the cards according to themes...The search for text can be easily accomplished with a computer program." (Creswell, 1998, p.156)

The mechanics of this data analysis have described an inductive approach, where "relevant perspectives and experiences were identified" (Jones et al., 2003, p.216) from the interview data. However, elements of a deductive process were also present, in that some of the categories were anticipated from the researcher's study of previous research, own previous learning opportunities in the same profession and pilot study findings. This should not be viewed as biasing the analysis of the resulting data, as few researchers begin a study without understanding something about the topic they are researching (Krane et al., 1997).

Once all the interviews had been analysed and the text broken up into categories, each individual category and its content was evaluated. Where text was considered to have been misplaced it was reallocated into a more appropriate category. The use of a small sample allowed for a careful analysis of each participant and cross-referencing of experiences, something which would not have been reasonably possible with a much larger sample (Crouch & McKenzie, 2006). Through this process the first findings and relevant pieces of text started to emerge.

## 3.11 Establishing Validity and Reliability

Previous research (Biddle et al., 2001) addressing the field of sport psychology has been critical of the lack of consistency in demonstrating methodological robustness. Some proponents of qualitative research avoid terms like validity and reliability, preferring instead to use terms such as "credibility, transferability, dependability and confirmability" (Robson, 2002, p.170) or "quality, rigor and trustworthiness" (Golafshani, 2003, p.602). Nevertheless, within the qualitative research community a researcher is encouraged to utilise and document techniques that demonstrate the legitimacy of their research methods (Robson, 2002; Golafshani, 2003; Onwuegbuzie & Leech, 2007). Emphasising that these techniques cannot lead to validity being proven, or disproved, Onwuegbuzie & Leech (2007) suggest that "an assessment of procedures used in qualitative studies is imperative for ruling in, or ruling out, rival interpretations of data" (Onwuegbuzie & Leech, 2007, p.239). Of the prescribed strategies suggested, the following justifications are offered as evidence of what could be viewed as the validity and trustworthiness of this research process.

'Prolonged engagement' (Robson, 2002; Onwuegbuzie & Leech, 2007) and 'Persistent observation' of the "characteristics, attributes and traits that are most relevant to the phenomenon under investigation" (Onwuegbuzie & Leech, 2007, p.239) are viewed as strategies against which the credibility and legitimacy of the research can be tested. If the researcher has an understanding of the culture in which they are operating and has developed trust with the study participants then it is suggested that participants are more likely to give honest, truthful answers to questions. At the same time, the researcher needs to be aware that they do not bias their actions in sympathy with the field being studied.

An 'audit trail' which demonstrates the processes undertaken throughout the study is another suggested strategy (Janesick, 2000). The documenting of the data collection, data analysis and data interpretation methods used in this study are offered as evidence of reliability in this instance (Biddle et al., 2001).

In previous interviews with elite coaches (d'Arripe-Longueville et al., 1998; Bloom & Salmela, 2000; Martindale et al., 2007) researchers have also suggested "establishing credibility through stakeholder checks" (Martindale et al., 2007, p.192). As already highlighted in the data analysis section (3.9) these stakeholder checks were undertaken in this study; the transcribed interviews being returned to the interview participants for corroboration that the text reflected what was said and was fully representative of their views on the subject area in question.

The bias brought by the researcher and participants to the study must also be acknowledged, because as Strauss & Corbin (1998) point out it is not possible for either one to bring anything other than certain levels of bias in their beliefs and assumptions of themselves and the world in which they live. It is stressed that recognition of these issues "intruding into the analysis" (Strauss & Corbin, 1998, p.97) is fundamental. In reducing bias through the questioning process, Martindale et al. (2007) suggest the use of open ended questions to elicit full and complete responses from participants as one method of establishing the trustworthiness of data. However, the willingness of the participant to offer honest and truthful views, rather than the answers they think the researcher, or wider world should hear, is still essential for the credibility of the study (Robson, 2002). Where the researcher believes that a participant is engaged in such deception they should not be afraid to check the answer through further questioning, starting from a different standpoint. In this post-graduate research study, where a

researcher works alone and cannot rely on a second interviewer or observer, this method appears to be particularly valid.

# 3.12 Chapter Conclusion

The choice of qualitative research methods allowed the researcher to pursue in-depth data on the learning activities used by expert coaches in their construction of knowledge. This chapter introduced the participants in the study and gave detail of their backgrounds, as well as providing information on the researcher, his background and addressing the potential challenges of researching a field in which one is regarded as an insider. The chapter also highlighted the methods used to collect, analyse and interpret data within this study. It provided a rationale for using a constructivist and interpretative approach and the use of semi-structured interviews. Systematic methods of data collection and analysis were amongst the criteria identified as critical to providing trustworthiness to the findings of this study.

## **Chapter 4: DISCUSSION**

## 4.1 Introduction to the Chapter

This discussion will explore the emerging themes from the findings of the semistructured interviews and relate them to previous research and theoretical frameworks related to sports coaching. The approach to learning and the learning activities chosen by the coaches will be addressed. Within these findings the conception of knowledge construction will also be analysed.

## 4.2 Approach to Developing Knowledge

The golf coaches' initial search for knowledge was driven by the recognition that they were poorly equipped to deal with students early in their careers. In line with other expert coaches (Schinke et al., 1995), these coaches experienced considerable difficulties when they initially began coaching. The playing background of these players was evidently not enough to provide them with the tools to begin coaching students, even of a low skill level:

"When I look back on it, it's a horrific situation, because I can remember really being totally unqualified to pass on any understanding or knowledge I'd learnt out of playing, because I'd never been coached" – (Kevin, 04/01/08)

"I had no idea what I was doing, I mean it really was a case of okay, let's get Golf Magazine before the Members do, so I can see what's in it in March and that's what I'll teach for March" – (Michael, 15/01/08)

As observed in Salmela's study (1995), the majority of these coaches immersed themselves in as much information as they could find from the beginning. Developing

knowledge was spurred on further by the challenge of improving players of higher ability, being employed in a new role that changed the type of students they were dealing with, or through conversations that they were involved in with other coaches, where they became aware that there was more information that they did not currently possess. These examples suggest people who were, as Jones et al. (2003) remarks, "reflecting on experiences, evaluating them and considering alternatives" (Jones et al., 2003, p.222). Moon (2004) describes this as "cognitive housekeeping" (Moon, 2004, p.90). Furthermore, they all acknowledged that there was more than one way to approach a problem, or deal with an issue. This suggests a deeper approach to developing knowledge, where coaching is viewed as a complex activity, not a simplistic, logical progression where compartmentalised, de-contextualised knowledge of a particular topic will suffice. Indeed, Kevin's approach to learning could be viewed as being representative of the whole group:

"We're all learning for a lifetime, we're all trying to be better for a lifetime ......

I think, over a longer period of time you've experienced the more subtle ways of being successful, of getting things done, and you've also learned to deal with the ones that it doesn't work with, and how am I going to find another tool to do this" – (Kevin 03/01/08)

Most of this learning was instigated by the coaches themselves who would decide the style in which they wished to receive information, the entry level at which they felt it beneficial to begin learning and the appropriateness of the subject area to particular issues that they faced on a regular basis. As Gilbert & Trudel (2001) suggest, "individuals will pay more attention to information that has immediate and personal meaning for them" (Gilbert & Trudel, 2001, p.32). Consistent with all the coaches, Michael explained that although initially his approach to developing knowledge was

driven by the desire to understand why he had failed as a player, later on his craving for knowledge was driven by the desire to improve the performance of his students. This approach to learning is fundamental in the constructivist view of learning laid out by Moon (2004), where the meaningful learning is identified as originating from the learner themselves.

In a similar vein to the expert football coach studied by Jones et al. (2003) these coaches were prepared to view new information with an open mind; try to apply it in a practical setting; reflect on the outcomes; before dismissing it, or adding it to their repertoire of knowledge. Derek, Paul and Stephen all suggested that they would generally want to try out the new ideas on themselves to gain some idea of how it might be used in an intervention with a student in the future, whilst Michael would work directly with students, observing how the information was taken on board. They were all keen to understand if the new knowledge was going to be usable in a practical setting:

"The first question I ask now is how do you know it works? Because if it doesn't work under fire it's no good" - (Derek, 04/01/08)

Kevin explained that when he was given a new role within golf, he would evaluate the new challenge he faced, as well as the skills and knowledge with which he was prepared for the task. This reflective process resulted in the realisation that he needed to develop areas of knowledge and improve on the depth of knowledge. However, only Paul said that he sat down regularly and evaluated what he wanted to do about developing his knowledge. Co-incidentally he was the only coach who had spent a lot of time working as part of a structured team of coaches, where the head coach had instilled a need to work systematically on coach development:

"She [the head coach] had sort of individual chats and talks with all of us and we all had our own coach development plan which was very much monitored and mentored" – (Paul, 03/01/08)

This systematic appraisal of coaching knowledge and coaching practice was observed in a group of expert golf instructors (Schempp et al., 2007) whose self monitoring strategies were recorded. However, it is at odds with other elite coaches previously studied (Jones et al., 2003; Abraham et al., 2006) and the other coaches in this study, but it does not mean that they took anything other than full responsibility for their own learning, as other expert coaches previously have done (Jones et al., 2003). In particular, Stephen and Michael highlighted that their search for new knowledge was not driven by a conscious desire to follow a specific path; rather it was led by their interest in a certain area, which in turn was motivated by issues that were present in their day to day activities at the time:

"I don't set tangible, measurable goals... I think I have a philosophy about, you know; I'm going to give it all I've got. I'm going to try and be the best I can be, I'm going to keep learning, but I don't set goals and I certainly haven't ever measured myself. I've never thought about where am I at as a teacher, I just keep trying to get better" - (Michael, 15/01/08)

The process by which Stephen went about evaluating new knowledge was similar to that of other coaches. He explained that in the early days he was more inclined to accept the word of an expert, without really questioning them.

