FROM PISTE TO PODIUM - A QUALITATIVE EXPLORATION OF THE DEVELOPMENT OF FENCING COACHING IN BRITAIN

By

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A thesis submitted to the

University of Birmingham

For the degree of

MPhil (B) SPORTS COACHING (EDUCATION)

School of Sport, Exercise and Rehabilitation Sciences

University of Birmingham

December 2014

ABSTRACT

Fencing has been contested in every Olympiad of the modern era, with Great Britain represented throughout, but British Fencing international performance results have declined over the last 40 years (FIE, 2011). Other nations have maintained their standing in the world rankings. This difference might be explained by a variance in the way that fencing coaches are trained.

A qualitative study was undertaken to investigate if differences existed in the coach education systems at home and abroad. In the research a sample of expert coaches (*n=12*) from Britain (*n=6*) and Europe (*n=6*) were questioned on the way they were trained, how they worked and what they felt coaches needed to know using semi-structured interviews. A thematic analysis of the verbatim transcripts of the interviews was made to provide the data for the research. The study reviewed the literature of coaching in general and the work on the teaching of fencing and this was used to support or contradict the data from the subsequent research.

From the research data it was discovered that expert coaches gained most of their coaching knowledge and skills from their own professional experience, from deliberate and reflective practice, and from working with mentors. Acquiring this expert knowledge took years rather weeks and included knowledge of coaching science, pedagogy and sports and exercise sciences. The formal courses currently on offer were not found to be very useful in the gaining of coaching expertise, in that the courses did not convey enough information or time to practice.

Putting these findings of how expert coaches gained their expertise into the syllabi and delivery of coach education might help raise both British Fencing coaching standards and assist the fencing athletes to the podium.

ACKNOWLEDGEMENTS

I would like to thank the many people who have encouraged me, kept me going when it would have been easy to give up and whose knowledge and enthusiasm have made the journey so worthwhile. First they are the staff and lecturers at the School of Education, University of Birmingham, in particular my Supervisor, Dr Martin Toms, to whom I owe a great debt of thanks for his wonderful and incisive comments and guidance.

Without the stoic support and encouragement of my wife, Marguerite, the project would not have succeeded; thank you, my patient checker of references.

My thanks go to the many people who have from time-to-time looked over parts of the work, discussed ideas and freely given me theirs. Thanks also to Gill, who so carefully proofread the final draft.

I would like to thank the Directors and staff of the Sydney Sabre Centre, in Australia, for their forbearance as the work neared completion and their new Chief Instructor became more and more distracted. You have my full attention al last.

Finally, my thanks go to the coaches and others who told me their stories so openly and frankly. Without them none of this would have been possible. *Köszönöm szépen*.

"When you are a Bear of Very Little Brain, and you Think of Things, you find sometimes that a Thing which seemed very Thingish inside you is quite different when it gets out into the open and has other people looking at it." (Milne, 1928, p.101)

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Chapter 1 – INTRODUCTION

1.1. Introduction to the Chapter

This first chapter will describe the background of the study and introduce the reasons and need for the research. The opinions and views of the expert coaches form basis of this qualitative comparison of the way fencing coaches are trained, both here in UK and in other countries. This chapter will inform the reader of the history and context of the training of fencing coaches in UK under the governance of the National Governing Body (NGB).

1.2. Outline of the Study

Heretofore coach education in fencing has been instructional and skills based (British Academy of Fencing, 2010, Randall, 2010), but this concept is challenged by recent research both in technical content (Lyle, 2002b), and its wider social philosophies (Bailey et al., 2011). Other sports and countries have arguably more effective coach education systems than British Fencing (BF), so discovering and bringing in some of their methods may be beneficial. BF is currently in the process of re-writing its syllabi with Randall's (2010) work-in-progress programme for the training of coaches. There are issues, too, for example defining 'coaching' (*cf* teaching or instructing).

1.3. Introduction to the Research Question

Competitively, Britain was successful at all three fencing weapons until the middle of the 20th century, winning world and Olympic championships. It has not won a gold medal for fifty years (de Beaumont, 1960, FIE, 2011, Gray, 1984). Gravé (1934, p.21) wrote "why are the British teams, or individual fencers, so often beaten in international contests?" It may be coincidental, but up to the early 20th century, when the idea of the sporting club for fencing was conceived, fencing was only taught in Fencing Masters' *Salles d'Armes* (Corble, 1936).

There were 15 countries with athletes in the top ten of the world ranking list in 2010-2011 season; ten have more than one fencer in that list, which covers foil, épée and sabre and both sexes (see Table 1). Great Britain is not one of those countries (FIE, 2011). No British fencer achieved a quarter-final in the London

2012 Olympic Games, so Great Britain is not what could be called a leading nation in the sport of fencing. With BF's World Class Programme (2013-2017) the infrastructure foundations are being laid to regain a podium level performance for Rio de Janeiro and beyond (British Fencing, 2013).

Nation	No of Fencers in World Top 10
Italy	14
France	6
Russia	5
South Korea	4
Germany	3
Hungary	3
Romania	3
Switzerland	3
USA	3
China	2
Egypt	1
Netherlands	1
Poland	1
Ukraine	1
Venezuela	1
Great Britain	0

Table 1. Nations with fencers in the world top ten (2011)

Clearly other countries have been more successful than Great Britain. Hungary has had frequent world champions and their expatriate coaches have trained other nations' successful athletes and teams (*e.g.* China, Canada, France, Germany, Japan). The question initially addressed in this research was, "what do coaches trained under a system that does produce world-level success do that Britain does not, and what should the British coach education system deliver to achieve similar coaching effect?"

The research question sought to examine the training regimes of other countries' fencing coaches to discover how theirs compared with the British coach education system. The research was intended to elicit coherent responses, which might indicate possible directions for the British system to be developed.

1.4. Overview of the Thesis

This first chapter introduces the sport and the aim of the thesis. It outlines the direction the thesis takes. The literature is reviewed in chapter 2, which gives

some key theoretical framework for both the findings from the data and the methodology of the research. Chapter 3 provides a rationale for the chosen research method, thematic analysis, and describes the steps of the research process undertaken. A discussion of the data analysis is given in chapter 4, and this is reflected in the research described in the literature. The last chapter draws conclusions from the research, lists some implications for the sport, and makes some proposals for the future training of fencing coaches as well as suggestions for future research.

1.5. Methodological Background

Historically, research into the training of fencing coaches has been informal and to do with what technical elements should be included or excluded from the coaching syllabus. This has been found wanting in the literature (Nash and Sproule, 2011), and at the same time the British national results have been below some expectations (British Fencing, 2013). This study sought to understand how coaches of other, more successful countries were trained, and if there were some aspects of their education, which, if employed here, might raise the British competitive standards in the longer term.

Up to the 1970s research into coaching was quantitative, looking at the 'how' and 'what' to coach (Gilbert, 2002). Jones et al. (2004, p.2) define a coach as "much more than a subject matter specialist and a systematic method provider." Discovering what this might be was a descriptive process so more suited to qualitative methods, seeking to cut through the over-simplifications of coaching, which Jones et al. (2004, p.1) say is a "very complex process." Semi-structured interviews and thematic analysis were used to elicit a personal theory of the acquisition of successful coaching expertise from the interviewees.

1.6. Organisation and Governance of Fencing

In UK fencing the flag-carrier for international events is the Great Britain team (GBR); it is with this that the sport's national governing body (NGB), British Fencing, is concerned and it is BF that liaises with the international governing body, the *Fédération Internationale d'Escrime* (FIE). It is the GBR results that

concern Sport UK, which funds the elite squad and Olympic pathway. BF is a limited company with its board of directors elected by the entire membership.

Within the UK there are several home countries, notably England, Northern Ireland (NI), Scotland and Wales. These home countries are also the flag-carrier teams for 'home internationals' and the Commonwealth championships. BF members choose to belong to one home country on joining. Members can fence for both GBR and their home country; home country international competition is run by BF not the FIE. The NGB for England is England Fencing (EF) and the great majority (some 80%) of all BF members belong to EF.

There are now 3 disciplines in competitive fencing: foil, épée and sabre. All are practised by both men and women, and the sport of fencing has been in every Olympic Games of the modern era.

1.7. Organisation and Leadership of Coaching in British Fencing

Coach education was performed by a joint committee of BF and the British Academy of Fencing (BAF) up to about 1998, when there was an ideological split over assessment methods (British Academy of Fencing, 2010). BF introduced several training systems, but none was allowed to develop to maturity, either being superseded or cancelled. Responsibility for coach education was delegated to the home countries in the 2000s and this resulted in the new design by England (Randall, 2009, 2011). Scotland and Wales went with their own systems. Currently, in 2013, this leaves the BAF with the only mature, UK based coach-training system for all levels of coaches and available to all fencers.

This thesis is limited to examining the coach education system in England since 2008 in the contexts of the BAF and the previous joint venture, the light of recent research, and with the new aims of BF to train podium athletes in the longer term.

1.8. Chapter Conclusion

This chapter has introduced the study, the research question and an overview of the thesis with a short outline of its scope. It has introduced the methodological background for the research and the reader to the context of the organisation and governance of fencing in Great Britain. Finally the chapter described the immediate history of coach education in fencing.

The chapter points out the recent paucity of international results in fencing, suggesting that this may be at least partially caused by the way the national coaches have been trained.

Chapter 2 - LITERATURE REVIEW

2.1. Introduction to the Chapter

The aim of this chapter is to critically review the literature relating to the education of fencing coaches and the training of fencers in England, including some research literature in the coach-supporting science disciplines. These include pedagogy, psychology, physiology, and strength & conditioning (S&C).

By looking at the context of coaching generally (*cf* teaching), and using a broad review of the empirical and theoretical work that has been undertaken in the domains of sports coaching and pedagogy, this chapter will give an understanding of general sport coaching developments, the instruction of fencing, and of fencing coaching progression in England. It will act as a context for the research.

As coaching is both a pedagogic and technically skilful activity (Cross, 2002), this chapter is written in to reflect both these methodologies (pedagogy and technical skill), which are both required by a fencing coach. This is illustrated by Werthner and Trudel (2006, p.198) who write, "…coaching is complex, and, therefore, coaches need to develop a knowledge base which should include coaching knowledge and sport specific knowledge".

2.2. Coaching as a Profession

Teaching has long been professionalised, with teachers certified as being of "Qualified Teacher Status" (QTS). Coaching both as a science and a profession has been discussed, researched and developed in recent years but as yet there is no such formal professional standard.

Sports Coach UK (scUK) published its coaching framework and states that coaching should progress to a "Professionally Regulated Vocation" (Stanners, 2009, p.2). scUK is an agency of the Department of Culture, Media and Sport, so such a document may be a statement of political intent, rather than being strictly research based.

In the following paragraphs the literature will provide some of the body of evidence of good and effective expert coaching practice and coaching can become more professional.

The concept of coaching as a profession is developing and Jones (2006b) describes how the profession of coaching is moving away from the role of instructor and becoming more like an educator. Galipeau and Trudel (2006, p.77) say that coaching should "not only be defined through a list of instructional methods to use and/or a specific sport knowledge content to deliver, but rather that it is a more complex activity". Other research indicates that the coaching process has "been reduced both in complexity and scale, and the essential social and cultural elements of the process are often underplayed" (Cushion et al., 2006, p.83), which is all emphasised by "…coaching practitioners requir[ing] not only expansive technical knowledge of their sport but also the pedagogical skills of a teacher, the counseling skills of a psychologist, the training expertise of a physiologist, and the administrative leadership of a business executive." (Potrac et al., 2000, p.187). To maintain the professional skill level of coaches, their training should include the elements Cushion et al. (2006) say are underplayed.

Considering the coach education programme, it 'becomes important to structure the content of the coaching domain to promote its advancement as a profession' (Côté et al., 1995b, p.2).

2.2.1. The Science of Coaching and Pedagogy

The idea of coaching being more than the simple passing of how-to-do-it instructions is explored by Potrac and Cassidy (2006, p.42): they argue that the "traditional nature of the teaching and learning in many sports, [is] where the orthodoxy has been for coaches to adopt a largely prescriptive approach regarding when and how athletes should perform specified skills or movements". This idea, Potrac and Cassidy say, is also challenged by Vygotsky. Vygotsky's main work in Russia was in developmental psychology; this was used as a foundation for educational psychology in the west in the 1970s. Vygotsky found the learning – even skills – was a complex psychological process so the pedagogue had to do more than instruct. Daniels reports that Vygotsky places

emphasis on “collaborative learning relationships” (Daniels, 2001, p.43), and goes on to say that there is a difference in communication within schooling (*about* words) and the more general social communication (*with* words); the coach’s role is that of the pedagogue, and is not simple.

Vygotsky’s (1987) work on thinking and speech is reflected by Czaijowsky (2005, p.6), where he says practice should be ‘never by rote’, but made with understanding as a scaffolding for the building of knowledge, although Czaijowsky is at pains to stress that being able to name things correctly is also important (British Academy of Fencing, 2002). Using Vygotsky as a foundation might be a sound way to progress the design of future coach learning by including the educational philosophies he suggests into the pedagogic science and professionalisation for coaching.

Commenting on the nature of instruction from a UK perspective, Peters (1966, p.32), believes that, “… ‘trained’ suggests the development of competence in a limited skill… whereas ‘educated’ suggests a linkage with a wider system of beliefs”. One would educate rather than train emotions, for example, and these are traits, which would fit nicely into the hierarchy of coaching levels, where a level 2 coach might ‘train’ an athlete, and a fully qualified coach would ‘educate’. In this context, coach ‘education’ is well named. This book is one of Peters’ most important works, and so could be a solid foundation on which to build coach education strategies.

The science of teaching, coaching and pedagogy has been researched much in the last 20 years or so, for example by Gilbert and Trudel (1999) and Nelson et al., (2006), all seeking to show how coaches acquire their knowledge. Although somewhat dated, Gilbert and Trudel try to explain how coaches might focus on the delivery of sport-specific knowledge in the context of general professional coaching practice. This research was a test of an evaluation strategy for coaching courses, and although it rested on one example, proved that the strategy worked through a wide variety of data collected. Nelson et al., (2006) reviewed a significant body of research in to coaching (there are 72 references in their paper) but don’t say on what criteria they based their selection, except that it

was using a previous framework. Nelson et al. (2006) divide the concept of coach 'learning' from coach 'education', seeing the latter as more restrictive and sport specific.

Putting much of the period's work together in a textbook for sport pedagogy Armour (2011) argues that sport pedagogy is a life-skill delivery rather than simply the instruction of playing skills, and the same could be applied to the education of coaches. In the same book, Walsh (2011, p.288) describes "what the research tells us about effective coaching" gleaned from some 30 references on coaching effectiveness from 1995-2009. She notes that it is hard to make a definition of effective coaching and cites Lyle's (2002b) coaching model (see Figure 1) for comparison with the pedagogy she describes. This reinforces the concept of complexity and even of ambiguity in coaching efficacy. In particular Walsh notes that the terms 'effective', 'expert' and 'elite' have often been used interchangeably to describe coaching, so making it unclear if coaches who work with elite athletes are considered expert or effective, and whether those who are effective are expert, or *vice versa*. These are important aspects, which need to be defined before coaches can be assessed objectively, and this probably impacts on, and should inform, the coach education delivery and assessment.