"I would have asked the question, is this really right? And would have given the person I'm listening to the authority to say, yes, no, no, this is right, okay, fine, fine. Now I suppose it's just experience and more knowledge yourself that you might have other ways of saying, of ....., I've heard of this way, I disagree with

it because of that, ...... I've probably got more persistent in sort of questioning is this really, yes is this really OK" – (Stephen, 25/03/08)

As his knowledge of coaching and specific subject areas increased however, he had more references to draw from and would question the person more thoroughly before deciding whether or not to implement the new knowledge into his coaching.

"If you stop at the place of "I've heard it therefore it must be right", that's not deep enough, which I think is easy to do if you're listening to a guru. You sort of say well, "He said this it must be OK", and I've done that. What I now will do, and even with some people I'm working with now who are the leaders in the world at it, I listen to it, listen to it, listen to it and then I start to question it. It can't be right because of this, this and this, and so I go back and argue it and then when I'm happy I've argued it and it's still coming back to that same, you know, philosophy or whatever it is, I go that's fine, I've got enough understanding, I'm happy to coach it then, I keep looking into it even more" – (Stephen, 25/03/08)

Moon (2004) suggests that this deeper approach to learning is possible not only because the learner has a greater repertoire of knowledge in a specific field from which to draw, but because an appreciation of various contextual issues are being considered.

A number of these personal traits are consistent with the findings of Bloom & Salmela (2000) and Jones et al. (2004) who noted that the expert coaches they studied: were consistently looking to gain further knowledge and learn more, had a great passion for coaching, had a strong work ethic, tried to filter all they learnt from other people into a coaching philosophy of their own and used multiple learning activities to gain their knowledge.

# 4.3 Learning Activities

#### 4.3.1 Unmediated Activities

The majority of activities from which the coaches drew knowledge were unmediated activities, grounded in experiential and situated learning and often using reflective practice to draw meaning from the activity. Participating in the game was one of the main activities from which all coaches drew knowledge and learning.

## 4.3.1.1 Playing Golf

Research by Schinke et al. (1995) found that all the expert basketball coaches they interviewed loved their sport from the early stages of participation and were obsessed with the game as they became more proficient. Those traits along with the prolonged commitment shown to the game mirrored that of the coaches in this study. All the golf coaches played the game to a high level as an amateur, although at the Professional level their success varied. These findings conflict with previous research (e.g. Salmela, 1995; Irwin et al., 2004; Jones et al., 2004; Trudel & Gilbert, 2006; Erickson et al., 2007) which has suggested little linkage between elite level coaching and participation as an elite level performer in the same sport. This might well be due to the nature and structure of golf in the past, which has generally demanded that a coach must have played to a proficient level at the very least in order to obtain a PGA qualification (Phillpots, 2007). Therefore, the infrastructure of the sport and consequent pathway into coaching for a player or non-player should be viewed as critical when analysing such findings. Due to the structure of golf it is highly unlikely that anyone who had not played the sport to a high level and competitively at some stage could become an elite level coach.

They all sought to be tournament playing Professionals initially, but when they realised they could not successfully compete any longer, they chose different roles within golf, which all involved coaching. This transition into coaching is in keeping with other research in this area (Schinke et al., 1995; Erickson et al., 2007) where the end of a playing career signals the start of a career in coaching. However, in contrast to the coaches in those studies who acted initially as assistant coaches, these coaches were in full control of the coaching they did almost immediately, golf being a sport where a team of coaches rarely work together.

As the research of Schinke et al. (1995) suggests, these coaches did continue to play on initially, not committing to a pure coaching role until it was clear that the two activities could no longer mix. It was suggested by more than one coach that playing the game to a high standard gave the coach an understanding of the finer points of playing the game, which in turn shaped their philosophy of coaching:

"When I started coaching seriously, I sat down actually for quite some, well quite some time and I looked back and I started writing the things down that I thought worked, that I thought a good player had, if he was, what I call a complete golfer" – (Derek, 04/01/08)

Equally, at various stages in their playing careers, all the coaches struggled to maintain a standard of performance over a period of time and each coach stressed the important influence that those times had on shaping their coaching philosophy. This concurs with previous research (Salmela, 1995; Irwin et al., 2004) where these struggles have been viewed as somewhat beneficial, as they caused coaches to analyse certain areas of the game more closely than perhaps more gifted individuals (Salmela, 1995) and offer more "compassion and understanding towards others" (Irwin et al., 2004, p.432).

Quite often the weaknesses that the golf coaches perceived in their own games, especially towards the end of their playing career, were exactly the areas that they initially began to investigate when they started to coach:

"My whole belief structure as a player was the harder you work the better you'll be and if you can develop a perfect golf swing you'll play perfect golf, and if you work harder than everybody else you'll be better than anybody else, neither of those worked for me... it was a real strong foundation for me to come into coaching ... I definitely had a different perspective when I was looking at other people as to how much I should push them technically" – (Stephen, 25/03/08)

The lessons learnt from playing the game certainly influenced how they approach coaching on a day to day basis, but Paul was honest enough to say that he had still made the same mistakes as a coach that he had observed other coaches making with him as a player.

# 4.3.1.2 Learning from the Experience of Coaching

All coaches in this sample acknowledged the valuable role the actual experience of coaching had played in their development. This should not be surprising as it has been found consistently to be a method of knowledge development that coaches have used to ascertain what works and what does not (e.g. Gould et al., 1990; Salmela, 1995; Schempp et al., 1999a; Gilbert & Trudel, 2001; Jones et al., 2003; Irwin et al., 2004; Jones et al., 2004).

The observations given by this group ranged from acknowledging the early role played by actually coaching and observing your results as you progressed, through to more sophisticated approaches taken by the coaches where they would review film

footage taken in a session and debate with themselves whether the decision made at the time was the decision they would still make with hindsight, a month or so on:

"I gave a huge amount of lessons and I'd just started to learn to communicate then and you start formulating or putting together your formula for how you give lessons" – (Derek, 04/01/08)

"I would then sit down quietly on my own and I would often bring up on the screen their swings or look at their notes and go through it and say, "Right, if I was looking at it again today, first time ever, would I still be doing what I'm doing now or would I changed it?" That's a question I do ask a lot, you know, if I was, if it was the first time I'd met them and I know what I know, would I still go on this path?" – (Stephen, 25/03/08)

On several occasions the point was made that mistakes were an important part of learning how to be an expert coach, as only through experiencing the issues that failure brought with it, could a coach appreciate that there were times when a different approach might be more beneficial in the long run with a particular student. Kevin explained how he gained knowledge which shaped his philosophy by realising how the decisions he made had affected certain players' development; being honest enough to say that he made mistakes by pushing students too soon, or too hard:

"I made mistakes, I pushed one or two of the poorer players too hard ... Again, that's a big learning curve in your coaching, isn't it? Because its tells you as the coach, you had better be fairly certain you can back up your thoughts and opinions" – (Kevin, 03/01/08)

Schempp et al. (2006b) suggest that experience is critical to increasing knowledge in coaching, but point to activities engaged in by the coach *following* coaching activity as being key to the development of the coach. They suggest that the

type of activities engaged in by the coaches in this study, after coaching experience has occurred are crucial; stating that a coach must "make purposeful and sustained efforts to improve" (Schempp et al., 2006b, p.148), using activities such as reflective practice. Linking to the theoretical framework of experiential learning and reflective practice, Moon (2004) shares a similar viewpoint, defining experiential learning as an activity where someone is: directly involved; the activity has relevance to that person; reflective practice is involved (either during, or directly after the event) and there is intent on behalf of the learner to learn from the experience.

# 4.3.1.3 Seeking out Other Coaches...to take Instruction

Previous research (Jones et al., 2003; Jones et al., 2004; Schempp et al., 2007; Wright et al., 2007) has stated that coaches have been influenced by the coaching they received as players. The research has not clearly defined at what point in a person's development these experiences would have occurred, however it appears that it was prior to any sustained coaching being undertaken. The coaches in this study, where influenced to some extent by coaches they came across during their early development, but it appears they were far more heavily influenced by the coaches they met towards the end of their playing careers, when they had begun coaching. This corresponds with the 'stages of development' models suggested in previous research (Schinke et al., 1995; Erickson et al., 2007) where coaches have still been competing whilst they began coaching at a recreational or lower level. Through their desire to continue competing, these golf coaches sort information from other coaches to help them improve their own performance as a player. The information they received for their own game, consequently provided them with information with which to coach their students.

Michael noted the structure and style of delivery as being influential in shaping his delivery of coaching sessions:

"(*I*) did go to see [coach's name] down in London for a few lessons. That helped my teaching, because there was a man who was structured in his teaching and that gave me some things to teach. I didn't go down there to learn how to teach, but definitely, I mean, there was an influence there on me, certainly early on, gave me some understanding" – (Michael, 15/01/08)

Kevin highlighted how changes he went through in trying to improve his own game later shaped his awareness of coaching certain skills in isolation:

"It taught me something very strong which I didn't recognise at the time, it taught me that, obviously, a quite obvious fact now, that if you change one area of the swing whilst you can have positive effects in some departments of the game, i.e. the long game, it had a big detrimental effect on my short game" – (Kevin, 03/01/08)

These lessons provided coaches with other essential learning as they were involved in both coaching and then trying to perform as a player. This form of knowledge development does not appear to have been found in other sports in previous research, although it is briefly mentioned by Schempp et al. (1999a; 2007) as an action taken by American Golf Professionals they studied when they felt the need to expand their coaching knowledge. This may be due in part to the nature of the golf, where players can play and compete throughout their lives.

#### 4.3.1.4 Seeking out Other Coaches...to Observe them Coach

Initially these coaches observed other coaches who were close to home, such as their employing Professional. However, as they became more expert, they started to visit specific coaches and observe how they coached. All coaches reported seeking information from coaches abroad as well as closer to home; in keeping with activities noted by Irwin et al. (2004). These particular learning opportunities were most definitely aimed at improving their knowledge as a coach, rather than previously where the priority had been to become a better player. With this more coaching focused approach, it would appear they became more aware of the actions of the coach as an outsider looking in on the performance, rather than being at the heart of the coach/player interaction:

"When I watched them teaching, they were doing stuff I'd never seen before. So I think my quest in that regard was, and still is, to always gather information ...watch people teach other players and notice the delivery, not just, I mean I always notice that, not just the content, but how they delivered it." – (Michael, 15/01/08)

Observing other coaches has commonly been highlighted as a primary source of coaching knowledge for coaches at all levels (Gould et al., 1990; Salmela, 1995; Schempp et al., 1999a; Gilbert & Trudel, 2001; Lemyre et al., 2007). These exchanges support the view of Jones et al. (2002) that coaching, and learning to coach is "a social activity, which is inextricably linked to both the constraints and opportunities of human interaction" (Jones et al., 2002, p.35). The common result from all these interactions was that they improved their understanding and left "with a personal set of coaching

views emerging from observations of, and interaction with, existing coaches" (Cushion et al., 2003, p.217).