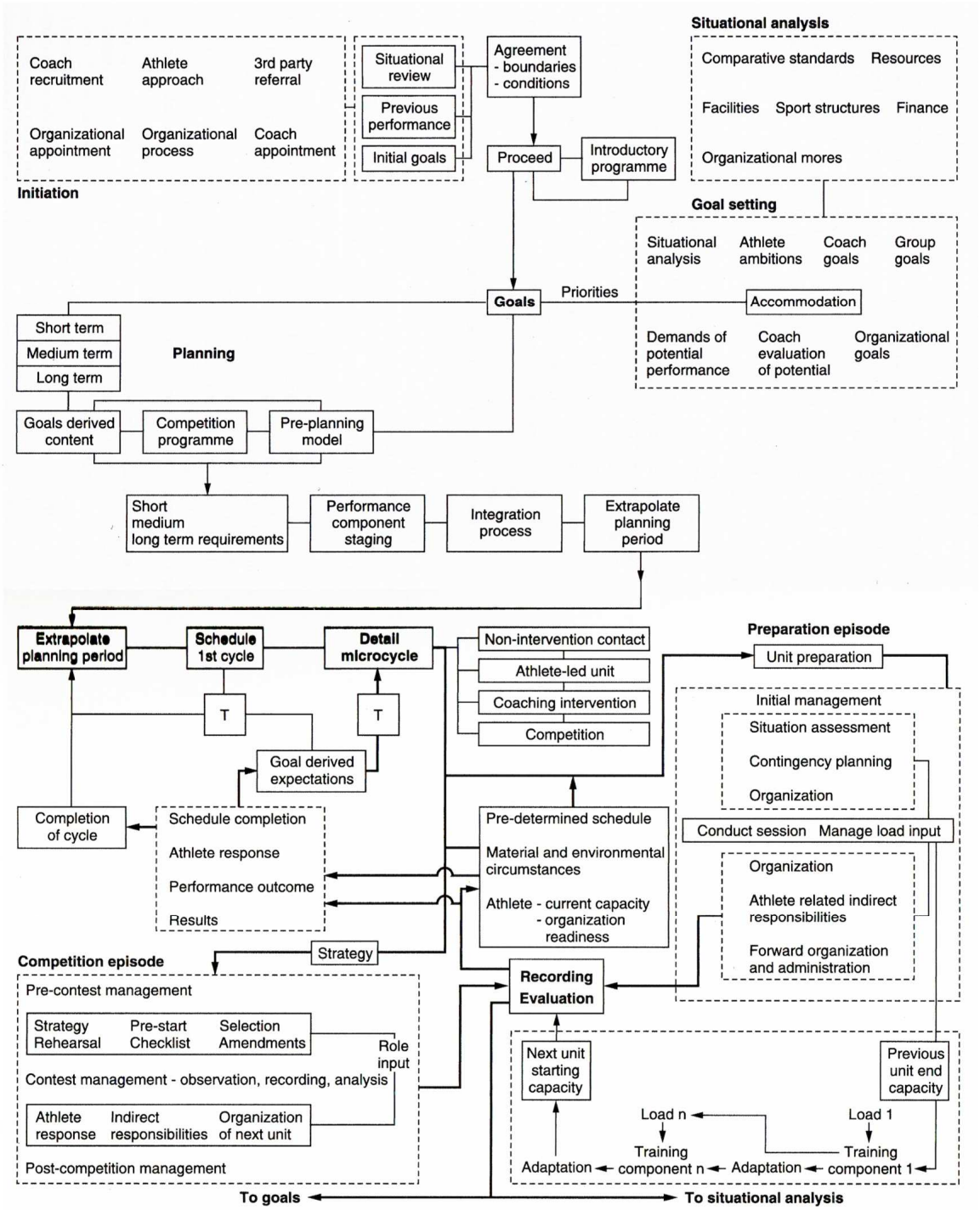

Figure 1. Lyle's model of the coaching process (Lyle, 2002b, p.18-19). Lyle notes that the process included here may be cyclical or serial, but always around the goals and operate within external constraints. Many of the processes have sub-processes, yet the whole is a continuous series of inter-personal interactions, and there is also a cultural dimension. This illustrates neatly just how complex coaching can be and how deep needs to be the knowledge and experience of the expert coach.

2.2.2. Changing from Belief-Based to Evidenced-Based Coaching

As coaching moves towards professionalisation there should be a move from belief-base to evidence-base in the teaching of coaching. There is a culture of belief-based coaching in many sports as reported in a web article by Rushall (2003), but belief-based coaching is being challenged by research, he says, particularly into evidence-based tuition. Telfer (2010) found this to be effective, ethical and measureable. Rushall gives a journalistic opinion backed by examples. However Telfer writes supportively in a balanced, evidenced and referenced review.

Coaches need to provide plans that will beneficially adapt their athletes for the sport, but traditional belief-based coaching may lead in the wrong direction.

Wojciechowski (1988, p.19) advocated "continuous jogging 2-3 times per week for 40-50 minutes", which fitted beliefs at the time but has been superceded by more recent research by Turner et al., (2013). They made a needs analysis from the perspective of the S&C expert to identify the biomechanical and physiological requirements of the fencer in combat. Following Wojciechowski, Randall (2009) makes reference only to cardio-vascular (aerobic) preparation, and Sowerby (2011) stresses the importance of aerobic jogging. Turner et al. found that the exercise demands of fencing actions were almost entirely anaerobic. This supports earlier research by Kraemer (2000, p.142, Table 8.1) in a textbook running to several editions, who said that the "primary metabolic demands of… fencing" were high for the anaerobic system and not significant for aerobic metabolism, and means that the traditional coach training should probably be re-thought. This is a good illustration as to why coaches need to have access to the research literature to avoid passing on solecisms, and why a traditional hand-me-down of belief dictating how to do things may not be the most successful for the modern coach. Evidence and research should now be allowed to direct the delivery of coaching and pedagogy.

2.2.3. Coaching as a Whole-Person Holistic Activity

There is a body of thought that education of the whole person should be a fundamental component of coaching, illustrated in Lindholm's short essay about coaching in the US school system that "educational values are often central truths" (Lindholm, 1979, p.734). Makopoulou (2011), writing perhaps with greater gravitas from the UK perspective, offers the concept of 'personalised learning' in his chapter and argues that coaching and teaching once again are part of the same spectrum. Again, writing from the UK, Potrac et al. (2002) investigated an expert soccer coach to provide a more holistic understanding of the coaching behaviours of a top-level professional; they found that he attempted to create a social bond between himself and his athletes. The use of a single subject was mitigated because they were not looking to provide an answer, rather guide further research. Nevertheless it could give a basis for reflective practice for trainee coaches and for the formulation of coach education course design.

These references show that there needs to be much more to the training or education of a coach than the learning of a set of skills-drills for the trainee to impart to their pupil athletes.

2.2.4. Development of Teaching within Coaching

Teaching, as a profession, exists to serve its clients, the students, and Armour (2010) in her review of professional responsibility stresses the need for coaching pedagogues to do more than merely perform teaching; they need to act as coaches through the learning process. Also, the sports coach has a much greater role than simply instructing skills and tactics argue Côté et al., (2010), in their significant description of the coaching role through their review of 153 references. This means that, though the coaching process is only beginning to be understood, it certainly includes the coach being a role model and mentor to developing adolescents. In order to make his or her coaching effective, as described in Baker and Horton's (2004) review of factors affecting the development of expert performance, the coach needs to make sense of the socio-cultural environment in which the athlete exists and the training is delivered.

Arguing against the separation of teaching and coaching, Jones (2006a, p.6) writes “recent studies have confirmed that coaches view their work, not as physical trainers, but as educators or guides in developing and growing athletes”, and it is suggested that pedagogic concepts should take a more central role in coaching (Jones et al., 2004). Both these books essentially offer a case that coaches should be considered as educators and coaching itself a complex pedagogical process. The latter also offers some thought on the nature and delivery of coach education programmes. Both are argued, evidenced and referenced. Bergmann Drewe (2000), reporting from a Canadian perspective, suggests a reason there is a lack of teaching skills in coaching might stem from the higher value placed on sport as opposed to education, but she appears to offer no evidence for this in her examination of the subject. In the researcher’s experience the teacher-status is the more respected in both state and independent schools in UK, but this may be because of the nature of the schools involved in fencing; she would report from Canadian schools, where ‘Coach’ may be a special and respected person. She also asserts that the distinction between (*inter alia*) knowledge and skill should be dissolved, and that competition “is a necessary part of education” (Bergmann Drewe, 2000, p.80), but here she offers several sources as evidence (*e.g.* Alexander et al., 1998, looking at Australian schools). There might be a distinct difference in the standing of the coach *cf* teacher in the USA, Canada and Australia compared with the UK.

Glaser (1990) and Fairweather (2002) look at the acquisition of skills and knowledge. The former wrote in a peer-reviewed journal about the principles of learning and suggesting that there should be more integration of learning theories. The latter, in a textbook used in undergraduate and other courses, applied those principles to a coaching context, and found it requires much more than simplistic instruction to acquire the skills and knowledge of an effective coach. Moving on from this discussion, Nash et al.’s (2012), meta-data analysis looking at 50 research papers (from 554 recovered) covering 1995-2009, found the ‘what’ and ‘how’ in coaching are inextricably linked, and that the decision making process in coaching may be a more important expertise in coaching than skills and instructional ability. They also found that application of inconsistent criteria to select expert coaches might not, in the papers they looked at, have

identified appropriate individuals to research. This would imply further research might be needed before the redesign of the coach education system. However, the pedigree of the data and the authority of the meta-analysis methodology make this an important paper.

There is little attention to the science of coaching in the British coach education syllabi (Randall, 2010, British Academy of Fencing, 2005), and therefore it is a subject currently omitted from coaches' training; however, in their examination of the literature surrounding coaching expertise and tacit knowledge looking at another large sample of papers (n=67), Nash and Collins (2006) suggest it would be a sensible topic to include. This paper would have been even more useful perhaps had the inclusion criteria been spelled out, but it is an important and useful paper for the development of coach education.

2.2.5. Development of Coaching Models

In trying to make sense of coaching skill several attempts have been made to define or describe it as a model. Côté et al.'s (1995b) initial model infers that coaches will begin by developing a mental model of the potential of their athletes (see Figure 2), and this would, *inter alia*, be influenced by the coaches' own personal characteristics. This model had been developed by qualitative analysis of interviews with 17 Canadian expert gymnastic coaches. It used a small number and a very limited spectrum of coaching from one nation, however it is a guide and would make a good start point for further research. This model is quite simplistic and possibly not very helpful now, but it did open up threads about the nature and profession of coaching as well as the knowledge coaches required, indicating the much greater skill set needed by the aspiring coach than was believed and that coaches needed a well defined set of concepts and principles.

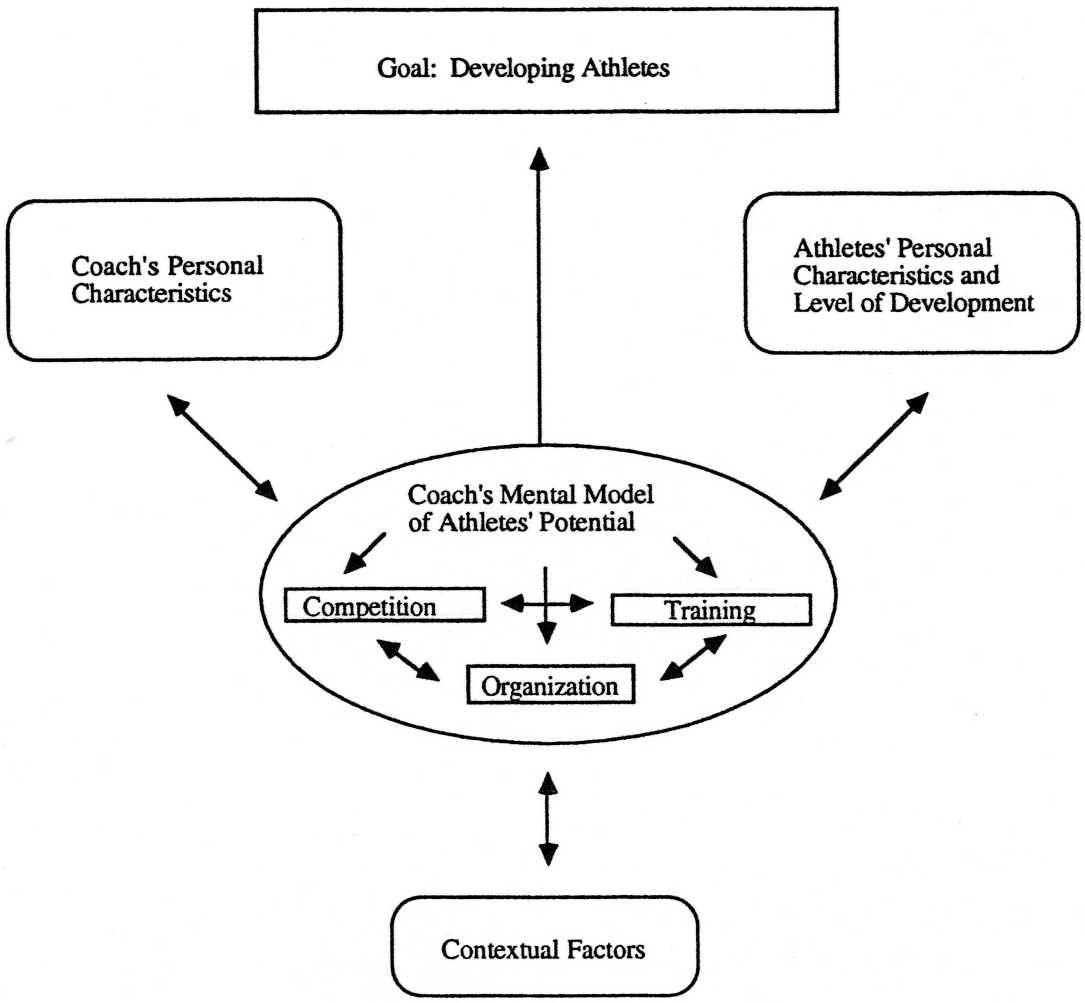

Figure 2 The coaching model (from Côté et al. 1995b, p.10)

Bailey et al. (2010) proposed a complex and holistic development model for the athlete, taking note of a young athlete's ability to get there rather than looking at a performance measure at a moment, especially an athlete's psychological development, which, they note, is non-linear. Bailey et al. base the work on three perspectives, biological (physiological), psychological and social. Their paper brings together the physiological and psychological models, adding a social aspect and challenging the role of the coach only as a technical instructor (see Figure 3). The review was written about the participation of athletes, but the findings effect coaches as well, for coaches are the ones who will have to train the participants and need to know how to do it. This also fits well with the ideas from Bowes and Jones (2006), which are considered later (see section 2.2.6). These models describe the findings from the research about coaching. They show coaching to be very complex and not mere instruction of sports skills.

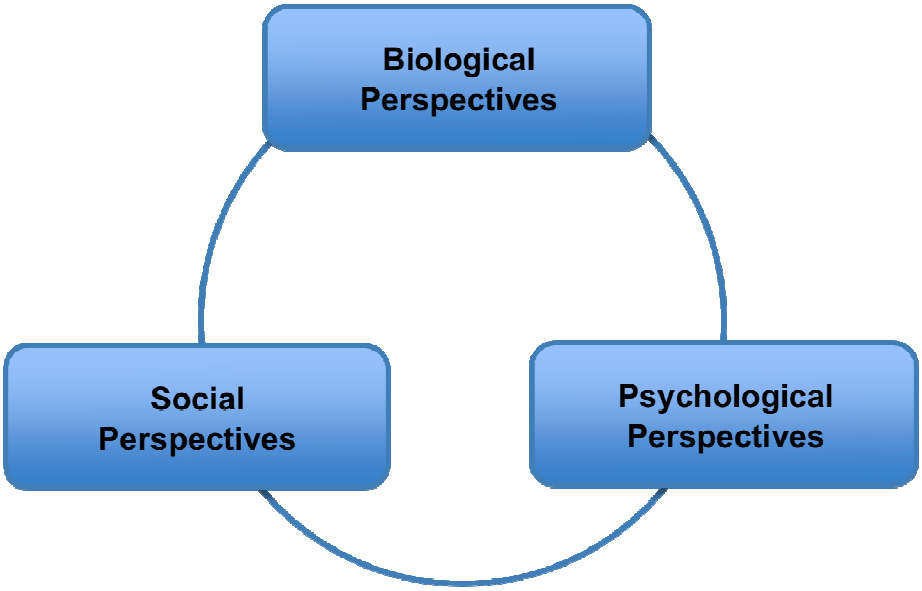

Figure 3 Elements of the biopsychosocial model of development (Bailey et al., 2010, p.6).

2.2.6. The Nature and Acquisition of Coaching Expertise

As late as the 1990s one of the main problems was that there was no definition as to what expert coaching actually was or how it was attained (Côté et al., 2007). Bowes and Jones (2006), drawing on some ideas of social cognitive psychology in a meta-analysis of some of the literature, suggested there were many blanks in our knowledge of the coaching activity and proposed a concept of coaching based on the empirical data to move coaching on from its current mechanistic state into a more composite social nature.

The research turned to the ways coaches gained the knowledge they needed in order to become experts. Jones et al. (2003) looked at the acquisition of coaching expertise by adopting a life-story approach, where the subject describes learning from others (observation and emulation). Though this has the problem of being a description of just one experience, which is acknowledged, it does form a basis to examine the subject. Irwin et al. (2004) present learning-by-experience (experiment and self reflection) by interviewing 16 elite gymnastics coaches (15 male and one female). All were working at international level, had ten years of coaching experience, and were high performance coaches (defined by their NGB), so these opinions had authority and could be extrapolated into other sports. Both experiment and self-reflection are established ways of learning,

though perhaps new to coach education. Nash and Collins (2006, p.470) describe specific structured knowledge gained from coaching experience and "personal and contextual knowledge generated in the form of an immediate understanding of the situations", all consolidating into the tacit knowledge displayed by expert coaches.

Examining the qualitative analysis of interviews with the same sample of 17 Canadian elite gymnastic coaches mentioned above Côté et al. (1995b) found coaching was dependent on a coach's characteristics and experience. These findings are supported by other research, for example Wright et al., (2007), who looked at Canadian youth ice hockey coaches (n=37) and revealed seven different learning situations for trainee coaches, which needed, they said, to be included in coaching instruction.

2.2.7. The Perceived Weakness of Formal Coach Education

The investigations done in Canada (Wright et al., 2007) (hockey), USA and UK (Nash, 2003) (soccer) found that formal coach education tended to be too narrow in focus and needed to expand to include the blend of coaching tools that the coaches themselves found they needed. Examining a sample of five British male elite and expert golf coaches, Colclough found that they often dismiss formal coaching training, as it "did not significantly add to the knowledge he had already gained from working", indicating that the formal training was not sufficiently relevant (Colcough, 2008, p.77).

In other examples, Culver and Trudel (2006) showed knowledge might be gained from the coaches' community of practice, a cultural context, rather than formal courses. Erickson et al. (2007, p.304) say that, from their research, "…all coaches spent a minimal amount of time on formal coach education", preferring experiential coach development or mentoring by senior coaches. This paper is important because the sample was a relatively high number of coaches (n=19; 15 male, 4 female) from University level competition split between nine different team and individual sports including fencing. It indicates a way that coach education could be beneficially developed.

As “the basis for beginning a process of coach-critical reflection”, formal courses can do well, Jones et al., (2003, p.227) say in their case study report. However, the knowledge gained from sources such as PE degrees and learning from other coaches was extremely influential in the development of their expertise. In other words, expert coaching was more than the simple application of skills learned on coaching courses.

It seems to be acknowledged that an important part of learning how to coach occurs outside current formal coach education courses, and that this natural and experiential way of learning to coach should probably be incorporated in the more formal education. It is also found that this reflective learning is more than ‘just doing’, and it is a teaching-learning skill in itself. Without it, coaches “might simply accrue experience without becoming more effective coaches” (Trudel and Gilbert, 2013, p.528) and "ten years of coaching without reflection is simply one year of coaching repeated ten times." (Gilbert and Trudel, 2006, p.114).

As the coach’s role becomes more professional, wider training and education is required in a coach’s development, and Côté et al. say:

> “The two most important knowledge sources that helped the coaches to develop their coaching style were their own experience and other successful coaches. These sources were considered far more important than the two lowest ranked sources: coaching books and coaching classes. This appears to be a severe indictment against existing courses designed for this very purpose” (Côté et al., 1995a, p.66).

Cushion et al. (2010) conducted an apparently seminal review of literature covering 15 years of research into coach learning, commissioned by scUK. They admitted that their adherence to strict inclusion criteria would have excluded useful research, so they used issues of quality and trustworthiness as part of iterative inclusion criteria. *Inter alia*, they suggest much more training over a longer time than is currently available on a standard coaching course in order to gain mastery, competence and identity as a coach, and say, “…current literature suggests that informal learning through coaching experience and engaging with other coaches remains the dominant mode of learning engaged in, with mentoring

playing a key role" (Cushion et al., 2010, p.69). This would encourage the idea that coach education should be a longer-term project and involve mentored experience in a variety of situations. The idea would sit well with the expertise list suggested by Walsh (2011). That it takes a long time to create the expert fencing coach is recognised in coaching manuals by both Szabó (1977) and Lukovich (1986), and Walsh's report would be a good place to begin to redesign British coach learning.

The technical coaching aspect splits into the current techniques of the sport (tactically ephemeral) and the sport science underpinning the training (continually developing). Candidate coaches need to be confident that the instruction they receive is authoritative. Coach tutors should acknowledge that "what stands for knowledge or accepted conventional practice is often 'passed on' unhindered and without critique", say Cassidy and Rossi (2006, p.237) in their position paper to advance contemporary thinking and organizational culture. So the coach-development system should have access to current research and the best source would be peer-reviewed academic papers.

Other research by Nash, based on a sample of 144 coaches from the single sport of soccer and roughly equally spread between USA and UK (Scotland), gave a contrast between the two countries. She found that though the formal courses were useful and informative, they didn't provide the skills and information needed for 'real' coaching (Nash, 2003), which supports the findings in Canadian hockey coaching, and should be relevant to the UK coaching profession. Nash and Sproule (2011) reinforced this concept when they compared how expert and novice coaches constructed their knowledge, finding the novice relied on mimicking their perception of good practice as delivered in the coach education. The expert adapted to the emerging situation by synchronising a number of pertinent variables. This is another example of a direction to change coach education beneficially.

There is also a clear description by Knowles et al., (2001) of some perceived failings of NGB delivered coaching courses where there was often no continuing support after the delivery of skill induction; this was found by looking at a sample

of only eight and those were undergraduate coaching science students, but nevertheless a useful pointer to guide the design of future coach training.

2.2.8. What a Coach Needs to Know – The Coach Education Syllabus

On the subject of what the coach needs to learn, Fraser-Thomas et al. (2008) described how wide and deep an effective coach's knowledge needed to be from a position of the psycho-sociological background of coaching. Abraham et al. (2006) recognised that coaches now require the '…ologies' listed in the left column of the schematic model to gain their expert status (see Figure 4). The authors indicate that lack of such wide-ranging training would severely limit the effectiveness of a coach, however technically competent an individual may be.

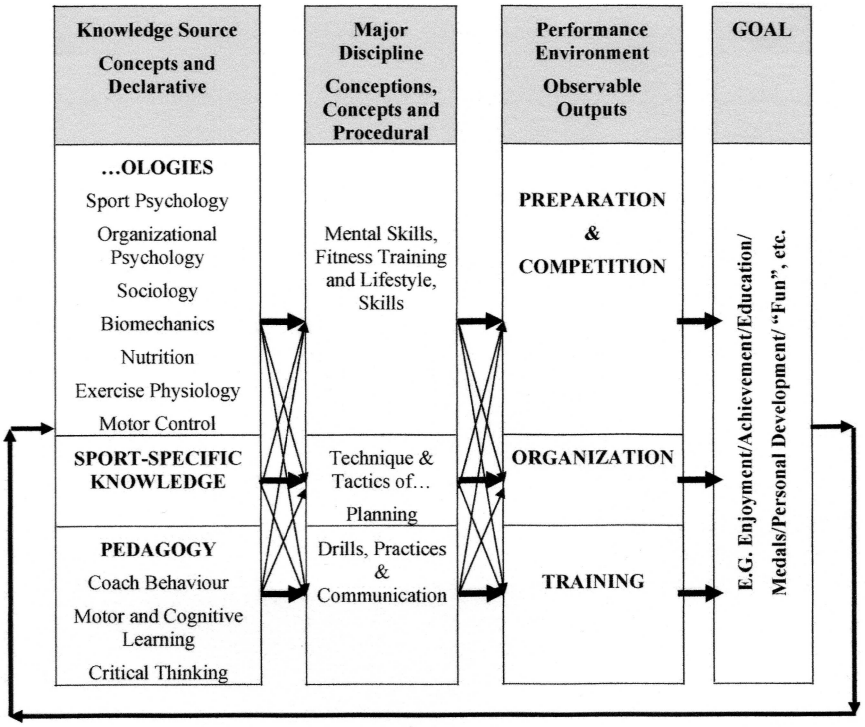

Figure 4 'The coaching schematic illustrating, at a conceptual level, the coaching process. This is achieved through referral to the required knowledge, concepts, decision making and resulting behavioural/observable output of all coaches. Bold arrows display how major contributions are made directly across the cycle. The smaller arrows indicate how each area can make a contribution to the thinking and decision-making processes in each other area.' (Abraham et al., 2006, p.555)

Bringing the theories of coaching abilities into the fencing arena and looking to introduce novel ways of teaching skills, Szabó showed he was a reforming (fencing) pedagogue by advocating class instruction along with the traditional

individual lessons, stating that he '…became convinced that it is possible to teach in a group much more colourfully and richly and with greater versatility than is generally believed.' (Szabó, 1977, p.10). Later, Lukovich developed the theory and focussed the discussion on the 'general theoretical questions related to fencing, the methodology of training, and the problems that arise in teaching' (Lukovich, 1986, p.9). This was a prescient hypothesis based on decades of coaching experience and supported by later research into coaching pedagogy by, for example, Potrac et al. (2000) and examined by Jones (2007).

2.2.9. The Measurement and Evaluation of the Expert Coaching Process

At the beginning of a decade of research into the nature and design of coaching, Gilbert and Trudel (1999) put forward a method of evaluating coach training, and Cross and Lyle (2002) wrote about becoming effective as a coach. Much of this work reflected the time taken to gain expert level as a coach and the necessity for experience and mentoring (Cassidy and Rossi, 2006, Gilbert et al., 2006, Lemyre et al., 2007). Côté et al. (2007) made suggestions as to what excellence in coaching actually is. First, they noted that excellent coaches appeared to have rich mental models of situations they faced, and second, the application of the coaching excellence was specific to the levels of their athletes. Gilbert and Trudel (1999) developed an evaluation strategy for both the process of the training and the coaches themselves, contributing to a growing bank of information on the science of coaching. Here the evaluation focussed on the design of the course and measured the new knowledge gained by the students.

Côté and Gilbert (2009) point out that despite nearly 35 years of research and discussion there remained a failure to relate effectiveness to Lyle's coaching process (Lyle, 2002a). Closing the circle for the requirements that should be demanded in the coach education programme, Côté and Gilbert (2009), after distilling 113 articles written between 1970-2001 on coaching expertise (from 872 found), offer some definition of coaching effectiveness and propose some coaching outcomes which would be useful and measureable, and against which trainee coaches could be assessed. They suggested that there were possibly three components of coaching expertise: a coach's knowledge, the athletes' outcomes, and expertise, the last of which could be measured by experience.

Côté and Gilbert had found there were various definitions of effective coaching. It would appear that none would be more correct than another, but that they differed, especially by viewpoint. They proposed a definition of coaching effectiveness as:

> "The consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve the athletes' confidence, competence, connection and character in specific coaching contexts" (Côté and Gilbert, 2009, p.316).

Rather than trying to define expertise, Ross, writing in the Scientific American magazine, says:

> "Without a demonstrably immense superiority in skill over the novice, there can be no true experts, only laypeople with imposing credentials." (Ross, 2006, p.65)

The expert coach, Ross argues, should have superior skills, but both Abraham et al. (2006) and Côté and Gilbert (2009) maintain that abilities should also be in the sciences and pedagogy rather than just the technical skills of the sport alone. Abraham et al. (2006), in their study of 16 (14 male, 2 female) respected UK-based coaches, concluded that expert coaches required significant knowledge of motor and cognitive learning coupled with an ability to think critically. Expert coaches used organisational and sport psychology, sociology, biomechanics, nutrition and physiology in addition to their sport-specific technical knowledge. They needed to be able to deliver the deliberate practice that Ericsson and Charness (1994) say is needed on top of the athlete's own required genetic make up described by Tucker and Collins (2012). Abrahams et al.'s findings are summarised in Figure 4.

In 2009, Nash and Sproule (2009) introduced objective measurement to define coaches as expert. They specified their selection criteria, and recruited nine coaches across three sports, both team and individual, split 5:4::M:F. This gave a good spread across the genders, sports and type of sport, even if the number was small. However it did make the research participants recruitable and

manageable. They analysed interviews with elite athletes' coaches and said the combination of excellent technical skill and the science of the underlying training is what makes these coaches expert. The BF coach education system would probably need to reflect this.

Walsh (2011) states that there are multiple outcomes of coaching effectiveness, which are found in the research and can be used to measure it. She lists eight, but only one is about technical knowledge. Two are on ratings (self and athletes'), three on performance outcomes, and two on the coach's character. It may be a useful exercise to include some validation or assessment of these outcomes when evaluating coaches either for appointments or coaching levels.

2.3. Designing Training of Coaches and Coach Education

Cross and Lyle's book (2002) gives some useful information for tutors of coach education courses as it is written from the British perspective of coaching. Cross is an expert and experienced coach by any standards and an academic lecturer and educationalist; Lyle was at the time a senior sport science academic, an ex-professional sportsman and coach. These two authors both worked at UK universities (Edinburgh and Northumbria) and are much published and peer reviewed writers on the subject. Each chapter has its own reference list to allow access to the source data making this a useful and authoritative work. Their first chapter would be suitable pre-course reading for higher-level courses, providing an introduction to coaching philosophies and a "conceptual framework for the coaching process" (Lyle, 2002b, p, 22). There is much more in this book dealing with other aspects of the coaching process, such as applying sports science in coaching and coaching in specific contexts. New students would probably be best served if a mentor or educator guided them through the chapters. Lyle's introduction to the book (Lyle, 2002b) might also be of interest to sports managers, especially those in charge of national training programmes. Student coaches and their tutors need to understand how effective coaches learn and acquire their expertise, exemplified by Werthner's and Trudel's (2006) look at how coaches learn to coach (based on a case study from a larger research project in Canada), and Côté's (2006) view in his important discussion paper covering ideas from Canada, Australia, New Zealand and Britain. Though not in the same

standard category, Baribeau (2006) might give some insight into instructional adaptions for differing learning styles and could be useful nonetheless.

Coach educators must deliver up-to-date information and "recognise that coaching knowledge is not static" (Cassidy et al., 2004, p.128). Educators should refer to pedagogic as well as technical knowledge according to Walsh's (2011) meta-research based chapter. Wikeley's and Bullock's (2006) pedagogic theories allow the efficient passage of information from the teacher to the taught and emphasise how coaching is an educational endeavour.

2.3.1. The Role of the Senior Coach or Mentor

The top and arguably most effective coaches act as much more than just an instructor of their sport. They are true mentors and get wrapped up in their athletes' lives (Bloom, 2007). Bloom was writing from the Canadian perspective in a chapter on coaching psychology, itself an important document for the trainee coach, and backs her assertions with evidence and references. She stresses the importance of both the senior coach and coach tutor as mentor and leader.

Equally, many elite coaches themselves were mentored "with the assistance of experienced and well-respected colleagues" (Bloom, 2007, p.245). Although Bloom's chapter refers to Canadian systems, Jones et al. (2003) in UK and Gould et al. (1990) in the USA also highlight the importance of mentoring. Although Jones et al. were working on one coach in soccer, their findings are backed up with the research done by Gould et al., where they look at 130 American coaches across 30 sports. Though it is still unclear what controls there were and how the coaching was managed, the concepts are still useful as corroboration. Bloom talks of coaches gaining confidence not just with the passage of time but also with positive outcomes playing an important part. Foster (2010) wrote on 'Pooling Experience' in a scUK magazine article, stressing how a mentor can take the pressure away from the coach under instruction. He referred to courses available, including on mentoring. As they express opinion, this type of magazine articles can be a very good training aid for coaches, but they need to be read with an open mind and used as a way of reading around a subject to gain corroboration.