## 4.3.1.5 Working with Other Coaches

Ghaye & Ghaye (1998) suggest that learning (and in particular reflective learning) does not have to be in isolation of others. "Talking to others about our practice, having it challenged, in a constructively critical manner, by our colleagues" (Ghaye & Ghaye, 1998, p.11) is all part of the process of social learning. This was evident in the group when they had chance to spend time with other coaches, over a longer period of time. Describing a two day meeting of national coaches, Derek said:

"We had 2 days and we just talked about using different practice regimes, drills, practice games, different ways of organising training weeks, you know that sort of thing" – (Derek, 04/01/08)

In an environment where coaches were gathered, sharing responsibilities for the same group of players, they described sitting down at the end of the day discussing how each other approached specific coaching issues. Out of these situations came chances to understand how other coaches analysed the performance of a player; their preferred approach to dealing with technical issues in a golf swing and various practices and drills that they used with players. These conversations would often lead to a coach developing a greater repertoire by which to deal with a single problem. Often it came down to the use of a phrase that a coach had not used before:

"I love the style of his vocabulary... just the way they put something, and I'd think that's a much better way of saying it than I say it... or they're looking at his leg action and I'm looking at his upper body action... it

was just a preference, that the slight language difference was interesting."

– (Kevin, 03/01/08)

Michael highlighted the benefit of working with a group of coaches over an extend period of time where they would socialise together as well as coach together.

"We were all single, you know, you do your teaching, you'd play 9 holes of golf and then, where would you end up, in the bar of course. And I mean we had conversation after conversation, six of us, seven of us, every night round a table, drinking beers till the wee hours of the morning, I mean, you know, we'd agree, we'd disagree and I think that was a very important time for me ......it just got me to ask more and more and more questions in my own head like, why would he say that? I don't think that's right" – (Michael, 15/01/08)

Evenings spent sharing opinions on all sorts of coach related topics away from the golf course led him to continually question the way he viewed his knowledge and to try and work out why other people might have differing opinions to himself. Gilbert & Trudel (2001) have reported that "having access to knowledgeable and respected coaching peers is critical to the reflective process" (Gilbert & Trudel, 2001, p.32).

The group of golf coaches to which Michael belonged could be defined as a group of people, who meet on an ongoing basis; who share common interests in a particular topic and who continually interact with one another with the goal of improving their understanding of the topic. This describes well the "community of practice" concept put forward as part of Wenger's (1998) situated learning theory. Findings from research by Irwin et al. (2004) in gymnastics highlight the importance of this form of knowledge development, although other findings (Gould et al., 1990; Trudel & Gilbert, 2004) suggest that only a few coaches have engaged in this activity,

particularly when it has been perceived that a competitive advantage might be gained from any exchange.

## 4.3.1.6 Influence of the Employing Professional

Within the PGA training programme, each person spent a minimum of three years working with a qualified Professional as part of the apprenticeship undertaken to ensure that as well as the theoretical skills of the profession, newly qualified Professionals had some practical experience to reflect on (Phillpots, 2007). Seeing the same person on a daily basis, in a golf environment, meant that the apprentice was likely to absorb the beliefs, traits and routines of the senior coach. This may have provided some initial benefits to developing coaching practice, as suggested by Jones et al. (2003), however, there are dangers associated with passing on what might be perceived as conventional practice without question or reasoning; the apprentice coach potentially making no conscious decisions as to how and why they coach the way they do (Cassidy et al., 2004; Cassidy & Rossi, 2006). Indeed, Derek suggested exactly that process happened in his early development:

"You don't realise you're gaining (*knowledge*) at the time, it's almost like an osmosis process ... I mean we'd talk golf everyday ... I watched him coach and he would obviously coach me and take me out and we'd play at least 9 holes at least once a week" – (Derek, 04/01/08)

This experience is similar in nature to the apprenticeship served by the expert coaches studied by Salmela (1995) and the role of mentor coaches highlighted in research by Irwin et al. (2004). In the work by Salmela it is suggested that the head coaches "passively transmitted successful means of operation" (Salmela, 1995, p.6) to their coaches and frequently mentor coaches were in fact club-based coaches who

helped them learn the basics of coaching (Irwin et al., 2004). The 'mentors' in this research were not trained in any formal manner to educate their apprentice; rather it appears the coaches received experiences that were "unstructured, informal and uneven, in terms of quality and outcome ... serv(ing) to reproduce the existing culture and power relations found in existing coaching practice" (Cushion, 2006, p.131). Kevin highlighted a typical experience for an assistant working with a golf professional on a daily basis:

"We would practice occasionally on the practice ground in the evenings and talk about things ...... he was saying you know this that and the other, try this, try that, he'd get me shaping shots, talk about it and he was quite a good player himself, ...... I wouldn't say he necessarily taught me a lot about the golf swing, but I did learn it from him in, an around about way" – (Kevin, 03/01/08)

This does not mean the experiences gained are not meaningful, as the situated nature of the environment does at least offer the apprentice "authentic activities grounded in complexity, multiple experiences, examples of knowledge application...and a social context in which learners collaborate on knowledge construction" (Cushion, 2006, p.144).

# 4.3.1.7 Learning from Students

All coaches talked about learning from their students, including golf related and non-golf related knowledge. More than one of the coaches talked of gaining insights about the game from the tournament players that they coached, which they later added to their repertoire:

"He's been on the tour for 10 years, he's got a lot of knowledge, a lot of information about the golf swing and so it's a, that's always a two way conversation" – (Derek, 04/01/08)

Sometimes the learning came from picking up on comments made by students, not necessarily Professionals, but people who came from another walk of life and who offered a different insight into things such as the way the coach spoke to them as a student. All the coaches looked to learn from successful people outside of golf, as well as inside, and so the chance to question and/or listen to a student, for example a successful business person who was coming to them for instruction, was rarely missed:

"That's the wonderful opportunity that being a coach is, is listening to the some of the pupils you are coaching. I mean not everybody can offer you that, but there are some wonderful pieces of information that come out of it, that not only help you in your general life but help you in your coaching" – (Kevin, 03/01/08)

The benefit of student feedback in developing knowledge would appear to have been either ignored or not appreciated in much of the previous research. Although previous research (e.g. Bloom, 1985; Côté, 1999; Jones et al., 2003) acknowledges the importance of rapport between player(s) and coach, it fails to demonstrate whether coaches learnt from the insights of their students. It is suggested by Jones et al. (2004) that the social environment in which coaching takes place, brings with it issues of social power and what is described as "legitimate power ... power that derives solely from a person's position within a particular social structure or organisation and not solely because of any other special qualities a person may possess" (Jones et al., 2004, p.153). They go on to suggest that a coach with expert power, a perceived power based around the knowledge someone holds, is constantly "trying to maintain and enhance their legitimate power through the use of further development of expert power" (Jones et al., 2004, p.154). It can be surmised that coaches, especially those involved in team sports, may not view coaching as a two way process, preferring to dictate to the athletes for fear

of losing power and credibility. More research needs to be done into the value of knowledge gained from the athlete in the future.

# 4.3.1.8 Learning from Players

Coaches reported that talking to players they did not necessarily coach provided them with good sources of information and knowledge. In the earlier years of coaching where they were still trying to play competitively, they were often discussing golf and sharing ideas with fellow players. This environment opened up a number of vital learning opportunities:

"You're playing with those players regularly, you're talking about the golf swing in a general way ... my golf was improving so I was learning from my own golf" – (Kevin, 03/01/08)

Later on in his career, Stephen acknowledged the valuable insight great players provided with their views on the game. This provided him with further knowledge to help his players:

"I think my knowledge has also come from mixing with people who have had success playing the game and then asking them how they do it" – (Stephen, 25/03/08)

Although one coach in a study carried out by Jones et al. (2004) refers to the influence of listening to players when he was a player, the exchange of ideas between coaches and players in a sport does not appear to have been utilised judging by the findings of research in this area. Furthermore, no reference can be found to interactions with players who are not coached by the coach themselves.

#### 4.3.1.9 Experts in Other Fields

Taking information from experts in various fields of relevance to the coach was a consistent trait of our expert coaches. Typically, psychology, physiology and biomechanics have been mentioned in previous research as being key areas in which to gain knowledge (Gould et al., 1990; Abraham et al., 2006). In this research a common pattern of subject areas was not present, and coaches appeared to engage in subjects that were relevant to them at specific times in their careers. Some of the subject areas chosen were physiology, psychology, coaching practice, technical skills, presentation skills, meditation, life skills, etc. In general these subjects were initially studied through different mediums, such as CD's, DVD's, workshops, etc, but generally led to the coaches seeking one-to-one visits with the experts to learn more specific, detailed information, pertinent to their own knowledge base in that area, a trait noted by Schempp et al. (2007) in their study of golf instructors.

Derek worked with a sports psychologist whilst playing and later continued working with the same psychologist to implement coaching strategies using the principles learnt as a player.

"At the time I still wanted to, I wanted to play for the rest of my life I still wanted to win the Open, I still wanted to play in the Ryder Cup ... Now I'm coaching, you can see that all the stuff I've done before has helped me get to where I am now" – (Derek, 04/01/08)

Paul described having a number of mentors who he met with on a regular basis to talk about different issues which were pertinent to his current development:

"I have a number of people now that I would call my mentors, they probably don't know it ... I think that helps me, not in a formal way of

realising where I need to go next in terms of education, but more in just sharing ideas and thoughts and bouncing thoughts that may have come up" – (Paul, 03/01/08)

These people all had backgrounds in coaching, but not all in golf. Through this regular contact all coaches reported that they developed lasting friendships with other experts.

Irwin et al. (2004) reported that coaches who faced issues that they could not resolve might engage with an expert from the pertinent field, but at least one coach suggested that if the expert had not played, or coached, the sport they would be less inclined to engage with them. This reluctance to engage with the sports science specialists seems strange, taking into account that elite level coaches themselves have identified knowledge of sports sciences as important in the development of a coach at elite level (Gould et al., 1990), and as Lyle (2006) noted, at the elite level the coach needs to factor in the organisation of the sports science support teams into the coaching process. This challenges the coach to "draw on several knowledge sources simultaneously to address both anticipated and unforeseen issues" (Jones et al., 2008, p.138).

### 4.3.2 Mediated Learning Activities

Learning shaped by others, formed a very small part of these coaches learning.

However in certain cases the learning was still highly influential.

## 4.3.2.1 Formal Education

Coaches responded quite differently to the significance of the formal education on their ability to coach. Training provided by the PGA in the apprentice phase was

viewed by two coaches as a providing a stable base from which to begin their further study and develop their coaching practice.

"I think at the very beginning I can remember going through the (*PGA*) manual in particularly the swing stuff and there is no question at the beginning it gave me a reference place really, somewhere to go and just check in with the basic stuff" – (Stephen, 25/03/08)

Two others felt it did not provide them with any real preparation with which to cope with the practical nature of coaching. This concurs with other research which has addressed this subject (Jones et al., 2003; Irwin et al., 2004; Jones et al., 2004; Abraham et al., 2006) which found conflicting opinions of the usefulness of formal courses delivered by the sport's governing body. Paul was the only coach who undertook a basic coaching qualification prior to coaching full time. After leaving school undertook a Physical Education (PE) degree which he reported to be extremely influential on his development, specifically because he was able to engage with coaches from other sports.

"My feeling is afterwards that that gave me a completely different background than if I'd, than what I would have had if I had gone straight into the golf coach education, and I think that the discussions that we had over those 3 years were different discussions because there were people from a number of different sports" – (Paul, 03/01/08)

Later on he enrolled on the PGA programme, having already been extensively involved in coaching, and found that the education he received did not significantly add to the knowledge he had already gained from working with students and the PE education.

The amount of time spent in formal education by these golf coaches was negligible in comparison to other activities that enabled them to develop their knowledge. This is not an uncommon finding in research pertaining to this area (Cushion et al., 2003; Nelson et al., 2006). The formal education that the five coaches went through with the PGA was generally only a few days long, with assessment at the end of it driving the process, in order that they could receive their professional qualification. This effectively gave them a licence to practice for the future. The proximity of assessment to the actual learning experience would suggest that the participants sought to know the answers to the anticipated questions in the assessment rather than develop a deep understanding of the subject area (Moon, 2004). According to Cushion et al. (2003) they are also unlikely to contest much of the content on the course for fear of failing the assessment and not gaining certification. Indeed, although the assessment for the PGA qualification would appear to have been somewhat of a memory test, it was pivotal, because as Phillpots (2007) points out, nearly all coaching carried out in golf clubs is done by PGA qualified Professionals. The importance of such a qualification is in stark contrast to many other sports in the UK, where it has recently been reported that only 38% of all practicing coaches have some sort of formal coaching qualification (Nelson et al., 2006).

Of interest, is the lack of further education qualifications within the sample. Paul, who went through a PE degree and is now currently involved in a PhD study, was the only coach to have undertaken further education after school. The nature of the transition from amateur to professional ranks in the UK would suggest that this was unlikely at the time these coaches decided to try their hand at professional golf. In this respect elite level golf coaches are a long way behind the rest of the world, where it is

reported that upwards of 56% of elite level coaches have at least an undergraduate degree (Trudel & Gilbert, 2006).

## 4.3.2.2 Formally Organised Courses

Attending coaching conferences or seminars was something that all the coaches acknowledged as being beneficial, although none attended on a consistent basis. Kevin thought he would have benefited from attending more conferences earlier on in his career and suggested that one of the most pivotal things he had added to his coaching repertoire came from listening to a foreign coach talking about their delivery style. Derek felt that one of the main benefits from attending conferences was the interaction with coaches in the breaks and generally networking opportunities:

"We started attending conferences, and you try and attend 2 or 3 conferences a year and then you start then to talk to other professionals more, the one thing that professionals don't do is talk to each other and learn from each other." – (Derek, 04/01/08)

The PGA has offered Continuous Professional Development (CPD) seminars to its Professionals since 2002. However, Kevin explained that the CPD seminars were generally of little use to him, as the learning he had already done in his life meant that his requirements were more specific and as he put it:

"I know I've got to keep learning, but the reality is that most things that are going on at normal CPD level I have already somewhere experienced" – (Kevin, 03/01/08)

This finding certainly concurs with the views shared by the elite level coaches in other sports (Jones et al., 2004). They suggest that this type of education is potentially unproductive and unsuitable, with one coach remarking that "if you are relying on

coaching courses, you are relying on things that are already five years out of date" (Jones et al., 2004, p.111). The coaches in this study all emphasised the role of one-to-one time with people to gain specific knowledge which suggests that the importance of generic conferences and CPD is something that had reduced benefit over time. (See information on 'other experts').

#### 4.3.3 Resources used for Learning

Coaches also used three types of resource available to them to develop their knowledge. This involved learning that was away from the coaching environment. However, internal and reflective skills allowed the coaches to draw meaning from their experiences.

## 4.3.3.1 Sport Related Literature

Within this study all coaches highlighted the continual referral to written materials for further knowledge. Certainly those coaches who had not receive much in the way of formal coaching as a player sought out books and magazines for technical support; a means of deciding what they should coach. This should not be of surprise, as recently Schempp et al. (2008) reported that the group of expert golf instructors they surveyed read extensively, and across a large number of subject areas. The ability to turn the written word into something of practical benefit is a skill demonstrated by gymnastics coaches in the past (Irwin et al., 2004).

As their careers progressed these golf coaches found that the information they gathered provided them with more answers to questioned posed by their students. Michael suggested information he had gleaned from US coaching books was beneficial when faced with good players who understood better than most some of the more advanced technical issues:

"I'm reading all the Golf Digest stuff and getting better as a teacher, getting better, probably getting a little bit better as a player, but getting better as a teacher, having answers ...... don't know if it was the right answer, but I would have an answer for them, so the reputation grew" – (Michael, 15/01/08)

Once again the research suggests that this is a common trait amongst coaches of various sports (Abraham et al., 2006; Lemyre et al., 2007; Wright et al., 2007), as well as in golf (Schempp et al., 1999a; Schempp et al., 2007; Schempp et al., 2008). The initial interest would appear to have been driven by their own perceived weakness, but as they developed as a coach the material they read broadened to include many areas outside of golf and general coaching process information. Some of the varied subject areas mentioned during the five interviews included: laws of the universe, sales, motivation, presentation skills, Buddhism and philosophy.

"I still read a lot, not that many golf books nowadays more sort of maybe psychology, pedagogy, philosophy, whatever it might be." – (Paul, 03/01/08)

Indeed, when expert golf instructors were asked to recommend 3 books to their novice counterparts, Schempp et al. (2008) found that 50% of the books were not golf related. This trend was also observed in ice hockey, soccer and baseball also (Lemyre et al., 2007; Wright et al., 2007).

#### 4.3.3.2 Audio and Audio/Visual Resources

Michael believed that access to DVD's and videotape of experts delivering seminars to an audience of Professionals played a role in his development of knowledge:

"I got these teaching summit tapes of these great teachers, giving wonderful presentations and because of course it's on video and you watch it again and again, and I did ...... just kept watching and learning, and thinking, and you know tried things, some things worked and some things didn't and you know the things that didn't work, threw them out" – (Michael, 15/01/08)

Access to video footage is seen as beneficial to coaches who wish to learn underlying concepts and theory (Irwin et al., 2004). Indeed, it is suggested that this practice relates to Kolb's 'abstract conceptualisation'; a phase of experiential learning where the learner learns through greater cognitive engagement, rather than using physical experience to gain insight (Kolb, 1984).

The same process was prevalent where coaches were engaged in listening to audio resources. Both Stephen and Michael highlighted a significant amount of time listening to audio material – mainly CD's. Both used time travelling to listen to experts in non golf related subjects, highlighting a desire to use their spare time for learning:

"I probably do 10 hours a week minimum of study still now, probably a lot more than that to be honest, but that'll be in the car, so I'm always you know, getting CD's from all different subjects" – (Stephen, 25/03/08)

Michael even chose not to move house so that he could listen, uninterrupted to audios for 90 minutes a day. These actions suggest coaches engaged in self directed learning (Nelson et al., 2006), or unmediated learning (Moon, 2004), where they are in charge of the type of study they undertake and they decide the relevance of the subject areas they listen to. Whilst this learning is not situated in the coaching environment it is proposed that to aid transfer of knowledge to the "situation of deployment" (Moon,

2004, p.118) learners are reflecting on: their own current practice; how the new information relates to currently known knowledge; how new information might be integrated into practice and the resulting practice that may emerge.

## 4.4 Summary of Learning Activities

The activities undertaken by the coaches in this study to develop their knowledge appear similar to previous research in this area (Gould et al., 1990; Irwin et al., 2004; Jones et al., 2004; Lemyre et al., 2007; Wright et al., 2007) with notable exceptions. In referring to Moon's three different learning situations (Moon, 2004), it is apparent that the majority of learning has involved coaches participating in unmediated and internal learning, with little mediated learning evident.

In keeping with observations of Schempp et al. (1999a), it was noted that the majority of activities engaged in were situated in social practice involving other coaches, players and other experts in various fields relating to coaching. For example, it was observed that early in their coaching careers, coaches drew on both positive and negative experiences as a player (a key contributor of experimental learning early in a coach's career), as well as from being around other coaches. Interestingly, the two mediated learning situations (formal educations and formally organised courses), where in the past the de-contextualised nature of content has been brought into question (Cassidy et al., 2004), were the two areas were feedback from the coaches was seen to be most conflicting.