As a way of formalising and describing competence-based coach education programmes, Demers et al. (2006) suggested a model with four periods of internship to provide coaches' mentored experience, preceded by the pedagogic instruction modules (see Figure 5). This is a description of an undergraduate coach-training programme as part of a Canadian degree course. They also call for the authorities to "render more explicit the standards for each professional competency" (Demers et al., 2006, p.171); they list some suggestions (2006, Table 1, p.166) and describe the detail of the competencies. This might be a useful model for a British coach education design team. Although their research was based in French-speaking Canada and only in one university, it was based on the literature on coach education, an evaluation of the Canadian National Coaching Certification Programme, and best practices discovered by an American college.

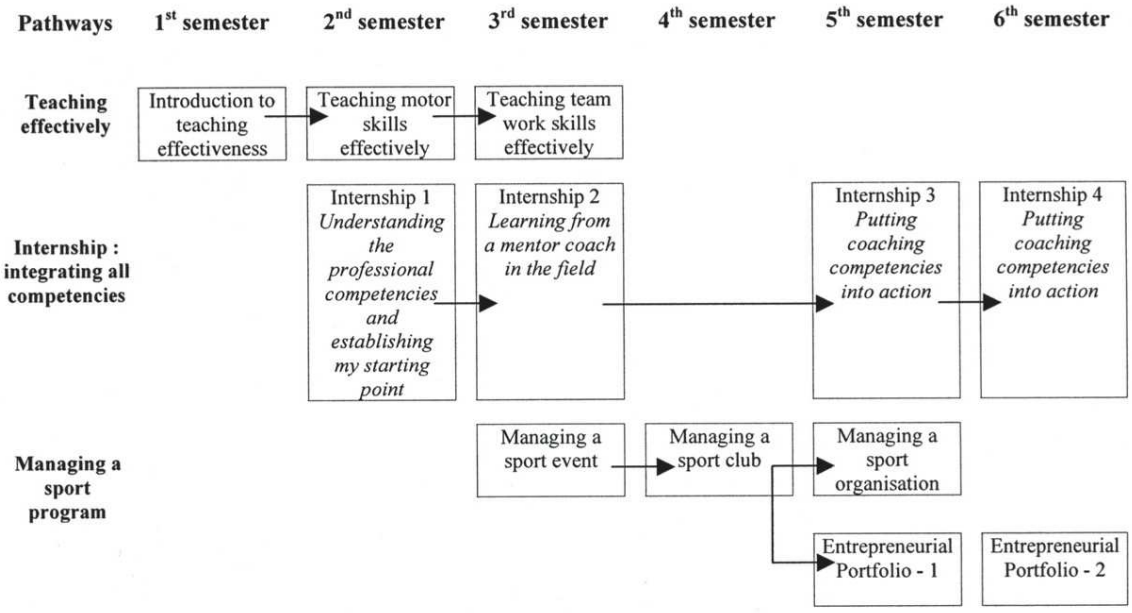

Figure 5 Demers et al. (2006) suggested a model with four periods of internship to provide their mentored experience, preceded by the pedagogic instruction modules.

2.4. Sports and Exercise Sciences in Fencing

During the 1980s, mainstream athletic training began to include sports and exercise science, and scientific theory started to have an impact on the training of athletes in general and fencers specifically (*e.g.* Wojciechowski, 1988).

Many of the writers on coaching say that the –ologies, the sciences of sport and exercise, need to be included in coach education and coaching practice. Coaches need to be confident that the programmes they design are suitable, likely to be effective and underpinned by research.

This section will review some of the sport science literature generally and then look into how the specific sciences have or could inform the coaching of fencing.

2.4.1. Appearance of Research Based Literature Specifically on Fencing

Although there has been sporadic research, analysis and comment on fencing was made in magazines and books from the early times of the formal sport (*e.g.* Colmore Dunn, 1894, Lynch, 1902, Outing Club, 1887), though there appear to be fewer such articles through the 20th century. Those that were written were often in academic papers and, though useful, seemed to be directed by the needs of the researcher rather than the sport because of the apparently random nature of the research topics. Illustrating this, there were papers by, for example, Stewart et al. (1977) on morphology and fencing success, and Bisiacchi et al. (1985) on handedness in fencers. This apparent randomness meant the research could not really lead the coaching in any coherent direction.

In more recent years and in line with other sports there has been an increase in journal articles specifically on research into fencing. For example, research on seasonal variation in competitive épée fencing (Koutedakis et al., 1993), research or position papers on the way fencers move (Cronin et al., 2003, Do and Yiou, 1999, Suchanowski et al., 2011, Yiou and Do, 2001), and papers on S&C and repeat sprint ability for fencing (Turner, 2011, Turner et al., 2013).

Koutedakis et al. (1993) used a sample of only seven fencers, all male épéeists, restricting the usefulness of the research in comparison to Cronin et al. (2003), who used 31 participants (again all male), but across a wide range of relevant sports. Finding that a lack of training affected the fencers' morphology and performance deleteriously, Koutedakis et al. made no comment on the typicality of this practice in other elite fencers or the other weapons. Cronin et al. produced numeric data measured from non-sport exercises to predict sport specific

performance, which could be a useful coaching tool or single-sex base for further research.

Do and Yiou (1999) used only five men, none of whom were fencers and had to be trained to execute the movements, which would therefore tend to be inaccurate and inconsistent compared to a trained fencing athlete. They looked at the execution of the foil fencing lunge and the relation of the tip movement and the anticipatory postural adjustments and found that there was a most effective way of executing the movement and delivering the tip to target. This could be read in conjunction with both Hageman et al. (2010) looking at how visual cues effect performance, and Suchanowski et al., (2011) on the synchronicity of the fencing lunge and its effect on attack accuracy.

Hageman et al. (2010) used 62 participants split into groups from elite, experienced fencers, though performers to non-fencing students. All groups contained males and females in a proportion of about 60:40 and the research looked at people of similar age with a control group of non-fencers training as novices. The exercises were measured and recorded, and so repeatable, and provide useful information about optical acuity and function in the sport. By contrast Suchanowski et al. (2011) used one experienced and elite woman to analyse a complex fencing movement. Though both these papers give useful information about attack execution, clearly the more reliable research would come from the greater sample.

Though the use of small samples is far from ideal, it may be so because of the relatively small number of athletes who fence and their physical disparity across the country. Notwithstanding the sample size, the research, done by these authors, gives coaches valuable information and evidence for a direction of technical coaching, professional development, and ideas for further research.

There was also some coherency found through the research, where for example Koutedakis et al. (1993) had discovered from empirical investigation that the 1990s training methods lowered performance in the competition period, and Turner (2011) later explained how to maintain it with reference to contemporary S&C theory. However, this coherency may be coincidental as Turner (2011) does

not cite Koutedakis. These two papers were sponsored by BF or were written at the suggestion of UK coaches. However, it is noteworthy that the findings of even the sponsored research did not appear in the coach education syllabus nor was there discussion about them in continuing professional development (CPD) (Randall, 2010, 2011).

2.4.2. Sport Psychology and Physiology for Fencing

That fencing is a mental game is widely acknowledged (Crosnier, 1951, Pitman, 1988), and advice about the necessity to prepare mentally for the sport stems from the mid-1980s (Lukovich, 1986). Interest began to grow in the psychology of fencing, but fencing books appear not to include sport psychology until Kogler (1993, 2004), who launched a scheme of mental work with the first, and a textbook for the coach to dip into with the second. These were based in his psychology research work, and led to changes in training particularly in USA where he coached. To learn about mental techniques in fencing before then, the fencer or coach had either to transcribe the ideas from another sport or to use general sport psychology books available like Syer and Connelly (1987) or Miller (1991) – books which were used as text books for contemporaneous degree courses. The use of goals, imagery and emotional control – all mentioned in various fencing literature like Barth and Beck (2007) and Lukovich (1986) - are examples of the type of psychological training and skills involved.

Other specific psychological research has been made in fencing and the general sporting and competitive context, for example, Duda et al. (1992) and Locke (1996), which was then reported by Kogler (2004) in his book on psychology for fencing. There are many research projects, which touched on useful subjects for improved efficacy for the competitive fencing athlete, covering topics like imagery (*e.g.* Williams and Cumming, 2011) and emotional control (*e.g.* Bishop et al., 2007).

Barth (2007a) wrote that the modern and effective fencing coach needs to be familiar with physiology-conditioning knowledge. Currently, these sport-specific, technical matters for fencing tend to be published only in books like Hauptmann (2007), Barth (2007b), and Szepesi (2009) rather than as original research in

journals, though this is beginning to change (*e.g.* Bottoms et al., 2013). There are general books for coaches to access the underlying knowledge on sport and exercise physiology, and S&C, like McArdle et al. (2006) and Baechle et al. (2000). To make good use of these works, coaches would probably need some training in physiology and S&C, as, for example, both McArdle and Baechle wrote for professionals in and students of those fields. There are also many books written for other sports on the subject and fencing coaches often have to make do with these.

2.5. Literature on Coaching of Fencing in English – Masters' Treatises

There is a tradition in fencing for a fencing master (coach) to write his – for it was almost always a man – treatise on how to execute and train for the moves and strokes in sword fighting. These 'how-to' books started with the earliest publications (*e.g.* Silver, 1599, Angelo, 1763) and ran throughout the last three centuries. A modern bibliography lists over 3,400 entries published from 1500 to 2000 (Pardoel, 2001). As the sporting weapons themselves have changed little over the past 100 years, there is a consistency in principle and use of these strokes and several authors describe similar actions a century apart (Colmore Dunn, 1894, Crosnier, 1951, Borysiuk, 2009). To illustrate the point, Borysiuk (2009), cites Crosnier (1954) in his sabre book, saying, "The proper way of holding a saber has not changed for decades." (Borysiuk, 2009, p.59). Vass (1976) wrote a detailed description of the moves and tactics (and how to train for them) for competitive fencing with bated blades. In its way it was very similar to Angelo (1763), which displays similar information, though for a different weapon and style, and for fighting with sharp blades.

This may be true, but ways of teaching the skill certainly have developed, but are not reflected in the fencing literature until books like Barth and Beck's (2007) came to be written.

2.5.1. Masters' Treatises on Fencing and Coaching

This section covers the books by fencing masters from the beginning of the published work on the art of swordsmanship.

Driven by the East's desire to better the West and show the superiority of the socialist ideology (Schirmer, 2007), works were written in the Eastern bloc describing their training methods and what became to be known as sport and exercise science (*e.g.* Beke and Polgar, 1963, Wojciechowski, 1988), and there followed a number of technical manuals from Hungary, translated into English, from authors like Vass (1976) on épée, Szabo (1977) on coaching, and Lukovich (1986) on 'modern' fencing. As the Hungarians noted about the arrival of scientifically based training "… the physical fitness of the competitors is steadily improving [and] this development is the result of scientific and resolute preparation and training." (Beke and Polgar, 1963, p.1).

Following the recent pedagogic and coaching research as outlined above, there have been further publications written more for the aspiring coach than the athlete, for example describing the German (Barth and Beck, 2007), Polish (Borysiuk, 2009) and Hungarian (Szepesi, 2009) training systems. However, there are still some traditional truths in the books of the old masters, which remain as important today and stand the test of time, for example Crosnier says:

> "The secret of the individual teaching [of fencing] lies in the master's ability to pass on to his pupil his own technique, precision, smoothness, speed and sense of blade" (Crosnier, 1951, p.234).

Although there were many other countries producing world-class fencers and coaches at the time say Pawlak and Przybysz (1983), it seems that only Hungarian books were routinely translated from their original languages into English. Consequently in English speaking countries there was a natural library-based bias towards the Hungarian way of things, notwithstanding the French influence through Crosnier (1951). His series of books (*e.g.* Crosnier, 1954), was written in English to describe the French system of fencing, when he was appointed to be the British national coach after World War 2.

In his coaching manual, the then British national coach, Pitman (1982) only refers to the instruction of skills and tactics, with no reference to the wider concepts of coaching as a process itself. Fencing manuals do not refer to coaching pedagogy, concentrating their focus on the instruction of technical skill drills, like Crosnier

(1951), Manley (1979), and the BAF (Bruce et al., 2011). This means that the aspiring fencing coach has little pedagogic guidance, and, however technically skilful a fencing instructor may be the coaching process in fencing is passed by.

2.6. Chapter Conclusion

The chapter started by describing the context of the coaching process and the development of coaching as a putative profession. It described some of the research and meta-analysis of sport pedagogy that has been undertaken recently. It then went on to show how sport and exercise science had been brought into coaching generally, though not until much later into the 21st century did the science get into the supporting literature for fencing.

The literature showed the complexity and depth of knowledge that an effective and expert coach requires outside the pure technical aspects of the sport skills. It indicated how long it takes to train for this, and gave some ideas on how formal coach education could alter to include this change from belief-based to evidence-based coaching, and how to evaluate coaching effectiveness.

From this context the fencing masters' treatises were described taking examples from those published in English. It was shown that there has only recently been a change from the 'how-to' nature of fencing manual to books that take into account modern, evidence-based and training oriented practices, which can be used to guide the aspiring fencing coach.

This body of literature sets the background for the study and provides a framework on which to base the thematic analysis of the data.

Chapter 3 - METHODOLOGY

3.1. Introduction to the Methodology Chapter

The purpose of this chapter is to introduce and give an account of the chosen methodology for the research and to describe the rationale for it. It also describes the sampling criteria, and the data gathering and interpreting. It looks at the analytical methods used in the research, and how the theories from the data are grounded in the literature. The chapter will introduce the participants with brief biographies, the researcher and his background; it will describe some ethical considerations, the data recording and security.

For the purposes of this sample, successful and expert coaching is taken to be the production of fencing athletes at national team level and although it is accepted that this is a narrow definition (Nash et al., 2012), it does allow consistency and measurability.

3.2. Methodological Paradigm

There are two main paradigms for research, quantitative and qualitative (Allan, 1991, Creswell, 1988). Allan (1991) explains that social science most accurately reflects the customary division of qualitative and quantitative methods. Gratton and Jones (2007) explain that qualitative research provides a method for looking at ideas that are not quantifiable. It follows that research into the natures and processes of coaching would naturally be qualitative, being social activities and broadly unquantifiable.

Allan (1991), writing of the world-views of the actors involved, says that qualitative research is exploratory, and aims to use the informants' own understanding of the subject. This is reiterated by Creswell (1998, p.74) who says, "Qualitative researchers approach their studies with a certain paradigm or worldview, a basic set of beliefs or assumptions that guide their enquiries".

From the 1970s to the turn of the century, the research into coaching had been into what coaches do, their behaviour in the job, what exercises they used, their language and actions (Gilbert, 2002). Gilbert's (2002) work was a

bibliography and analysis of coaching science, and found the emphasis from 1970 in 86% of research into aspects of coaching had been quantitative (the 'what' of coaching), but qualitative research rose to almost a third by 2000 as the enquiries opened lines into the processes coaches used or the 'how' of coaching. This may reflect a change in the perceived nature of coaching from simple instructor to the complex nature the activity is seen to be today, and so "...the researched [coaches] are not seen as objects with given properties..., which can readily be measured" (Allan, 1991, p.178). What research there has been into the coaching of fencing appears to have been quantitative in nature, being designed to measure outcome or cause of specific phenomena (*e.g.* Bottoms et al., 2013, Gutiérrez-Dávila et al., 2013, Koutedakis et al., 1993), looking at the 'what' for coaches rather than the act of coaching itself (the 'how').