The activities where coaches learnt on their own, away from the golfing environment (Reading, Audio & Audio/Visual Resources), required them to reflect on their current practice and how the new information might be integrated into their coaching practice. This led to 'trial and error' in the coaching environment to assess the

merits of new information, highlighting the role that experiential learning and reflective practice played in the development of knowledge amongst these coaches.

Parallels can be drawn with expert coaches studied by Salmela (1995), who viewed the development of their skills as an ever-evolving and continuous process, punctuated by "major successes, significant failures and career reorientations" (Salmela, 1995, p.7). Furthermore, Salmela's observation that coaches became more flexible in their approach to coaching as they became more experienced and continued to learn through a varied number activities was found to be true of these coaches also. In getting to this stage the coach had become "a skilled thief" (Lemyre et al., 2007, p.204) taking ideas and information from other coaches for his own benefit.

Schempp et al. (2007) reported that the expert golf instructors they studied, "closely monitor their skills, perspectives and knowledge in order to plan and execute strategies to continue their professional growth" (Schempp et al., 2007, p.187). The actions taken by the instructors to continually develop themselves were very similar to the activities used by the golf coaches in this study. However, the coaches in this study do not appear to have been as calculated in their professional development as those studied by Schempp et al. (2007), demonstrating in all but one case, a more reflexive approach to their accumulation of knowledge. Four of the five coaches in this sample appeared to be engaged in areas pertinent to them at a specific time in their career in preference to following a specifically planned route. It appears that the lack of relevant, structured, formal education opportunities forced each coach to take responsibility for their own learning agenda.

# 4.5 Chapter Conclusion

This discussion explored the emerging themes from the findings of this study and related them to previous research and theoretical frameworks associated with sports coaching. The approach to learning of the five expert golf coaches was documented and the learning activities chosen by these coaches analysed. Within these findings their conception of the construction of knowledge was also addressed. Although only limited quotes from each coach were possible, it is hoped that throughout this process the voices of the coaches have been heard, although the researcher acknowledges the views of Jones et al. (2003) who suggested that such a practice "is fraught with opportunities for the researcher's voice to dominate" (Jones et al., 2003, p.215). In the next chapter conclusions will be drawn, implications for future practice noted, and suggestions for future research offered.

## **Chapter 5: CONCLUSION**

#### 5.1 Introduction to the Chapter

This final chapter will address the findings of this study. After initially readdressing the research question, this chapter will lead on to observations about the methodology employed, the underlying findings of the study, limitations associated with the study, some potential directions for future research in this field and highlight implications for future practice within golf.

# 5.2 The Research Question

This thesis set out to address the question 'How do elite level, expert golf coaches approach the construction of knowledge and from which activities do they draw learning?' The interview process used four main themes to inform the question:

- Initial participation in sport and golf as an athlete
- The transition into coaching sport and in particular golf coaching
- The activities that have been critical in developing knowledge which impacted on the ability to coach the sport of golf
- Reasons and motivations for coaching

## 5.3 Summary of Research Findings

The findings of this study concluded that the five expert coaches developed along very idiosyncratic routes to the point at which they found themselves as this research was undertaken. This finding should not surprise others who have studied this phenomenon in other sports (e.g. Jones et al., 2003; Irwin et al., 2004; Werthner & Trudel, 2006). Elite level, expert golf coaches appear to utilise a number of similar activities previously documented in research on expert coaches in other sports. However

this study found three activities which have received limited attention in previous research. These coaches acknowledged the benefit gained from taking lessons from other coaches. This has only been documented by Schempp et al. (1999a; 2007), who in previous studies of golf coaches has documented coaches taking instruction from other coaches as a source of knowledge development. However, two activities that do not appear to have been highlighted in previous research were the input of students and players in a coach's development of knowledge. This may have something to do with the dynamics of individual versus team sports, or indeed the game itself. Further research needs to be undertaken to establish the legitimacy of this initial assumption.

In all cases, the playing experience gained by the study participants prior to starting to coach can be viewed as ineffectual in the first instance. Although initial coaching experiences were described in one instance as 'horrific', the playing experiences did in all cases go on to shape each coach's philosophy in the longer term.

Learning was a very socially orientated endeavour, where most knowledge was constructed through interactions with other coaches, students and players of the game. The majority of activities for acquiring knowledge were found to be situated within the same context in which coaching took place, demonstrating the situated nature of learning in this profession. Little of their knowledge was gathered in any formal settings; perhaps as Gould et al. (1990) suggested, "these findings may reflect the lack of formal coaching education programs available" (Gould et al., 1990, p.342). In line with previous research, a great deal of learning was grounded in experiential learning, with reflection on the implementation of new material determining whether a coach added the information to their knowledge base. With the ongoing pursuit of knowledge in key areas, it can be interpreted that these coaches viewed coaching knowledge as

extremely multi dimensional, none of them ready to dismiss information that might lead to more effective practice.

Engagement in a wide variety of learning activities was dictated by coaching issues that was deemed pertinent to the coach at a particular time in their career. Only one coach demonstrated a strategic and analytical approach to developing their knowledge.

As they progressed towards a high level of expertise, all coaches consistently looked to further their knowledge, maintaining a strong work ethic and driven by enormous passion, initially for the game and latterly for helping their students. A comment from Michael highlighted the motivation behind his endless search for knowledge:

"I've been teaching 32 years and it still absolutely fascinates me, consumes me. It consumes me to find an answer to, not to just a good player's problems but to anybody's problems within golf ...... it's very exciting for me to see somebody hit a good golf shot when they've been hitting poor shots, I mean it's, I don't know whether I get as much thrill as they do but it's very exciting" – (Michael, 15/01/08)

In line with the call by Trudel & Gilbert (2006) for all coaches to be "perpetual students' who constantly seek new information" (Trudel & Gilbert, 2006, p.532) the extent to which this group have continued to gather information to inform their practice is impressive.

#### **5.4** Implications of the Study

Although care should be taken when generalising findings based on small samples, the study does support elements of current coaching research, such as the

development of knowledge relating to expertise and the importance of social and experiential practices in the quest for coaching expertise. The researcher also acknowledges the observations of Jones et al. (2003) who suggest that without question the researcher's own "experiences and lenses [cause them] to emphasise some aspects rather than others" (Jones et al., 2003, p.227). Indeed it is suggested that interviews and subsequent findings from them must be viewed as extremely subjective (Atkinson, 2002). With all the "subjectivity, flexibility and inevitable human variables" (Atkinson, 2002, p.131) of a qualitative interview process which seeks to interpret the life stories of individuals, Atkinson recommends that the findings are "a text, to be read, understood, and interpreted on its own merits and in its own way" (Atkinson, 2002, p.131).

Although the initial PGA training programme for Professionals has been updated (Mathers, 1997; Phillpots, 2007) since these coaches passed through it, in the coming

(Mathers, 1997; Phillpots, 2007) since these coaches passed through it, in the coming years it will be critical to ensure that coaches of tomorrow are encouraged to blend formal coach education with less formal opportunities, which together have the potential to develop their coaching practice.

To do this effectively however, the development of personal learning skills similar to those exhibited by this sample may be crucial. Indeed, as Moon (2004) suggests, the ability to learn from various activities based on the approach taken to learning and an understanding of how knowledge is constructed would appear to be critical.

Furthermore, to deliver further education that can make a difference, the governing bodies of golf need to ensure that their education offerings are based around real life coaching issues, where knowledge, integrated from various sources, can be tried, observed, reflected on and finally evaluated in an environment that recognises that solutions are not always logical and simple.

#### 5.5 Recommendations for Future Research

The findings of this study provide a retrospective look back at the development of expertise in golf coaches, who as identified by Mathers (1997) received training that did not address the majority of the sports coaching process. It will be interesting to note in the future, when similar studies may be carried out on expert golf coaches who began with a more rounded grounding in the process, whether it leads to different findings as a result.

To understand whether the approach to learning and view of how knowledge is constructed is a critical component of an expert coach more research needs to be undertaken.

Furthermore, one of the other key questions emerging from this research is, "Will a structured learning plan help a coach develop expertise more quickly than a coach whose interest in learning is guide by that which is current and pertinent to them as a coach at a particular time?"

Finally, it would also be of interest to discover how coaches of varied ability interpret a specific learning situation. Does this interpretation change based on the context in which it is set, or the medium in which the information is presented?

## 5.6 Chapter Conclusion

This chapter re-introduced the research questions which gave the direction of the inquiry for this thesis. The findings of the study have been summarised and potential limitations of the study and the methodology employed have been noted. Implications for future practice within golf, and particularly coach education have been suggested as have potential directions for future research in this field.

# 5.7 Concluding remarks

This thesis set out to address the question 'How do elite level, expert golf coaches approach the construction of knowledge and from which activities do they draw learning?' These coaches appear to utilise a number of similar activities previously documented in research on expert coaches in other sports. However this study found three activities which have received limited attention in previous research.

Learning was a very socially orientated endeavour, where most knowledge was constructed through interactions with other coaches, students and players of the game. With the on-going pursuit of knowledge in key areas, it can be interpreted that these coaches viewed coaching knowledge as extremely multi dimensional, none of them ready to dismiss information that might lead to more effective practice.

As they progressed towards a high level of expertise, all coaches consistently looked to further their knowledge, maintaining a strong work ethic and driven by enormous passion, initially for the game and latterly for helping their students.

# **Chapter 6: <u>APPENDICES</u>**

# **6.1** Appendix A: Interview Guide

# Questions for MPhil Study – David Colclough.

# Scene setting

- The focus of the interview is around the person's role as a coach, but areas of the Profession (Golf) that have influenced the person should be addressed, if relevant
- The interviewee should explain their comments as if they did not know the interviewer, and is if the interviewer did not work in the industry.

# Initial questions -

- 1. Please tell me about your experiences in golf including:
  - a. your first involvement in golf, and how you got into coaching
  - b. the type of activities that have helped you develop the knowledge you currently have
  - c. the length of time you have spent in each of those activities
- 2. Tell me about your reasons/ motivations for coaching.