Suited to the methodological rather than epistemological answers required of the research question, Robson describes a more pragmatic approach to research and a concern for practical matters; in this he rejects the traditional dualisms (facts vs values) and "places a high regard for the reality of, and influence of, the inner world of human experience in action." (Robson, 2011, p.28). This sits well with the coaching process described in the literature, with its emphasis on gaining expertise and tacit knowledge through experience (Nash and Collins, 2006).

3.3. Rationale for the Research Method

In seeking to understand the experiences, perspectives and culture of successful fencing coaches, a postpositive, inductive approach was taken (May, 1997). Past researchers have sought to understand the nature of their subjects, using these approaches to understand the origin of coaching knowledge and how coaches increased their knowledge base (Irwin et al., 2004). Potrac et al. (2002) examine how a coach uses pedagogical behaviours and the effect of coaching's strong social bonds. Jones et al. (2003) investigated how experience and social construction shape coaching knowledge and behaviours. They were not looking to prove or disprove a

viewpoint, but to see how their subject interpreted or constructed their knowledge.

This research was essentially postpositive in nature, where the researcher seeks an ontological 'critical realism' and notes that the "findings [were] probably true" epistemologically (Lincoln and Guba, 2000, p.165), meaning that the findings would probably not be absolute and there would not be a single *correct* way of behaving, but a modified objectivist behaviour in a critical tradition might be called for. This would allow for leeway in the experimental approach, including qualitative methods. In seeking answers to the research question, a pragmatic approach was taken to seek "whatever methodological approach works best for the particular research problem" (Robson, 2011, p.28). In this question the researcher is looking to understand the experiences, motives and methods of some fencing coaches.

Thematic analysis could be described as a method for identifying, analysing and reporting on patterns and themes within a set of data, yet often goes further than this by minimally organising it yet describing it in rich detail (Braun & Clarke, 2006). This was a good place to start analysing the data and to determine the dominant and important themes, even if some of the depth and complexity might be lost at this stage. In using thematic analysis, the researcher would first become familiar with the data by listening to it again; having some prior knowledge of the subject would be helpful. The data would be transcribed for analysis.

At this stage, Braun & Clarke (2009) suggest a set of initial codes could be generated, making sure that the context of each is maintained. Once the data has been categorised thus, they can be gathered into supporting and contradicting themes, and examined to see if the fit is good or if there may be a problem with the data or the theme. Once that is done the themes can be named, described and the report written. This thematic analysis was used and described by Schinke et al. (2013). At this stage it may be necessary to revisit the data analysis if the depth is insufficient, and this iteration would possibly call for a Grounded Theory approach. More complex analytical methods could

be employed, but it seemed from the initial read-through that the data did not require that level of analytical sophistication and the themes naturally appeared from the answers to interview questions. At the same time that meant that the depth and richness may be affected, but that should become apparent as the discussion develops.

Grounded Theory is defined as “an inductive process of discovering theory from data” (Chambers and Armour, 2011, p.534). Understanding the perspectives, cultures and ‘world-views’ of the coaches involved in the research would be important to understanding their coaching and training methods (Allan, 1991). As it was not certain what the interviewees would have to say, the research would tend to benefit from following a Grounded Theory approach and allow the method to develop during each step of the data collection and analysis (Charmaz, 2000). The concept of Charmaz’s actors’ backgrounds having an effect on the nature of their answers also tends towards the use of a Grounded Theory to allow the flexibility to follow trains of thought not envisaged from the British perspective. In the event it did not require the sophistication of Grounded Theory and thematic analysis provided sufficient richness and depth from the data.

Having been guided that a qualitative approach would be useful, the researcher needed to decide on a data capture method and the narrative answer suits the interview (Cresswell, 1988). The interviewer would also need to keep the attention focussed (Glastonbury and MacKean, 1991). Fontana and Frey (2000) describe the rigidity of structured interviewing, and compare this to the more conversational style of the unstructured. Neither appeared very useful in this context, where the need was for the subjects to express their own views, yet provide answers to the same questions. The concept of semi-structured interviews seemed to fit the bill, where “interviewers have their shopping list of topics and want to get responses to them, but they have considerable freedom” (Robson, 2011, p.285).

Being guided by the research question, the researcher formulated the semi-structured interviews to allow the coaches to respond with open-ended and

freely-expressed answers to provide the data for the thematic analysis. The researcher was careful not to write specific questions, which could bias the analysis, but rather asked very general questions, giving the interviewees full freedom in their replies. With the previous research into coaching being on the experiential nature of the learning of the expert coach, Charmaz (2000) points out that the data may not be in the actual experience itself, but in a reflection on that experience. Using a semi-structured format so being able to ask supplementary questions to provoke that reflection in the interviewees would help this process and allow the themes to come from their reflections in answer to the interview questions.

Answering the research question required a reflection on themes from the interviewees as recorded in the data; what those themes were would come from the data itself. However the initial questions could produce rather one-dimensional but nevertheless fulfilling answers (and might form the basis of further research, being outside the scope of this study), but this would also mean that deeper, richer analysis would not be needed at this point, so the research could stay with thematic analysis rather than going off into Grounded Theory now.

3.4. The Researcher

The researcher has been involved with fencing since a teenager, when he was introduced to the sport at school. He continued at a participation level for the next twenty years or so, throughout his military career and without any outstanding achievements, until he had an opportunity to take a coaching course. Then the combination of a natural interest for teaching coupled with years of leadership training lead to a subsequent career as a sports coach.

Designing training for young fencing and Modern Pentathlon athletes based on principles learned at military academies gave the researcher a head start in the coaching world, where training methods and sport pedagogy were in their infancy.

Taking various coaching courses, and in essence following an experiential coach training programme based in reflective practice, the researcher trained some significantly successful athletes, for example a competitor in the BBC TV programme, 'Born to Win' in 2003, many national champions, medalists at world championships, and a fencer in two Olympic Games.

The researcher was sent to Budapest to study at Semelweis-TF University for the International Diploma as a fencing coach in 2002, where he was fortunate to study under some of the best fencing coach-tutors. These colleagues with others from within the BF coaching framework became the start point for the selection of coaches for the research sample, and the pipeline for the discovery and selection of others to fill the sample set.

He was appointed national coach to one of the youth teams, before handing it over to be the coach at Eton; both these appointments gave insider knowledge, *e.g.* for world-class competitive coaching, and a contrast between the independent and state school systems. He led two of BF's recent projects, the new coach education programme and the Apprentices' further education fencing programme. These last two examples gave experiences and reflective opportunities on, for example, the nature and science of coaching and sport pedagogy development. The researcher was for a time the Chief Instructor at the Sydney Sabre Centre in Australia, giving yet another experience.

The result was a set of experiences that gave the researcher an inside view of many aspects of the coaching profession, particularly in the delivery of the skill set needed by the fencer (children, participation, performance and elite), and coaching as a non sport-specific activity in itself. These experiences provided a foundation for the selection of an eclectic mix of beliefs and people from which to draw in order to provide the questionnaires and interviewees for this study. However, because the responses of the interviewees were recorded verbatim, the researcher's insider position had no effect, except to be able to identify and understand the technicality of what they were saying.

3.5. Pilot Study

The researcher undertook a pilot study as a test for the design. The pilot study was used to help confirm the conceptual framework of the research and inform decisions about methods and reveal potential problems in the plans (Maxwell, 2008). It also allowed a rehearsal where the questions and method could be checked. This ensured the method did produce the data required to answer the research question (Silverman, 2000), and that it engendered a natural flowing conversation in the interviews. The flow of the meeting needed to be controlled but the respondents retained the freedom to express themselves and any thoughts or opinions they wished. At the same time the pilot gave an opportunity to refine the interviews to 'good' questions as described by Cheek (2000), so they are feasible, socially important and scientifically relevant.

During the pilot study it became evident that seeking the information through questionnaires by asking respondents to fill in a form would not produce the rich depth of feelings, thoughts and experiences available (Allan, 1991). Finally the research did not call for such depth of investigation allowed by ethnography (Cresswell, 1988, Robson, 2011).

The pilot swiftly confirmed the benefit of the semi-structured interview and the detriment of trying to record the data by note-taking The researcher was not a fast enough writer, neither was he able to capture the tone or the expression. This was quickly dropped in favour of the digital voice recorder, which proved reliable, clear and simple to use. It also meant the sound files could be transferred by secure email and transcribed directly by a typist. Various technical matters were considered and tested (DiCicco-Bloom and Crabtree, 2006). The battery life was tested and found to be over 150mins, well in excess of the estimated interview length (90mins). Interview length was actually 36mins on average in the pilot, with a maximum of 43mins. DiCicco-Bloom and Crabtree (2006, p.318) also point out some of the difficulties of transcription (misunderstanding accents, inserting commas etc.) "When working with audio data, most experienced researchers listen to the audiotape while reading the transcriptions to ensure accuracy during interpretation." The

researcher found that listening to the recording while reading the transcription tended to eliminate these errors.

To obtain a meaningful and honest response to the questions manifestly requires a rapport between the interviewer and the subject. The time taken to affect this rapport has a significant impact on the outcome of the interview, and Dandelion (2004) suggests that where the interviewer is known or familiar to the interviewee, the time to gain the necessary rapport is significantly reduced. Where both the protagonists are in a similar profession or line of work – and therefore the *patios* is well known – the rapport builds very quickly and meaning can be transmitted clearly (Fontana and Frey, 2000), even across language barriers (Orme and Forbes, 1991).

Telephone interviews as described by Dooley (2001) were tried, but the loss of clarity in speech (regional and foreign accents), line interference and the difficulties with interpretation meant that this was not a viable option. The pilot showed that a face-to-face meeting was the most productive, secure and simple method to collect the data.

The matter of data administration and security was examined in the pilot study and a system devised that allowed for the password protection of all data files and their secure back-up (Economic and Social Data Service, 2005a).

3.6. The Research Design

3.6.1. Participants – Sample Selection

It is suggested that an interviewee should be an insider and "a member of the group studied, who is willing to be an informer and act as a guide" (Fontana and Frey, 2000, p.655). The researcher needs to have their trust and establish a rapport with the respondents. All the interviewees needed to have the knowledge or experience to be able to answer the questions asked in the interview. As Charmaz (2006, p.25) states, "The interviewer seeks to understand the topic and the interview participant has the relevant experiences to shed light on it".

To be able to provide the information the interviewees needed to have completed a full coach education regime (formal or informal) and have demonstrated coaching expertise by working with national fencers (performance or elite level). They needed to have been recommended by another national standard coach or fencer as being worthy of respect as a coach or held to be an effective coach so that personal bias of the researcher in the sampling might be eliminated.

The best subjects would have been those coaching the then current medallists on the world circuit, but the researcher did not have the resources to follow them. So the researcher used coaches, who filled the criteria, but were accessible to the researcher through pre-planned international travel. Purposeful sampling based on suggestions from the Budapest sports university and BF rendered a shortlist of suitable candidates. This is in line with the nature of purposeful sampling described by Patton (2002).

A list of coaches filling the first two requirements was triangulated against the suggestions from the two bodies and a final cohort of interviewees (*n=12*) and the list vetted by a staff member of the Budapest University for the European and of BF for the British coaches. The participants were all selected because they were expert and effective but not necessarily coaches of elite athletes (Walsh, 2011).

The interviewees are listed by pseudonym, which does not indicate their nationality. Fencing coaches who are members of the Académie d'Armes Internationale (AAI) hold the top-level coaching award from their national body.

3.6.2. Brief Vignettes of the Participants

Ádám

After a successful career as an international fencer, he studied in a sports university gaining a degree in teaching and coaching. A very experienced master, Ádám has been a national coach outside his native country for some 20 years.

Andrew

Andrew has been a national coach and has been coaching for some thirty-six years. He has been national team coach at many world championships, has qualified many fencers for world and other championships and is a member of the AAI.

Balázs

After competing at the highest level, Balázs trained in his own country and gained his coaching and teaching degree. He is now one their national coaches. He works abroad frequently, when he can be spared from his duties with his club and his national squad.

Basil

Basil was a member of a junior world cup squad. He trained for his initial award in Germany, and works with his own club. He has been a national coach for many years, is self-trained and holds an entry-level coaching award.

Charles

Charles learned to coach with world-class masters training their elite charges. He instigated, designed and leads one of his country's most successful training squads after obtaining an entry-level coaching qualification.

Csaba

Csaba is a master in his country, who has competed himself at the highest level and gained his coaching and teaching degree at the sports university. He has world champions to his name. Csaba is a secondary school teacher.

Daniel

Daniel learned his coaching from two world-class masters, British and Polish, obtaining an entry-level coaching award.

Following a fencing career at international level, he led one of his country's top training squads.

Edward

Much of Edward's coach education came from Swiss, German, Polish and French coaches in international environments. He has been a national coach for over ten years and trains many of his country's elite fencers. Edward is a member of the AAI.

Gábor

Gábor was trained at a sport university and now is one of the top fencing coaches in the world; he trained a successful Olympic team. He was a national coach for the 2012 Olympics.

Louis

Louis started fencing about 30 years ago, and trained with many of the top British, French, Hungarian, and French-trained British coaches of the day. He has a fine grasp of comparative coaching methods. He is a mid-range qualified coach.

Miklós

Miklós was an elite fencer in his native country, then trained as a coach at a sports university and graduated with a degree in fencing. He now works on the staff of a university, teaching coaches and fencers.

Pál

Pál is one of the world's top coaches and educators. His initial training was at the sports university then through much CPD in other countries. His career spans decades as a coach. He has trained champions, coaches of champions and coach tutors.

3.6.3. The Interview Questions

Using in-depth semi-structured interviews meant that the session lasted “much longer than questionnaire-based interviews, typically taking at least half an hour and sometimes several hours” (Veal, 1997, p.132) (mean=43mins). The researcher could ask a question and encourage the respondents to talk, ask supplementary questions and get them to explain their answers, where necessary, and employ “the art of good interviewing” as described by Jones (1991, p.203).

The key questions were linked to the findings of the literature review and were aimed at answering the research question, rather than being derived from it (Maxwell, 2008). They were particularly geared to see if coach training was longer elsewhere (*cf* Lukovich, 1986), and how coaches were trained or otherwise acquired their knowledge. The questions were designed to probe if expert coaches used experiential learning either deliberately or not, as described by Gilbert and Trudel (2001). These questions also examined what successful coaches thought was required of coaches.

Where the questions sought factual definitive answers it was found they were sometimes produced thin data so the question table was slightly amended during interviews to allow the subject free flow to follow their thoughts, their own interests, passions, beliefs and experiences (Patton, 2002).

A copy of the interview sheet is in Annex A. The questions that were always included were the greater open-ended ones, but some questions, which were omitted on occasion, were those that were only applicable to particular respondents. Only British coaches have an option in their coaching governing body, for example, so it may be relevant to determine if they are a member of the BAF or BF (see Table 2).

Question Type	Examples
Open ended – asked of all respondents	Please describe what levels of coaching there are in your sport.
	Can you describe the structure of the coaching hierarchy?
	Please describe what each level of coach, educator or trainer should be able or required to do.
	Please describe what methods of instruction or teaching (pedagogy) you have been taught yourself as a coach (as opposed to any that come with your main work).
	Please describe how you were taught to coach.
	Please briefly describe your training methods.
	What element do you spend most time on?
	What is the element you think is the most significant?
	Do you have a training of coaching manual or book you mainly use? What is its name?
	Please describe what records you keep.
	How do you use goals and aims?
Only for particular respondents (amateur coaches)	Do you get paid at all?
Only for British coaches	What is the name of your governing body?

Table 2. Examples of questions from the semi-structured interviews

The administrative control was achieved by using standard formatting of the transcripts and employing line numbering to make reference to the selected phrase a simple and accurate matter (Moore, 2006, Ryan and Bernard, 2000). Microsoft Excel was used to record the coded data, where it could then be coded and analysed. The research question sought only to compare one element (the training regimes of coaches) with another, so a relational database was not required. This made the database design very simple. It also made the data store very flexible and highly suited to thematic analysis concept (Charmaz, 2000, 2006, Strauss and Corbin, 1998).