# Prompts include:

- First involvement in golf.
  - Aged started playing
  - o Parental / friend influence
  - o Membership of a club
  - o Motivation to start

- Playing experiences throughout your time in golf
  - Handicap initial / lowest
  - o Years played? Hours per week? Months per year?
  - o Highest achievement in the game winning, representative, pro /amateur
  - o Your approach to the game
    - Theoretical, practical, reflective?
    - Practice /Play ratios
  - o Instruction received as an amateur
- What other sports have you played in the past?
  - o For how long? Hours per week? Months per year?
  - o To what level?
  - o Any position Captain, Asst. Coach, etc
- First experiences as a coach
  - o anything as an amateur
  - o reasons for getting into coaching
  - o A mentor??
- Number of years coaching
  - o Looking at the data provided on the pre interview sheet
    - What are the ability levels of player being taught /coached?

- Did your strengths and weaknesses as a player influence your development as a coach?
- Did anything in your development as a player influence your progress as a coach?
- On reflection were there any pivotal moments in your career so far that influenced your coaching?
  - o Why were they pivotal?
  - What did you do / do differently as a result of these moments?
  - o How accomplished were you already at that stage?
- Which do you consider to be the main activities you have done on a regular basis to develop your expertise?
  - o What has been your attitude towards self development?
  - o Do you purposively decide on what you want to learn?
    - What has triggered your desire to learn more about a certain subject?
  - o Do you complete any type of analysis on yourself?
- Resources used to develop knowledge as a coach? Most influential sources? Golf or Non Golf?
  - o Formal courses, conferences, seminars, etc
  - o Informal study books, videos, self learnt
  - Watching other coaches
  - Other ways other fields of work/interest/hobbies

Which are of most importance – top 3, and why do you give them so much importance?

- Main resources used <u>currently</u> to enhance knowledge? What type of environment stimulates learning for you?
  - o What is important about this to you?
  - o Why is that important?
- Have you worked with anyone in particular on your coaching?
  - o A mentor, friend, or a group of friends?
    - Has that changed over time?
    - How has the relationship developed?
- What are the key bodies of knowledge required to be an expert teacher / coach? Are some more important than others in your opinion?
- Is there anything else that has not been covered that you believe was essential to you developing the knowledge that you have?

# **6.2** Appendix B: Pre Interview data

Name:

D.O.B / Age					
First played at what age?					
Best Handicap whilst playing and when achieved?					
Year you joined PGA					
What year did you start to give lessons?					
Breaking your career down into 5 phases or less, please state the approximate number of lessons you have given as a coach during these phases					
Phase	No. of years	Sessions per week		No. of weeks per year	Total
1					
2					
3					
4					
5					

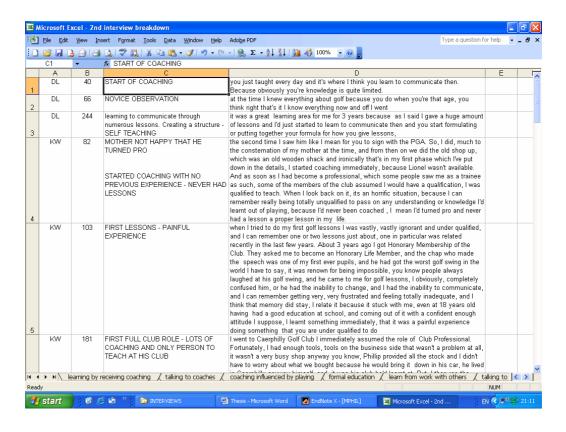
6.3	Appendix C: Example of Consent Form
I,	(please print name)
certify	that I have the legal ability to give valid consent and that I am voluntarily giving my consent to
particip	pate in the study entitled, "Knowledge Acquisition of Expert Golf Coaches from Europe" being
conduc	ted by David Colclough from the University of Birmingham.
I certify	y that the objectives of the study, together with any risks to me associated with the procedures
listed th	nere under to be carried out in the study, have been fully explained to me by David Colclough and
that I fr	reely consent to participation involving the use of me in these procedures.
Procedi	ures:
1.	I am being asked to answer questions at an interview inquiring about my coaching career, and in
	particular my progression from a beginner golfer through to the present day.
2.	My consent is completely voluntary and I may withdraw my participation in this study at any
	time
3.	All information provided will be anonymised and will not be released to anyone not involved in
	data collection and analysis
•	y that I have had the opportunity to have any questions answered and that I understand that I can aw from this research at any time and that this withdrawal will not jeopardise me in any way.
I have b	been informed that all data will be anonymised in order that my identity can be protected.
Signatu	are of the participant Date
Witness	s (other than the researcher) Date
Any qu	ueries or complaints about your participation in this research project may be directed to the

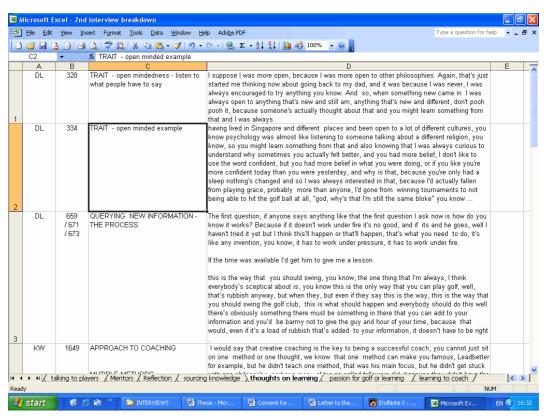
The University address is: University of Birmingham, Edgbaston, Birmingham, B15 2TT or [email]:

researcher or to his supervisor at the University of Birmingham, Dr. Martin Toms.

\_\_\_\_\_[Tel.no]:

## 6.4 Appendix D: Sample of File Card System





## **Chapter 7: LIST OF REFERENCES**

Abraham, A., Collins, D. and Martindale, R. (2006) The Coaching Schematic: Validation Through Expert Coach Consensus, **Journal of Sports Sciences**, 24, (6): 549 -564.

Allan, G. (1991) "Qualitative Research", <u>In</u> Allan, G. & Skinner, C. (Eds) (1991) **Handbook for Research Students in the Social Sciences**, London, The Falmer Press, pp.177 - 189.

Amis, J. (2005) "Interviewing for Case Study Research", <u>In</u> Andrews, D.L. (Ed) (2005) **Qualitative Methods in Qualitative Sports Studies**, Oxford, Berg Publishers, pp.104 - 138.

Atkinson, R. (2002) "The Life Story Interview", <u>In</u> Gubrium, J.F. & Holstein, J.A. (Eds) (2002) **Handbook of Interview Research, Context & Method**, Thousand Oaks, Sage Publications, pp.121 -140.

Baker, K., Schempp, P., Hardin, B. and Clark, B. (1999) "The Routines and Rituals of Expert Golf Instruction", <u>In</u> Farrally, M.R. & Cochran, A.J. (Eds) (1999) **Science & Golf III**, Leeds, Human Kinetics, pp.271 -281.

Berliner, D. (2004) Describing the Behavior and Documenting the Accomplishments of Expert Teachers, **Bulletin of Science, Technology & Society** 24, (3): 200 -212.

Biddle, S.J.H., Markland, D., Gilbourne, D., Chatzisarantis, N.L.D. and Sparkes, A.C. (2001) Research Methods in Sport and Exercise Psychology: Quantitative and Qualitative Issues, **Journal of Sports Sciences**, 19, 777-809.

Bloom, B.S. (1985) **Developing Talent in Young People**, New York, Ballantine.

Bloom, G. (2002) "Coaching Demands and Responsibilities of Expert Coaches", <u>In</u> Silva III, J. & Stevens, D.E. (Eds) (2002) **Psychological Foundations of Sport**, Boston, Allyn and Bacon, pp.438 -465.

Bloom, G.A. and Salmela, J. (2000) Personal Characteristics of Expert Team Sport Coaches, **Journal of Sport Pedagogy**, 6, (2): 56 -76

Brewer, C. and Jones, R.L. (2002) A Five-Stage Process for Establishing Contextually Valid Systematic Observation Instruments: The Case of Rugby Union, **The Sport Psychologist**, 16, 138 -159.

British Educational Research Association (2004) "**Revised Ethical Guidelines for Educational Research**", (online), Available from <a href="http://www.bera.ac.uk/publications/pdfs/ETHICA1.PDF?PHPSESSID=dbc3032b38edfd">http://www.bera.ac.uk/publications/pdfs/ETHICA1.PDF?PHPSESSID=dbc3032b38edfd</a> e698e0c0dcac944970 (Accessed 20th August 2007)

British Sociological Association (2004) "Statement of Ethical Practice - 2002 (appendix updated 2004)", (online), Available from <a href="http://www.britsoc.co.uk/user\_doc/Statement%20of%20Ethical%20Practice.pdf">http://www.britsoc.co.uk/user\_doc/Statement%20of%20Ethical%20Practice.pdf</a>, (Accessed 20th August 2007)

Campbell, S. and Crisfield, P. (1994) "Developing and Delivering a Quality-Controlled Coach Certification Programme", <u>In</u> Duffy, P. & Dugdale, L. (Eds) (1994) **HPER - Moving towards the 21st Century**, Champaign, IL, Human Kinetics, pp.201 -211.

Cassidy, T., Jones, R. and Potrac, P. (2004) **Understanding Sports Coaching**, Abingdon, Routledge.

Cassidy, T. and Rossi, T. (2006) Situating Learning: (Re)examining the Notion of Apprenticeship in Coach Education, **International Journal of Sports Science & Coaching**, 1, (3): 235 - 246

Chambers, E. (2000) "Applied Ethnography", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000) **Handbook of Qualitative Research, 2nd edition**, Thousand Oaks, Sage Publications, pp.851 -869.

Charmaz, K. (2000) "Objectivist and Constructivist Methods", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000) **Handbook of Qualitative Research, 2nd edition**, Thousand Oaks, Sage Publications, pp.509 - 535.

Chase, W.G. and Simon, H.A. (1973) Perceptions in Chess, **Cognitive Psychology**, 4, 55 -81

Coakley, J. (1978) **Sport in Society** St. Louis, MO, Mosby.