Although the questions were open ended and designed to elicit narrative answers, they were framed in a way to minimise generalities and abstractions (Mason, 2002). This helped the non-British interviewees. The researcher took care to be aware when generalities or abstraction might cause meanings to be obfuscated and become unclear.

In the pilot study, the data was codified using the questions as a foundation and pertinent phrases used as the drivers to codify the information. “The investigator identifies potential themes by pulling together real examples from the text.” (Ryan and Bernard, 2000, p.783). The research data was analysed

line by line. It was noted that interviewees often strayed into several codes during a single response and this meant that the codification needed to be driven by the answers themselves (Ryan and Bernard, 2000), and was also a useful check to make sure that contradictory data was properly included (Allan, 1991). This meant that as the analysis was pushed deeper into the data store, the theories themselves could be shaped by the findings in accordance with Grounded Theory (Charmaz, 2000, 2006, Strauss and Corbin, 1998). The first pass used an "open coding" method (Strauss and Corbin, 1998, p.101), then on to an "incident by incident" level of coding (Charmaz, 2006, p.57).

3.7. Ethical Consideration

The sample coaches were contacted in person, by email or telephone and the project explained to them. They were all given an information sheet guided by the Economic and Social Data Service (2005b), a copy of which is in Annex C. This described the project and the aims and intentions of the research. There were clear opportunities to opt out of sections or the entire interview at any time if the interviewee wished. The opportunity to withdraw was made available throughout the research and at the time of interview. All signed a copy of the consent form shown in Annex D, in line with the ethical guidance from the Economic and Social Data Service (2005b).

The interviewees were all given anonymity, and pseudonyms have been used throughout to comply with this condition and maintain confidentiality (Rees, 1991). A brief vignette of each coach is given to set their responses in context and give authority to their words.

Some of the answers required opinion, but this was not contentious as they were asked about their own systems. There was no direct comparison in their answers with any other system or methods, so no personal criticism of others, which could have raised ethical issues as well as personal bias (Strauss and Corbin, 1998).

3.8. Establishing Reliability, Validity and Credibility

Reliability means that the data in consistent across various results, for example on re-testing or internally within an interview, as well as having an expert interviewee's opinion reflected in and supported by the literature (Gratton and Jones, 2007). This in turn provides some of the triangulation suggested by Allan (1991). Consistent answers to the interview questionnaire for example would indicate reliable data.

Drawing conclusions from the analysis of the data is only valid if the data actually describes the required phenomena (Gratton and Jones, 2007). The construct validity would be indicated by interviewees from various nations having similar opinions and the phenomena supported both from the data and in the literature. Face and content validity should be apparent in the themes identified from the data, but the predictive validity may only be seen when the opinions of the experts are tested in further research.

The research would be valid if the conclusions are true, but it is "reliable when the findings are repeatable." (May, 1997, p.68). Applying a systematic thematic analysis approach tends to answer this call for reliability and validity (Biddle, 2001, Gratton and Jones, 2007).

Credibility is inherently important to research (Gratton and Jones, 2007). By choosing a sample of coaches who are measurable against quantitative standards (the training of national standard athletes), and by selecting coaches from internationally more successful nations than Great Britain (see Table 1), respect for their opinions is conferred onto the interviewees by the nature of their status, and the raw data gains credibility. In minor sports, it can be that technical opinion is localised, experiential or not evidence-based, which might be a challenge to the credibility of the data. If the subsequent analysis is clear and open then the data, too, should derive the same status of credibility.

3.9. Bias in the Study

3.9.1. Researcher Bias

The researcher's experience in the field being examined meant that some phenomena might be anticipated, and that suitable supplementary questions could be posed during the interviews with a possible increase in the quality of the findings (Chambers, 2000). In previous research into coaching, Bloom and Salmela (2000, p.61) reported that using unstructured or semi-structured interviews guarded against the interviewer "guiding the subject to respond in a manner or framework which has been posited by the researcher beforehand".

To avoid bias, it was important not to suggest agreement or disagreement with questions or replies. The researcher had to carefully word supplementary questions to avoid implying an opinion (Fortuna and Frey, 2000).

3.9.2. Bias from the Sampling

If an involuntary sample is used, say by examining the coaches' training records, the bias of volunteering would be removed but possibly replaced by another caused by the very selection of the records. Gratton and Jones (2007) suggest that where the sample is selected from the informed consent of the participants there is less risk of building in bias, especially if there is a high take up (here 100%).

3.9.3. Interviewee Bias

Bias could also come from a natural politeness of the respondents, where they talk up or down comparisons between training systems (Strauss and Corbin, 1998). To reduce this, they were questioned only on their own training regimes. The researcher was careful not to make comment on anything said by the interviewees.

People, who do not have English as their first language (including the interpreter), may lack some subtlety, which might introduce a bias by misunderstanding or misleading. As the subject is not sensitive, subtle hints at

phenomena are less likely to occur. As the coaches were very proud of their qualifications, experiences and results, they might be more likely to extol rather than try to hide them in ineffective euphemism, and this pride would reduce any inadvertent bias. This language barrier bias is also reduced because the technical language is universal.

The data was presented in the form of verbatim transcripts of the interviewees' spoken words. This ensured that there was no omission of data with the bias of data selection. Naturally there were occasions where words were indistinguishable or unintelligible, but these were rare because the researcher could listen to the recordings while reading the transcripts (DiCicco-Bloom and Crabtree, 2006). Though this might allow a possibility of bias to creep in, much of the speech concerned technicalities, with its implied universal definitions (British Academy of Fencing, 2002), so bias could be removed.

Given the mass of data in the transcripts, a clear methodology was needed to extract useful phenomena. Being able to burrow down to the micro-analysis level helped the researcher to stand back and avoid Strauss and Corbin's (1998, p.97) more obvious 'red flag' elements of bias from the researcher's own preconceptions and perceptions gained from his close association with the data.

3.10. Data Collection

Mutually suitable times and places were agreed with the sample members and the interviews conducted over an extended period of several months.

Interviewees who did not have English as their first language were asked if they wanted an interpreter; several took up this offer. The questions were not controversial and all were based on the normal training and routine of a fencing coach, so there was little chance of losing the subtlety of an interviewee's answer by receiving it through the medium of the interpreter. The interpreter was familiar with the subject and had done similar work with the researcher translating for coaches to English-speaking fencers.

Security and confidentiality of the data was maintained in line with the Economic and Social Data Service (2005b). The interviews were recorded and the recorder battery life (150mins) never exceeded as predicted from the pilot study; the average interview was 43mins (*n=12*) and the longest 61mins. The recordings were loaded onto the researcher's personal computer using alphabetical identifiers. The details of the interviewees were recorded in a separate document. The computer was password protected and backed up to a second machine and 'cloud' based storage, both password protected. Only the researcher had physical access to the data. The medium over which the data is transferred used an encrypted wireless network.

The recordings were transcribed verbatim by a transcription service. The prose was line-numbered. The questions were not included in the transcripts as they were consistent and read from the questionnaire; the questions themselves are included in Annex A. In transcription the interviewees were made anonymous (Rees, 1991).

3.11. Data Analysis

Qualitative research has gained credibility in sport and exercise science, and the dominant template is "combined protocol of semi-structured interview and content analysis." (Biddle et al., 2001, p.792).

Thematic analysis was found to be effective in allowing the discovery of phenomena in the data. The concept of Grounded Theory goes back to the work done by Glaser in 1967 and has been followed up with more recent work (Charmaz, 2006, Glaser and Strauss, 1967, Strauss and Corbin, 1998), however, its iterative nature was not needed to prise the themes out of the transcripts.

In the data analysis the researcher is seeking to garner evidence (Gratton and Jones, 2007) to answer the question, "is there a difference in the way the British coaches are trained compared to their more apparently successful national counterparts?" To do this the interview transcripts were read through

and elements that describe the ‘key concepts’ selected (Clark and Causer, 1991).

Ultimately, the aim of the design was for the researcher to be able to make sense of the data to extract the evidence to answer the research question (Gratton and Jones, 2007). If credible conclusions are to be drawn there must be demonstrable evidence to support them. There was no need to treat the accounts as either true or real, but in seeing them as opinions, which could be compared and by looking at ‘push’ and ‘pull’ factors of the same data (Silverman, 2000, p. 823), it was possible to gain corroboration between the phenomena emanating from the data.

The process was also led by the thematic analysis described by Biddle et al. (2001) in their framework, where the similar coded statements are grouped into themes (concepts). These then also grouped by meaning to give a second, higher order of theme, the categories above. Biddle also states that too great a rigidity in the questioning can reduce the chance of capturing the experience.

It is possible to go from a single occurrence of a concept in the data to a general notion; it may be that a single concept would illustrate “something we could learn from this case that will give us insight and understanding about a phenomenon” (Strauss and Corbin, 1998, p.285).

The concepts were codified, initially by applying a word or short phrase to them, and thus divided into sections of interest (Charmaz, 2006). This gave the researcher the ability to simultaneously categorise and summarise each piece of data. The line number allowed the data element to be accounted for and located in its original context, and a reference generated by concatenating the code letter to identify the speaker and the line number of the phrase. To give further control when transcribing, the elapsed time in minutes and seconds was recorded in square brackets, *e.g.* [7:14]. For example see Table 3, where Basil (Coach E) opines on skill entry standard required for coaching:

59 **Please describe what you think each level of coach, educator and trainer should be able or required to do. [7:14]…**

75 '… I think anybody who is going to start getting into coaching should have a certain level
76 of fencing experience I would say at least up to like a major domestic final or maybe last
77 16 something like that, at least I would have thought, and fenced maybe at that level for at
78 least 3 years…'

Table 3. Data control marks including line numbers and elapsed time marks.

Having selected these key concepts, and to make identification clearer each coding label was also given a numeric coding. Numbers were added because some of the descriptive codes were quite similar, yet clearly discreet, for example there are two entries under 'Coach Training', 'Entry Qualification' (Reference # 8) and 'Recruitment and Retention' (Reference # 85). By adding the numeric coding the researcher could easily and clearly separate the elements, yet still retain the ability to do slightly fuzzy searching by utilising the textual coding.

The code labels are then given a second descriptor to group them into concepts. In the example above, the two codes are in the 'Coach Training' concept group. The concept was then entered into the database and categorised, noting the speaker (headed 'Pers' in last column) line and page number for later location. From the above, the reference 75E in Table 3 would read:

ID No	Concept	Code	Interview Extract	Line	Page	Pers
8	Coach training	Entry Qualification	Anybody who is going to start getting into coaching should have a certain level of fencing experience	75	3	E

Table 4. Concept coding with context location and speaker record.

The quote from the transcripts was copied into the record field of the data, as it was this that is the meat of the analysis. It allows the comparison of data with data directly (Gratton and Jones, 2007).

Another aspect of the analysis was to search out data that ran counter to the current theory (Ryan and Bernard, 2000). Care was taken to make sure that data elements that included a contrary slant were included.

3.12. Chapter Conclusion

The method selected for this research was a qualitative analysis using thematic analysis. The data were collected by means of semi-structured interviews, which were in turn transcribed verbatim and the text analysed line-by-line. The phenomena arising from these data were coded and grouped.

Some of the data were seen to overflow into more than one area, so allocating codes to the data sets helped identify these and control the analysis.

Bias was recognised as a possibility, both from the point of view of the interviewees, who may have wanted to please the researcher, and the interviewer, who comes to the research with his own life-experiences.

Chapter 4 - DISCUSSION

4.1. Aim of the Chapter

This chapter will explore the results of the thematic analysis of the data from the transcripts from the semi-structured interviews and relate these findings to the research question. It will explore the possible differences in the training of coaches in British Fencing and other countries. It will also relate the findings to the existing published research and theoretical models relating to sports coaching in general and in the coaching of fencing in particular.

The ideas and beliefs expressed by the participant coaches together with their approach and experience in being trained as coaches themselves will also be explored.

The aim of the chapter is to compare the outcome of the thematic analysis of the data to the processes, culture and identity described by the coach education schemes available to trainee coaches in British Fencing, to the values and processes described in the literature, and across the national coach education systems in fencing.

The data from the interviews were analysed in a first pass and coded. The codes were grouped into categories and these into three main high-level themes, which were the actual knowledge and skills the expert coach needed and how coaches acquire the knowledge to become expert; strengths and weaknesses of the various coach training systems; and how developing coaches needed to be supported. The analysis of the data showed little contradiction (<2%) so the reliability was high (Silverman, 2000). The ideas put forward are posits for improving the fencing coach's efficacy, but the specific suggestions would probably need to be tested by further research.

The main requirement for a fencing coach is to provide training for athletes. If athletes train and carry out deliberate practice, they should improve (Ericsson, 2007, Szepesi, 2005). Recent research and opinion says that there may be no such thing as 'talent', but that what is perceived as such is in fact manifestation of the desire and opportunity to train (Abbott et al., 2007, Colvin,

2008, Vaeyens et al., 2008). If Great Britain is lagging, then it would follow that the athletes' practices set by the coaches may not good be enough in quality or quantity, attributes stressed by the foreign interviewees. Coaches need to be able to deliver a high quality of training at all levels of coaching, and all student coaches need to learn how to deliver this as part of the formal coach education.

4.2. Views on Acquisition of Coaching Skills and Knowledge

This section describes how the interviewees (all rated as expert coaches in the UK) felt they acquired the knowledge, skills and techniques that they possessed: not just for the training of elite athletes, but the delivery of the coaching of fencing from the child-beginner, through all stages of adolescent development and into elite careers, from the novice adult to participant or performer, finishing with the support required for veterans and wheelchair fencers.

The data conforms to the literature where there is also consensus that coaches needed to have high levels of skills in the sport (Pitman, 1982, Ross, 2006, Szabo, 1977) as well as in coaching skills (Potrac et al., 2000).

4.2.1. British and Eastern European Fencing Coach Education Systems

The participants said there is a difference in the way that coaches are trained between countries in that in some nations there are several levels of coaches, as in the scUK model of four levels, but in others, like Hungary, there is essentially one level: the fencing master or fully qualified coach equating to the top level in scUK system.

British Levels-2 and -3 are generally the more usual working levels of coaches, being trained to give individual lessons as well as group instruction. The interviewees (*n=8*) deemed individual lessons to be the bedrock for the development of a fencer, their opinions being supported by the literature (Lukovich, 1986, Szabó, 1977).

Level-4 is the 'national' level of coach, the top qualification, and with it coaches are taught to "implement and evaluate the process and outcome of long-term/specialist coaching programmes for individuals and teams at performance and elite levels" (Randall, 2010, p.14). Level-4 coaches need to have the knowledge to create and implement programmes of training for specific long- or medium-term goals.

In Hungary, as an example of the Eastern Bloc fencing coach training system, the candidate coach enters the sport university and reads for a degree in a related sport subject, takes a three-year course in fencing coaching (simultaneously) and then studies for the equivalent of a PGCE in physical education giving them (Hungarian) Qualified Teacher Status (QTS) or equivalent. Some may choose another subject for their main degree if their career is to follow the teaching rather than coaching profession. Either way fencing masters are graduates and have studied the coaching of the sport for several years, even after entering as elite or at least technically high grade performing and experienced fencers. The impact of this is discussed in section 4.4.1 below.

Another issue is professional indemnity insurance. Abroad, fully qualified coaches can obtain professional insurance; however in UK partially qualified (*i.e.* from Level 1 or 2) have the same insurance cover as the fully qualified. Many coaches in UK take only the fundamental awards just to acquire the insurance cover. As Charles (5/3/08) says, "My coaching qualification … was really … to get insurance" and Daniel (18/3/2008) confirms, "I went in [to a coaching course] for the insurance."

British coaches (*n=7*) often see no need to progress their formal training as all fencing coaching qualifications carry the same level of insurance cover. Thus there is a disincentive for the new coach to invest in further training once they have the basic qualification. This is confirmed by Gilbert et al. (2006), who note that some coaches stop formal coach education as soon as they achieve the minimum award required, whereas others keep learning.