Côté, J., Salmela, J.H. and Baria, A. (1993) Organizing and Interpreting Unstructured Qualitative Data, **The Sport Psychologist**, 7, 127-137.

Côté, J., Salmela, J., Trudel, P., Baria, A. and Russell, S. (1995) The Coaching Model: A Grounded Assessment of Expert Gymnastic Coaches' Knowledge., **Journal of Sport and Exercise Psychology**, 17, 1-17.

Côté, J. (1999) The Influence of the Family in the Development of Talent in Sport, **The Sport Psychologist**, 13, 395 - 417.

Côté, J., Young, B., North, J. and Duffy, P. (2007) Towards a Definition of Excellence in Sport Coaching, **International Journal of Coaching Science**, 1, (1): 3 -18

Creswell, J.W. (1998) **Qualitative Inquiry and Research Design - Choosing among Five Traditions**, Thousand Oaks, Sage Publications.

Crouch, M. and McKenzie, H. (2006) The Logic of Small Samples in Interview-based Qualitative Research, **Social Science Information**, 45, (4): 483 -499.

Culver, D.M., Gilbert, W.D. and Trudel, P. (2003) A Decade of Qualitative Research in Sport Psychology Journals: 1990-1999, **The Sport Psychologist**, 17, 1-15.

Culver, D.M. and Trudel, P. (2006) "Cultivating Communities of Practice: Developing the Potential for Learning Through Interactions", <u>In</u> Jones, R.L. (Ed) (2006) **The Sports Coach as Educator**, Abingdon, Routledge, pp.97 -112.

Cushion, C.J., Armour, K.M. and Jones, R.L. (2003) Coach Education and Continuing Professional Development: Experience and Learning to Coach, **Quest**, 55, 215 -230.

Cushion, C.J. (2006) "Mentoring: Harnessing the Power of Experience", <u>In</u> Jones, R.L. (Ed) (2006) **The Sports Coach as Educator**, Abingdon, Routledge, pp.128 - 144.

d'Arripe-Longueville, F., Fournier, J.F. and Dubois, A. (1998) The Perceived Effectiveness of Interactions Between Expert French Judo Coaches and Elite Female Athletes, **The Sport Psychologist**, 12, 317 - 332.

Denzin, N.K. and Lincoln, Y.S. (2000a) "Strategies of Inquiry", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000a) **Handbook of Qualitative Research, 2nd edition**, Thousand Oaks, Sage Publications, pp.366 -378.

Denzin, N.K. and Lincoln, Y.S. (2000b) "The Discipline and Practice of Qualitative Research", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000b) **Handbook of Qualitative Research**, **2nd edition**, Thousand Oaks, Sage Publications, pp.1 -29.

Erickson, K., Côté, J. and Fraser -Thomas, J. (2007) Sport Experiences, Milestones and Educational Activities associated with High Performance Coaches' Development, **The Sport Psychologist**, 21, 303 -316.

Ericsson, K.A. and Charness, N. (1994) Expert Performance: Its Structure and Acquisition **American Psychologist** 49, (8): 725 - 747.

Ericsson, K.A. (2006) "The Influence of Experience and Deliberate Practice on the Development of Superior Expert Performance", <u>In</u> Ericsson, K.A., Charness, N., Feltovich, P.J. & Hoffman, R.R. (Eds) (2006) **The Cambridge Handbook of Expertise and Expert Performance**, New York, Cambridge University Press, pp.683-703.

Ericsson, K.A., Krampe, R.T. and Tesch -Römer, C., (1993) The Role of Deliberate Practice in the Acquisition of Expert Performance, **Psychological Review**, 100, (3): 363 - 406.

Fontana, A. and Frey, J.H. (2000) "The Interview - from Structured Questions to Negotiated Text", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000) **Handbook of Qualitative Research, 2nd edition**, Thousand Oaks, Sage Publications, pp.645 - 672.

Fontana, A. and Frey, J.H. (2005) "The Interview - From Neutral Stance to Political Involvement", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2005) **The Sage Handbook of Qualitative Research - Third Edition**, London, Sage, pp.695 - 728.

Gerson, K. and Horowitz, R. (2002) "Observation and Interviewing: Options and Choices in Qualitative Research", <u>In</u> May, T. (Ed) (2002) **Qualitative Research in Action**, London, Sage Publications, pp.199 -224.

Ghaye, A. and Ghaye, K. (1998) **Teaching and Learning through Critical Reflective Practice**, London, Fulton Publishers Ltd.

Gilbert, W. and Trudel, P. (1999) "**Framing the Construction of Coaching Knowledge in Experiential Learning Theory**", Sociology of Sport (online), Available from <a href="http://physed.otago.ac.nz/sosol/v2i1/v2i1.html">http://physed.otago.ac.nz/sosol/v2i1/v2i1.html</a>, (Accessed 09/06/07)

Gilbert, W. and Trudel, P. (2001) Learning to Coach through Experience: Reflection in Model Youth Sport Coaches, **Journal of Teaching in Physical Education**, 21, 16-34

Gilbert, W., (2002) **An Annotated Bibliography and Analysis of Coaching Science**, The Research Consortium of the American Alliance for Health, Physical Education, Recreation and Dance, Available from <a href="https://www.aahperd.org/research/pdf\_files/grantees\_coaching\_science.pdf">www.aahperd.org/research/pdf\_files/grantees\_coaching\_science.pdf</a>, (Accessed 5th May 2007)

Gilbert, W. and Trudel, P. (2004) Role of the Coach: How Model Youth Team Sport Coaches Frame Their Roles, **The Sport Psychologist**, 18, 21 -43

Gilbert, W., Côté, J. and Mallett, C. (2006) Developmental Paths and Activities of Successful Sport Coaches **International Journal of Sports Science & Coaching**, 1, (1): 69 -76.

Gilbert, W. and Trudel, P. (2006) "The Coach as Reflective Practitioner", <u>In</u> Jones, R.L. (Ed) (2006) **The Sports Coach as Educator**, Abingdon, Routledge, pp.113 -127.

Gilbert, W. and Trudel, P. (2008) Learning to Coach through Experience: Conditions that influence Reflection, **The Physical Educator**, 32, (1): 32 - 43

Golafshani, N. (2003) Understanding Reliability and Validity in Qualitative Research, **The Qualitative Journal**, 8, (4): 597 -607.

Gould, D., Krane, V., Giannini, J. and Hodge, K. (1990) Educational Needs of Elite U.S. National Team, Pan American and Olympic Coaches, **Journal of Teaching in Physical Education**, 9, (4): 332 - 344.

Gould, D., Collins, K., Lauer, L. and Chung, Y. (2007) Coaching Life Skills Through Football: A Study of Award Winning School Coaches, **Journal of Applied Sport Psychology**, 19, 16-37.

Gratton, C. and Jones, I. (2004) **Research Methods for Sport Studies**, Abingdon, Routledge.

Gubrium, J.F. and Holstein, J.A. (2000) "Analyzing Interpretive Practice", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000) **Handbook of Qualitative Research, 2nd edition**, Thousand Oaks, Sage Publications, pp.487-508.

Hammersley, M. and Atkinson, P. (1995) **Ethnography - Principles in Practice, Second Edition**, London, Routledge.

Henderson, I.T. and Stirk, D.I. (1982) **Golf in the Making**, Winchester, Henderson & Stirk Ltd.

Holt, R. and Mason, T. (2000) **Sport in Britain**, Oxford, Blackwell Publishers Ltd.

Holt, R., Lewis, P.N. and Vamplew, W. (2002) **The Professional Golfers' Association 1901 -2001**, Worcestershire, Grant Books.

Irwin, G., Hanton, S. and Kerwin, D.G. (2004) Reflective Practice and the Origins of Elite Coaching Knowledge, **Reflective Practice**, 5, (3): 425 -442.

Janesick, V.J. (2000) "The Choreography of Qualitative Research Design: Minuets, Improvisations, and Crystallizations", <u>In</u> Denzin, N.K. & Lincoln, Y.S. (Eds) (2000) **Handbook of Qualitative Research, 2nd edition**, Thousand Oaks, Sage Publications, pp.379 -400.

Jenkins, S. (2007) Editorial, Annual Review of Golf Coaching, 1, v -vi.

Johnson, J., M. (2002) "In-Depth Interviewing", <u>In</u> Gubrium, J.F. & Holstein, J.A. (Eds) (2002) **Handbook of Interview Research, Context & Method**, Thousand Oaks, Sage Publications, pp.103 - 119.

Jones, C. (1993) "Qualitative Interviewing", <u>In</u> Allan, G. & Skinner, C. (Eds) (1993) **Handbook for Research Students in the Social Sciences**, London, Falmer Press, pp.203 - 215.

Jones, R., Armour, K. and Potrac, P. (2002) Understanding the Coaching Process: A Framework for Social Analysis, **Quest** 54, 34 - 48.

Jones, R., Armour, K. and Potrac, P. (2004) **Sports Coaching Cultures**, London, Routledge.

Jones, R.L., Armour, K. and Potrac, P. (2003) Constructing Expert Knowledge: A Case Study of a Top Level Professional Soccer Coach, **Sport, Education & Society**, 8, (2): 213 - 229.

Jones, R.L., Hughes, M. and Kingston, K. (2008) "Tying it all together", <u>In</u> Jones, R.L., Hughes, M. & Kingston, K. (Eds) (2008) **An Introduction to Sports Coaching - from Science and Theory to Practice**, New York, Routledge, pp.138 -143.

Kirk, D. and Macdonald, D. (1998) Situated Learning in Physical Education, **Journal of Teaching in Physical Education**, 17, 376 - 387.

Knowles, Z., Borrie, A. and Telfer, H. (2005) Towards the Reflective Sports Coach: Issues of Context, Education and Application, **Ergonomics**, 48, (11 - 14): 1711 - 1720.

Kolb, D.A. (1984) Experiential Learning, New Jersey, Prentice -Hall.