4.2.2. Learning from Experience

It is clear throughout the data that experience is a very important factor in coach development supported in research by Cushion et.al., (2003). The knowledge and skill gained from experience are not things that can necessarily be taught, illustrated by Basil (3/3/08), who was "developing my own experience" and Pál (1/8/08) saying "It is the experience that is the practice". Experience also features in the literature as a way of developing and training coaching skills (Gilbert and Trudel, 2001, Irwin et al., 2004).

The British national coach training system (Randall, 2009, 2010) makes no room in the syllabus for time to gather experience. However, the coach education system could expose aspirant coaches to experience as deliberate practice in a planned and programmed way (Ericsson, 2007).

Charles (an interviewee) mentioned that another very good source of experiential coach training is fencer-led coaching, which can direct the (even experienced) coach down new and interesting paths. A thrusting and ambitious athlete will certainly stretch their coach as much as the coach endeavours to stretch the fencer; a coach is a very important element in the success of athletic performance (Moen and Federici, 2013).

4.2.3. Time-Scale of Training and What Fills It

This section deals with the time-scale over which the interviewees and others suggest that sports coaches in general and fencing coaches in particular might be trained in order to deliver the best outcomes from their athletes.

From the data transcripts there was an opinion from both domestic- and foreign-trained participants that coaches needed a full training (*n=7*), and there was concurrence that it took years, rather than weeks, to do so. Edward explains that that coaches need time to absorb the training; and, according to Pál, they need to feel the moves and the way the muscles work. It was made clear that senior coaches had to have this full training and that they could not do the job they were asked to do without it.

Pál pointed out that, even after so many years of mastery, he still learns, and the inclusion of such experiential training would be supported by research (Cushion et al., 2003, Nash and Collins, 2006). It was the "hours of training [that] differentiates the levels of coaches" (Miklós, 30/7/08) and he also said that to give the coach some of the necessary experience "the essential answer … is having a training venue available … all day every day" (Miklós, 8/7/08).

This concept of time and experience required to attain elite coach status is supported in the literature by proven masters like Szabo (1977) and Lukovitch (1986), and writers in coaching science like Potrac et al. (2000) and Jones (2007).

4.2.4. Learning from Books and Written Material

There was a near unanimous feeling from the data (*n=7*) that one cannot learn either to fence or to coach fencing from a book exemplified by Basil, Louis, Miklós, Csaba and from Pál (1/8/08) saying, "No one can teach from a book". This concept is supported by Cushion et al. (2003) in the coaching science context and by Lukovich (1986) as a master coach. Both British and foreign coaches (*n=4*) said they didn't have a particular publication that they used as a main source of reference, except their own, Pál said. Notwithstanding this, they all concurred that, although the use of written material for CPD was important, it was the absorption of the material, that made the exercise of reading fruitful, said Daniel, Edward, Miklós and Pál. This written material built on and informed the knowledge and experiences gleaned from their fencing masters' courses and other training,

Both the data, exemplified by Basil, that a coach needs knowledge on "… health, well being, general fitness, diet etc.", and the literature (*e.g.* Abraham et al., 2006) indicate that the written material studied should include research on all aspects of the coaching profession.

The books on technique, which were generally condemned to be of little use from which to learn to coach (Pál, 1/8/08), were severally cited as being useful

for snippets and ideas (Andrew, 8/4/08). Miklós added that taking a drill here and there was useful. The interviewees said that most of the books on fencing described technique, and do so with concordance, "so no criticism" (Miklós, 27/7/08). As a result none were 'best', and living authors quoted their own work as "useful" (Pál, 1/8/08). Abraham et al. (2006, p.559) reinforce this, where they say, "the coach needed to have an extremely good level of sport-specific knowledge".

Some interviewees (*n=3*), Andrew, Charles and Edward, suggested that coaches should do a lot of reading, research ideas on the Internet, combine resources and think through coaching issues, making use of concepts like the communities of practice (Culver and Trudel, 2006). Louis, Andrew and Miklós added that manuals and books were often formulaic, prescriptive or didactic. The coaches said current British coach education courses (British Academy of Fencing, 2005) describe the teaching of skills in prescribed and unrealistic situations as they are based on this literature (*e.g.* Crosnier, 1951, Pitman, 1988). For example Daniel reports on one course, "…they wanted specific things done with specific moves … regardless of the timing, distance, regardless of anything." (Daniel, 18/3/08)

The lack of coach development training meant that successful coaches have often been "more or less completely self taught" (Andrew, 25/03/08). Notwithstanding the common held view that you can't learn to coach totally from books, Andrew and Charles both state that much of their early and formative coaching information came from library research out of necessity.

4.2.5. Other Ways Coaches Learn to Coach

Other than formal training, coaches learn in many ways and some are discussed here. Some of the interviewees (*n=8*) stressed how coaches learn from each other, for example, describing coaching on a training camp, Daniel said, "The coaches would sit down together and discuss why they did things differently" (Daniel, 18/3/08).

The tactics required to gain success on the piste at the top level is very hard to teach, but the insightful novice coach could gain this from a successful fencer-pupil and through discussion with a coach mentor; this is observational learning as discussed by Hodges and Williams (2007), where the coach learned from the pupil's actions. Illustrating the way coaches can learn from a (world-champion) pupil, Charles (5/3/08) said, "[My pupil] had a very deep insight into fencing tactics", meaning that Charles had learned tactical skills from the pupil, which he was not able to pick up from his formal coach instruction. This is very similar to the observational experience described by Cushion et al. (2003).

4.2.6. Continuity of Coaching Appointments & Communication Channels

The data indicated a requirement for clear passage of information through the coaching hierarchy. Interviewees (*n=4*) reported that there was no obvious conduit for this information in UK. As an example of what the fencers required, Daniel spoke of Bauer, a German champion, who went to China as national coach. Now the Chinese coaches give 'Bauer' lessons, such was their information flow. Balázs said Poland runs a similar system. Other systems have directors in place to ensure this flow of information like the USA (USA Fencing, 2013). Senior coaches need to pass on experience, skill and knowledge to subsequent generations.

Equally, In Britain, employers of coaches make little distinction between the levels of coaching awards. This is probably a misunderstood risk by organisations employing coaches with minimal awards, as the less-trained could lack the knowledge (Côté et al., 2007) and the pedagogic skills (Walsh, 2011) required for true coaching expertise (Nash and Collins, 2006). This presupposes that the higher-level training offered by the qualifying body is effective, which may not always be the case, as perceived by recognised expert coaches (Cushion et al., 2003). The foreign coaches (*n=4*) accepted the training they were given as a foundation and sought to build on it as exemplified by Pál. The British coaches (*n=5*), while seeking CPD, had difficulty defining what it was they needed to know, and tended to fall back on technical skills alone, described by Basil and Andrew and as set out in the

fencing coach education training syllabi (British Academy of Fencing, 2005, Randall, 2009).

4.2.7. Entry-Level (Technical) Standards to Coach Training Programmes

In many coach-training schemes, for example that of Hungary, the technical ability of the candidate is assumed. Indeed one cannot aspire to the course unless you are of a high standard as a player. In UK the entry standard is not checked to the same degree. This causes technically challenged fencers to aspire to train as a coach, and perversely encourages British fencers to give an exaggerated respect to the excellent competitor (as a coach), without reference to competitor's coaching ability.

Recognising coaching talent in elite and performance athletes could be part of coaching leadership and was supported by both Csaba and Laszló. Tucker and Collins (2012) emphasise the importance of genetic make up for the athlete – and by extension, the coach. So here is an argument that coaches, too, may be born not made, though both athlete and coach need to acquire the expert skills. To discover the coaching talent, Goldsmith (2009, p.1) points out that "testing [of athletes or coaches] does not replace the skilled eye or the instinctual feel of an experienced and talented coach", or in this the case coach-educator.

Charles mentioned that British coaching standards should be generally higher, and he emphasised that senior coaches should be able to deliver lessons to all levels of fencer.

Charles, Basil and Miklós all mentioned that candidate coaches should have considerable knowledge of the sport and have high technical standards before entry into the coaching system. They thought that both international competition experience and working abroad in other systems would be advantageous. For example Charles said, "As I got better as a fencer … I produced better fencers." (5/3/2008), and Basil opined, "Anybody who is going to start getting into coaching should have a certain level of fencing experience […and] experience abroad would be useful" (Basil, 3/3/2008).

Ádám and Pál regarded technical skills and standards as being slack in the UK coaching system. Both reinforce the importance of a deep knowledge of the fundamentals of the sport to be able to coach fencing effectively.

The coach needs to know the feel of a move they want their pupil to achieve so that the coach can create the context and stimulus for it, “feeling the blade controlling the distance” as Charles (5/3/08) puts it, while reproducing “authentically the characteristic features of style, tempo and rhythm of various opponents in a lesson situation.” (Szabó, 1977 p.30).

4.2.8. Leadership Requirements of Coaching

Three of the European coaches state that leadership, trust and respect are very important attributes of a sports coach, which is also evident from the literature (Szabó, 1977, Potrac et al., 2002), but was reported as lacking in British coaches and their fencers. Charles emphasised the possibly unusual structured and disciplined nature of his successful British club, which helped to engender a general philosophy of respect.

The data suggests (*n=3*) that coaches have to consider the social background of the athlete, and Basil says coaches need a good relation with parents, as they are usually the sponsors of the athlete in youth fencing. The literature agrees with this for example Smoll et al. (2011) say that coaches also need to be skilled managers of their young athletes’ parents, however, the coaches may also need to ethically balance their requirement for income against the needs of their young charges. Cushion et al. (2006, p,83) conclude that “the essential social and cultural elements of the [coaching] process are often underplayed”. None of the British fencing books comment on this sociological subject, which is described in the report by Bailey et al. (2010). This aspect may be worth pursuing and some training devised to give new coaches confidence in their dealings with the families of young athletes.

4.2.9. Resource and Personnel Management

Resource management is a subject that Andrew particularly mentions as missing from the coach education syllabi. This would include the creation and management of projects and records, and managing coaching teams and support staff. All require complex and sophisticated management techniques (Arnold et al., 2012), which are not easy to pick up without formal training; indeed the requirement for them is often not obvious to the uninitiated. Where the management is of people, the skill becomes one of leadership and respect. Charles made the point that high standards can be difficult to maintain in the culture of the amateur sport in UK, but the individual coach's leadership can overcome the difficulty if they have the knowledge to deliver it, so such training needs to be delivered in coach education.

4.2.10. Business and Financial Skills

Another technical but related aspect of coaching ignored by all the British systems is that of financial and business training for coaches as suggested by Andrew when he says, "The [business] management side of coaching has been forgotten about in the coach education syllabus" (Andrew, 2/3/2008). This is similar to the resource management mentioned above in section 4.2.8.

The data suggests that in Britain fencing coaches are usually part-time, informal, peripatetic and self-employed as described by Louis. Abroad they are usually full-time contracts of employment as Csaba describes. British Fencing expects fencing coaches in UK to be generally self-employed or voluntary. This means that professional coaches need to have enough business and financial knowledge to make a living from the trade they create. This highlights the difference in coach employment contracts in UK and abroad.

Putting these people on a more sound financial footing would mean investment made in their training is likely to bring a higher return. The subject of general business management in sport (Davis, 1994) and the management

of risk (Taleb et al., 2009) could be beneficially included in the coaching syllabus of the professional cadre (Arnold et al., 2012).

The upshot of this is that British coaches would need training for the business of coaching, and of the realities of pupil recruitment and retention. None of this was covered on coaching courses until the, now cancelled, Level-4 part of the 2008 England coach development project (Randall, 2009).

4.2.11. Recognising Success in Quality and Outcome

The BAF system works well, as Louis (20/8/08) points out, "…the coaches themselves give quite a high regard to the BAF qualification," and there is a great personal and official respect internally for the highest award of 'Professor' (of fencing). Passing the assessment is lauded publicly in print, and the diploma being presented at an annual ceremony (Merry, 2010). This public recognition reinforces the concept of respect for the top awards, which in turn means that people strive after them. Hence people are attracted to the system regardless of its efficacy. It is not only a good public relations strategy; it is effective leadership practice. There are apparently no such routine plaudits in *The Sword*, BF's house magazine.

The same could apply to the coaches who, whatever their level, have success with their pupils, "We don't tell [the fencers] how well [the coaches] have done" (Andrew, 24/3/08). The successful coach's training methods could be analysed and the novel part perhaps included in the coaching lexicon as suggested in the literature (Culver and Trudel, 2006, Nash and Collins, 2006).

4.3. Views on Professionalism, Pedagogy and Coaching Science

4.3.1. Coaches Need Pedagogy and Science

There was broad support from the data (*n=10*) for the concept of pedagogic techniques and skills, for example the need for lesson planning in teaching and coaching, which is supported by the literature (Trudel and Gilbert, 2013, Armour, 2011). This is echoed in the British coach education manuals

(Randall, 2010) in a formulaic manner, but the simple forms provided could lead to unadorned instruction rather than coaching, especially at the lower levels.

A coach's knowledge of managing and controlling groups, especially children, was brought up by a broad consensus (*n=10*). Children are naturally competitive and love winning (Griffiths, 2010), and coaches could make use of these traits. Youngsters may get bored if they train for fencing like learning parade-ground drill. "The most fun a kid ever has is when they win." (Charles, 5/3/08). This is from a successful British coach, and illustrates the need for coaches to understand the science and art of teaching and motivating pupils, which applies to both children and adults.

Pál's stated (1/8/08) that a coach needed to "teach footwork, pair work and other exercises", and it transpired from the data that the coaches (*n=5*) felt that teaching fencing skills should be mostly by sequence work, a series of blade or footwork actions. However, fencing is also an open skilled sport, and athletes needed to react to unexpected situations. Planning surprises into lessons, in the class or individually was said to be a useful teaching practice (Lukovich, 1986). Importantly the data stressed that the moves taught should be simple.

Coaching instructs the athlete, not just the fencer. The data indicated a need to be able to train a pupil in the round. Miklós mentions that training children is a long-term business and that preparing for winning as a youth is often not effective in the production of an elite senior podium athlete, saying, "Winning is secondary to good development in children … Coach should train an athlete, not just a fencer" (Miklós, 30/7/2008). Charles (5/3/2008) added an ethical dimension, when he advised, "…coach obviously needs that whole package: mentor, fitness trainer, technical advisor… How do you make kids strong enough without being damaged?"

So the coach requires knowledge of long-term training; training that will keep fencers interested and enthusiastic, and thus both feeding the needs of the coach (employment) and the fencer (longer-term potential).

Louis describes the feeling that should be engendered by the coach as:

> "…the [coach] should be competent enough to deliver technical aspects of the sport and that people enjoy it." (Louis, 20/8/08)

Louis says that this enjoyment has to be present for both fencers and coaches, which is sometimes an essence that gets lost in the intensity of the one-week coaching course and its exam. It also reinforces the differing nature of the instructional delivery, when the coach is faced with a variety of pupils. This in turn leads to coaches needing to understand learning styles. The British coaches (*n=4*) support the concept that a sports coach is an educator (Jones, 2006b) and point out that there should be greater emphasis on pedagogy and understanding how people learn during coach education (Cassidy, 2004, Cassidy et al., 2004).

So being a qualified teacher could have great advantages for the aspiring coach. QTS provides the pedagogic foundation for their coaching. Such a qualification provides a much more important benefit for a coach: it allows them to be employed in a career as a schoolteacher with natural access to the physical resources required for the coaching – a training venue in the school sports hall and a ready population of recruits (Gilbert and Chakravorty, 2001). This touches on the requirement to understand the business side of coaching, and is the model readily used in Hungary described by Csaba, where a coach may be a physics teacher and the fencing master in a school.

The interviewees (*n=9*) spoke at length about what coaches should be taught. Even at Level-2 the coach needs an understanding of psychology, S&C and physiology in addition to pedagogy, reflected in the literature by Walsh's review and insight (2011). Edward and Ádám both explain this with the concept of the training structure for a fencer being like a pyramid. The base is the fitness and built on that are the skills. Once these skills are in place tactics can be introduced, followed at the apex by the psychology to be a successful competitor. This indicates that the coach needs enough knowledge of these supporting sciences to either deliver the training

themselves or know when to ask support staff for help – and manage what is delivered in line with Abraham et al. (2006).