KPMG, (2007) **Golf Benchmark Survey in the EMA region 2006 - GB&I**, Hungary, KPMG, Available from <a href="http://www.kpmg.co.uk/industries/tlt/pubs.cfm">http://www.kpmg.co.uk/industries/tlt/pubs.cfm</a>, (Accessed December 12th 2007)

Krane, V., Andersen, M.B. and Strean, W.B. (1997) Issues of Qualitative Research Methods and Presentation, **Journal of Sport and Exercise Psychology**, 19, 213 -218.

Krane, V. and Baird, S.M. (2005) Using Ethnography in Applied Sport Psychology, **Journal of Applied Sport Psychology**, 17, 87-107.

Lave, J. and Wenger, E. (1991) **Situated Learning - Legitimate Peripheral Participation**, New York, Cambridge University Press.

Lemyre, F., Trudel, P. and Durand -Bush, N. (2007) How Youth Sport Coaches Learn to Coach, **The Sport Psychologist**, 21, 191 -209.

Lyle, J. (2002) **Sports Coaching Concepts - A Framework for Coaches' Behaviour**, London, Routledge.

Lyle, J. (2006) "The Coaching Process: An Overview", <u>In</u> Cross, N. & Lyle, J. (Eds) (2006) **The Coaching Process: Principles and Practice for Sport**, Oxford, Butterworth - Heinemann, pp.3 -24.

Macdonald, D., Kirk, D., Metzler, M., Nilges, L., Schempp, P. and Wright, J. (2002) It's all very well, in theory: Theoretical Perspectives and Their Applications in Contemporary Pedagogical Research, **Quest**, (54): 133-156.

Malete, L. and Feltz, D.L. (2000) The Effect of a Coaching Education Program on Coaching Efficacy, **The Sport Psychologist**, 14, 410 -417.

Martindale, R., Collins, D. and Abraham, A. (2007) Effective Talent Development: The Elite Coach Perspective in UK Sport, **Journal of Applied Sport Psychology**, 19, 187 - 206.

Mathers, J.F. (1997) Professional Golf Coaching: Is there an Appreciation of the Coaching Process?, **Scottish Journal of Physical Education**, 25, (1): 23 -35.

McCullick, B. (1999) The Professional Orientations of Expert Golf Instructors, **International Journal Of Physical Education**, 36, 15 - 24.

McCullick, B.A., Schempp, P. and Clark, B. (2002) "An Analysis of an Effective Golf Teacher Education Program: The LPGA National Education Program", <u>In</u> Thain, E. (Ed) (2002) **Science & Golf IV**, New York, Routledge, pp.218 - 230.

McCullick, B.A., Schempp, P., Hau, S.H., Jung, J.H., Vickers, B. and Schuknecht, G. (2006) An Analysis of the Working Memories of Expert Sport Instructors, **Journal of Teaching in Physical Education**, 25, 149-165.

McFee, G. (2006) "Ethical Considerations and Voluntary Informed Consent in Research in Sport", <u>In</u> Fleming, S. & Jordan, F. (Eds) (2006) **Ethical Issues in Leisure Research**, Eastbourne, Leisure Studies Association, pp.13 -30.

Moon, J.A. (2004) A Handbook of Reflective and Experiential Learning: Theory and Practice, London, Routledge Falmer.

Nash, C. and Collins, D. (2006) Tacit Knowledge in Expert Coaching: Science or Art?, **Quest**, 58, 465 - 477.

Nelson, L.J., Cushion, C.J. and Potrac, P. (2006) Formal, Nonformal and Informal Coach Learning: A Holistic Conceptualisation, **International Journal of Sports Science & Coaching**, 1, (3): 247 -259.

Onwuegbuzie, A.J. and Leech, N.L. (2007) Validity and Qualitative Research: An Oxymoron?, **Quality and Quantity**, 41, 233 -249.

Patton, M.Q. (1990) **Qualitative Evaluation and Research Methods (2nd Edition)**, Newbury Park, CA, Sage Publications.

Phillpots, K. (2007) The Development of the UK Coaching Certificate for Golf, **Annual Review of Golf Coaching**, 1, 167 - 184.

Pink Dandelion, B. (1995) "Insider Dealing: Researching Your Own Private World", <u>In</u> Tomlinson, A. & Fleming, S. (Eds) (1995) **Ethics, Sport and Leisure**, University of Brighton, CSRC, pp.181 -202.

Platt, J. (1981) On Interviewing One's Peers, **British Journal of Sociology**, 32, 75-91.

Potrac, P., Jones, R.L. and Armour, K. (2003) "It's all about getting respect" The Coaching Behaviors of an Expert English Soccer Coach, **Sport**, **Education & Society**, 7, (2): 183 - 202.

Robson, C. (2002) Real World Research, Oxford, Blackwell.

Salmela, J. (1995) Learning from the Development of Expert Coaches, **Coaching and Sport Science Journal**, 2, (2): 3 -13.

Sands, R.R. (2002) **Sport Ethnography**, Champaign, IL, Human Kinetics.

Schempp, P., Manross, D., Tan, S. and Fincher, M. (1998) Subject Expertise and Teachers' Knowledge, **Journal of Teaching in Physical Education**, 17, 342 - 356.

Schempp, P., Templeton, C.L. and Clark, B. (1999a) "The Knowledge Acquisition of Expert Golf Instructors", <u>In</u> Farrally, M.R. & Cochran, A.J. (Eds) (1999a) **Science and Golf III: Proceedings of the World Scientific Congress of Golf**, Champaign, IL, Human Kinetics, pp.295 - 301.

Schempp, P., You, J.A. and Clark, B. (1999b) "The Antecedents of Expertise in Golf Instruction", <u>In</u> Farrally, M.R. & Cochran, A.J. (Eds) (1999b) **Science and Golf III: Proceedings of the World Scientific Congress of Golf**, Champaign, IL, Human Kinetics, pp.283 - 293.

Schempp, P., McCullick, B.A., Busch, C.A., Webster, C. and Mason, I.S. (2006a) The Self Monitoring of Expert Sport Instructors, **International Journal of Sports Science and Coaching**, 1, (1): 25 - 35.

Schempp, P., McCullick, B.A. and Sannen Mason, I. (2006b) "Development of Expert Coaching", <u>In</u> Jones, R.L. (Ed) (2006b) **The Sports Coach as Educator**, Abingdon, Routledge, pp.145 - 161.

Schempp, P., Webster, C., McCullick, B.A., Busch, C. and Sannen Mason, I. (2007) How the Best Get Better: An Analysis of the Self-Monitoring Strategies used by Expert Golf Instructors, **Sport, Education and Society**, 12, (2): 175 -192.

Schempp, P., Jones, E.M. and McCullick, B.A. (2008) "Lessons from the Experts: Suggested Readings for Beginning Instructors", <u>In</u> Crews, D. & Lutz, R. (Eds) (2008) **Science & Golf V**, Arizona, Energy in Motion, pp.315 -319.

Schinke, R.J., Bloom, G.A. and Salmela, J. (1995) The Career Stages of Elite Canadian Basketball Coaches, **Avante**, 1, (1): 48 -62.

Schön, D.A. (1991) **The Reflective Practitioner**, London, Ashgate.

Singer, R.N. and Janelle, C.M. (1999) Determining Sport Expertise: From Genes to Supremes, **International Journal of Sport Psychology**, 30, 117-150.

Sports Coach UK, (2004) **Sports Coaching in the UK**, Leeds, Sports Coach UK, Available from <a href="http://www.sportscoachuk.org/research/Research+Publications/">http://www.sportscoachuk.org/research/Research+Publications/</a>, (Accessed September 18th 2007)

SRA and MRS (2005) "Data Protection Act 1998 – Guidelines for Social Research", (online), Available from <a href="http://www.the-sra.org.uk/documents/pdfs/ethics03.pdf">http://www.the-sra.org.uk/documents/pdfs/ethics03.pdf</a>, (Accessed 20th August 2007)

Strauss, A. and Corbin, J. (1998) **Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory**, London, Sage Publications, Inc.

Tan, S. (1997) The Elements of Expertise., **The Journal of Physical Education**, **Recreation & Dance**, 68, (2): 30 - 33.

Trudel, P. and Gilbert, W. (2004) "Communities of Practice as an Approach to Foster Ice Hockey Coach Development", <u>In</u> Pearsall, D.J. & Ashare, A.B. (Eds) (2004) **Safety in Ice Hockey: Fourth Volume, ASTM STP 1446**, West Conshohocken, PA, ASTM International, pp.167 - 179.

Trudel, P. and Gilbert, W. (2006) "Coaching and Coach Education", <u>In</u> Kirk, D., Macdonald, D. & O'Sullivan, M. (Eds) (2006) **The Handbook of Physical Education**, London, Sage Publications, pp.516 -539.

Vamplew, W. (2008) Successful Workers or Exploited Labour? Golf Professionals and Professional Golfers in Britain 1888 -1914, **Economic History Review**, 61, (1): 54-79.

Warren, C.A.B. (2002) "Qualitative Interviewing", <u>In</u> Gubrium, J.F. & Holstein, J.A. (Eds) (2002) **Handbook of Interview Research, Context & Method**, Thousand Oaks, Sage Publications, pp.83 - 101.

Wenger, E. (1998) **Communities of Practice: Learning, Meaning and Identity**, Cambridge, Cambridge University Press.

Werthner, P. and Trudel, P. (2006) A New Theoretical Perspective for Understanding How Coaches Learn to Coach, **The Sport Psychologist**, 20, 198-212

Wikeley, F. and Bullock, K. (2006) "Coaching as an Educational Relationship", <u>In</u> Jones, R.L. (Ed) (2006) **The Sports Coach as Educator**, Abingdon, Routledge, pp.14 - 24.

Wright, T., Trudel, P. and Culver, D.M. (2007) Learning How to Coach: The Different Learning Situations Reported by Youth Ice Hockey Coaches, **Physical Education & Sport Pedagogy**, 12, (2): 127 - 144.

Young, E.P., Granaghan, J. and Wallacw, E.S. (1999) "Irish Golf Club Professionals: A Training Needs Analysis", <u>In</u> Farrally, M.R. & Cochran, A.J. (Eds) (1999) **Science & Golf III**, Leeds, Human Kinetics, pp.302 -309.