The interviewees said that knowledge of the supporting sciences should be included in the coach training supported by Nash and Sproule (2011). The same people also thought a modern coach needs to be taught enough of all the supporting sciences to enable them to call in and manage the specialists in line with Abraham et al. (2006). The interviewees said that the necessary science should be included in the coach training and is supported by Nash and Sproule (2011). This indicates the longer courses would be needed because this could not be included into a week-long finishing course. It also supports the idea of using distance or devolved learning on a modular basis proposed by BF (Randall, 2011).

4.3.2. Quality Control of Coach Training and Development

Lack of quality control of British coach education was mentioned by Charles and was one reason he had for not pursuing his further qualifications. He mentions both the control of the coach-education process and the technical quality of the athlete being trained on a coaching course by the candidate-coach. There are calls in the literature as well as from the participants to raise the standard and quality of coach education and make it fit for purpose (Irwin et al., 2004), and to expand the content to include things like organisational skills and pedagogy (Jones et al., 2004, Trudel, 2006).

4.3.3. Continual Professional Development and Licensing of Coaches

This desire by the coaches themselves for CPD training means coaches want to do a lot of studying after their qualification. To encourage CPD, British Fencing planned to put a licensing scheme into place for fencing coaches (Brown, 2009), which would mean that there would be a requirement for some CPD training to maintain registration. Hopefully, coaches who have this extra knowledge and skill would be generally more successful, so would be the ones publicly acknowledged. Official acclaim for coaching success could be a helping driver for CPD.

In the data, all the British coaches (*n=6*) said they needed CPD (*e.g.* Edward (19/3/08) “I wanted to find out why [the training] was different”, Charles (5/3/08) “I went … to get involved in training”), and would welcome the opportunity to be able to engage in some further training; the foreign coaches (*n=4*) supported this argument by stating how important continual learning was for a coach. Having said that, Edward and Csaba noted that coaches often seek out training and technical lessons for themselves, or work with other senior or successful professionals at home or abroad. This would support the concept of a coach training structure that ran from initial training through to expert level instruction. The structure would combine the supporting science with pedagogic skills up to qualification as a Level-4 coach (*Maître d’Armes*), with CPD thereafter keeping the coach up-to-date. This would seem to be supported in the literature (Cushion et al., 2003, Demers et al., 2006, Stoszkowski and Collins, 2012).

4.3.4. Training the Coaching Levels, Remuneration and Respect

From the transcripts of the data, there are over two pages of comments made about these levels of the coach, describing what each should do and what technical knowledge each should have.

Coaching pay scales in UK seem to be independent of coaching award, and respect is given more to the perceived success of the coach measured by their fencers’ domestic achievements. As Daniel (18/3/08) says, “…it is more what … we can see they can do with the kids, and [a coach’s] pay scale is not reflected necessarily in what coaching award they have.” Csaba describes a typical European coaching post as a salaried appointment in a secondary school, open only to a (fully) qualified coach.

People tend to learn from those they look up to and respect. Novice coaches need to know who the respected coaches are, but the systematic respect for senior pedagogues from the NGB is missing. A comment from two British coaches was that there is little official respect for qualifications; a Level-2 holder may be appointed to a national coaching post for example. Abroad, no coach would be appointed without formal and full qualifications, said Miklós.

There is a need for the British Fencing coaching qualification to be respected and for systematic differential to be made between the various coaching levels. It should be self-evident that national coaching appointments should be made to higher-level coaches. Having clear level-differentiation and respect for the qualifications means that clients can have confidence in the coaches they employ, and that coaches have incentive to undertake further training.

4.4. Views on Weaknesses of Formal Coach Education

Coaches need a deep knowledge of their subject, and two of the British interviewees reported that candidate coaches were often surprised at the depth of knowledge required to pass the assessments for qualification. They both pointed out that in the British coach education systems, with courses of one-week duration, there was insufficient time for the coach educators to impart this depth of knowledge.

4.4.1. Length of Coach Training Programmes and Career Structure

The data from all the foreign coaches (*n=6*) supported a requirement for sound knowledge, and all the foreign trained coaches noted the length of their training (3-4 years), after a career as a fencer at international level. As Adám (18/3/08) demonstrates, "They have studied for 3 years in the university and have a diploma in fencing."

This should be compared to the short period of the British system's courses of 3 or 4 one-week courses (Randall, 2009). It has been argued (British Academy of Fencing, 2005) that because the time between the week-long courses is included, the period is similar. However, without supervision from coach-tutors to set and guide the experience this would not be so (Gilbert and Trudel, 2001). It cannot compare with the full-time 4-year continental training.

The longer course makes the practice deliberate, the training effective and the course reflective. The longer course would also give the chance to deliver the training in the sciences needed by the coaches both according to the literature (Abraham et al., 2006) and to the data, illustrated by Andrew's comments:

“Sport science has to go up commensurate with what the coach is doing…” (Andrew, 24/3/08)

A corollary of that is that there needs to be a career structure for coaches, who make the work their profession. This is supported by the literature (Nash and Sproule, 2009), and would start with a training protocol for coaches (Randall, 2011). A career structure would also require that national, regional or other official posts be assigned to properly qualified and experienced coaches. This will give the profession a natural career structure, and some incentive for junior coaches to continue with their training, which is a major investment for the individual. In any business model there has to be a return on investment. The data gives universal approval to CPD (*n=12*), but no specific mention of a career. This could be because the British coaches don’t generally see coaching fencing as a career and there were no specific interview questions on the subject; foreign coaches may just assume a coaching career in the same way as one trained in medicine tends to become a career practitioner.

4.5. Views on Tutoring and Mentoring

The data indicated there is a high dependency on technical skill in fencing, and Adám, Charles and Edward stressed fencers have to be trained in a precision of movement, accuracy and balance. This is often done by mimicry, like the teaching of dancing, so a coach needs to have excellent performance skills. The interviewees (*n=6*) said that coaches also needed to have the knowledge to instruct a battery of pair-exercises. These were universally considered good training, but need learning by the coach, practice in giving and experience in teaching to deliver well.

Accepting coaching skills were an important part of the training, there was a cautionary note from Ross (2006) to say that coaches required a good deal of deliberate and guided practice under a mentor to set the coach on the road to the 10,000 repetitions needed (Ericsson and Charness, 1994). Sport sciences could not replace these sword-in-hand skills. This deliberate

practice would apply to both their technical fencing skills and their coaching skills. It includes elements like class management and control.

Recognising coaching talent and training elite fencers as coaches has several benefits. Not the least is that this sets the country's most skilled fencers on the path to coaching. It creates a virtuous circle with the concept that good coaches tend to have been high-level performers, and, if their talent for coaching can be identified, harnesses the young star's enthusiasm. This works well when they are tutored and mentored over an extended period of years.

4.6. Views on Sports & Exercise Science and Fencing Treatises

4.6.1. Coaching with the Feel of the Movement and Stroke

That fencing coaches need to understand the concept of the 'feel of the blade' comes out in the data from both British and foreign coaches (*e.g.* Charles, 5/3/08, Pál, 1/8/08), and in the technical literature (Pitman, 1982, Szabó, 1977). The interviewed coaches set great store by this concept (*n=10*). This is a skill peculiarly specific to fencing (Lukovich, 1986) and is historically where the fencer or coach detected what is happening through, literally, the feel in their weapon. Nowadays it extends to the subliminal signals given by fencers as they move, as most modern fencing is conducted with the blades out of contact (Lukovich, 1986). The phrase now has a subtly different meaning referring to the use of all senses and clues. Coaches therefore need to be taught these fine distinctions at the start and not rely on years of work to acquire the understanding.

4.6.2. Touch-Line (Piste-Side) Coaching – Giving Coaching Advice

The ability to 'touch-line coach' was another aspect that the interviewees (*n=8*) mentioned as important, and again with consistency. With the modern playing style and the enforced breaks for coaching, the advice in competitive fights plays an important part in the bout, but it has to be delivered very carefully, Miklós (30/7/08) stating, "[Piste-side coaching] is a very dangerous

area - coaches should be very careful with this [moment]." The participants all stressed the importance of the inclusion of this aspect in the basic training of new coaches, with Daniel (18/3/08) illustrating it by saying, "Tactics will win fights above technique...."

Reinforcing this, Szabo (1977) lays down the coach's preparation and gives advice the athlete needed to fence in competition. Kogler (2004) describes the necessity of psychological aspects of the input from the coach in competition. With this unanimity it seems that piste-side coaching should be included early in a coach's training, and in some depth over the period of the course. The ability to give this advice stems from good technical and tactical knowledge and to be effective the coach needs to be well trained and highly skilled at the technique, reinforcing the idea of early and expert training in the concept of giving piste-side advice.

4.7. Chapter Conclusion

Using thematic analysis the chapter describes the phenomena found in the data from the interviews with the coaches. To answer the research question, theories about effective training systems for fencing coaches were drawn from the data.

The data were organised into high-level categories and common themes identified. The start-point was the skills and knowledge the interviewees thought a coach should possess. The main thrusts were that a deep theoretical knowledge backed by a high level of technical fencing skill were required.

The data suggested that coaches were trained in different ways and to different levels in the various countries' systems, and that coaches acquire their knowledge and skills from a variety of sources. However, the formal coach education course was not the most useful. More favoured was learning gained from experience and mentoring by more experienced coaches, and coaches' own research and study. Formal and informal CPD was thought to

be useful, and they opined that to train coaches, publications were a useful source of reference, but that one couldn't learn to fence or coach from a book.

The training of fencing coaches needed much more time than has been given. It was a multi-year task, best done at degree level with a high sport and exercise science content and a study of the science of coaching. It should involve wide experience, preferably in other countries. Fencers needed to have a high skill level on entry to coach training.

There were several subjects missing from the British coach education syllabus like coaching science, pedagogy, sport and exercise science, resource and business management, CPD and reflective experience. These should somehow be added to the syllabus in British Fencing and mentors brought into the equation as well.

Chapter 5 - CONCLUSION

5.1. Introduction to the Chapter

This final chapter will address the findings of this study. After re-visiting the research question, this chapter will lead to observations about the methodology employed, the underlying findings of the study both from the literature and the data. It will summarise limitations associated with the study, and some potential directions for future research in the coaching of fencing in Britain.

5.2. The Research Question

This thesis intended to examine the research question, 'what do coaches trained under systems that produce world-level success do that Britain does not, and what should the British coach education system deliver to achieve similar coaching effect?'

The interview process was designed to develop theories on how fencing coaches might be trained in the future. It encouraged responses on what knowledge and skills a fencing coach sought to deliver, how the interviewees were trained themselves and what they saw as important aspects of their training.

5.3. Summary of Theories from the Research

There were three main categories from the data, which broadly covered what a coach needs to know, how expert fencing coaches acquired their knowledge, and on how and how long they should be trained.

Necessarily briefly stated here, these theories were supported by the literature, and could make useful foundations for future research and experiment in coaching towards podium-standard athletes.

5.3.1. Outcome Requirements of Coach Education

Coaches need a deep theoretical knowledge of their sport backed by a high level of technical skill to deliver strokes and demonstrations in instructional situations.

A coach's theoretical knowledge should cover the sport and exercise science needed by their pupils and an understanding of when to call in and manage specialists in the subject. Their knowledge needs to give them a true understanding of the coaching science and pedagogy needed to effectively deliver the instruction required by pupils or training squad managers.

A coach's technical skill derives from their personal performance standard at the start of the coach education, and there should be a high entry standard of personal performance skill on entry to coach training. The courses should deliver a high standard of technical fencing coaching skill to enable the new coach to be confident training athletes of all levels.

5.3.2. How Coaches Acquire their Knowledge

The data indicated that to train coaches, publications were a useful source of reference, but that one couldn't learn to fence or coach from a book. There was general consensus on the technical aspects of the sport reported in the numerous treatises and manuals on fencing technique.

Literature covering the science of coaching rather than the technique of fencing would be of great benefit to coaches to support their coach education and CPD for working coaches. It would probably be a great advantage to coach educators to have this bibliography available to inform their instruction.

There should be a method of dissemination of up-to-date research in fencing and exercise science fields, especially where the journal papers are restricted to subscription readers (normally academics and students). Many of these research projects and the data they produce have surprising relevance to

sports beyond the one studied. Coaches need access to this information, especially if they are to deliver podium-placed athletes at world level.

5.3.3. Experiential Nature of Acquisition of Expert Status as a Coach

There was a unanimity in the respondents that what is presented on coaching courses is insufficient in itself and this is backed up in the literature, where expert coaches state that much of their beneficial learning comes from experiential work in real-life situations (Cushion et al., 2003, Culver and Trudel, 2006).

The data indicated that expert coaches gained most of their expertise from experience rather than formal courses. It should involve wide experience, preferably in other countries. However, this experience should be both guided by a mentor and reflective in practice, or it merely becomes accrued experience without adding to the expertise of the coach (Trudel and Gilbert, 2013).

5.3.4. Time Needed for Coach Education

The theories coming from the data indicated that the training of fencing coaches needed much more time than has been given. This, too, was, supported by the literature both of the coaching theory (Cassidy and Rossi, 2006) and the technical manuals (Lukovich, 1986). There should be a significant element of mentored experience following a technical and scientific training period of the course. The education should end with a further period of technical pedagogy and formal assessments (Cassidy and Rossi, 2006). This should apply to all levels; the higher the level the longer the course should be.

Training of fully qualified coaches is a multi-year task, involving degree-level learning and coach education.

5.3.5. Content and Syllabus of Coach Education

Analysis of the data suggested that the current courses often might not be considered of much relevance. However, with some realignment of the syllabi and course content in line with the ideas proposed by Randall (2011), it should be possible to combine the necessary technical formality of the education course with the experience required.

The data also suggested that coach education was best done at degree level with a high sport and exercise science content. Coach education syllabi should include study of the science of coaching.

5.4. Limitations of the Study

The study examined the opinions of 12 expert coaches from UK and Europe. Even though the opinions expressed were supported in the literature, it is a relatively small sample. However, with the unanimity of opinion it is reasonable to use these findings at least as a basis for future work.

Although the researcher has looked at over 3,000 sources and references, it is necessarily a skim over the relevant information. Nevertheless, it has also produced coherent arguments from the literature and, again, this can be used to instigate further work.

Using thematic analysis was a pragmatic choice and produced the necessary data for this first pass at the research. In future such qualitative investigations would need to produce deeper, richer data to guide the development of British fencing coaching science accurately and effectively.

5.5. Implications of the Study

Although one should take care making general assumptions from one research project, especially one with a relatively small base, there are general indications that would support the work being done by BF and the World Class Programme (British Fencing 2013). Jones et al. (2003, p.227) "…

provide valuable insights into the knowledge such coaches might need to possess."

Notwithstanding the above, there is a general agreement running through the data and the literature that would indicate ways for the domestic coach education to be changed, which in turn would lend support to the goals of the NGB (British Fencing, 2013). These are not instant solutions and it may take a decade or more for the development of a production programme for world-class fencing coaches.

However, with the coach education programme being re-written (Randall, 2011), this would be an ideal opportunity to include some of the newly researched concepts in coaching and learning, and write these into the developing syllabi of fencing coaching in Britain.

5.6. Recommendations for Future Research

There would appear to be two main areas for future research to help develop the coaching of fencing in Britain. The first is specific sport and exercise science research, which can directly impact on the way fencing athletes are trained or how they should compete. An example might include how the power is generated for attacking strokes, resulting in physiological advice to the coach on the fencer's stance and neuro-muscular functions.

Second, there is the need for research into the methods and effectiveness of coaching science and coach education in fencing, specifically the requirements for national posts and how to train domestic indigenous coaches to fill these roles. An example here might include the required roles and behaviours of a national or regional squad lead coach, and the difference between coaching at club and squad levels. It is suggested that specific methods for development of reflective practice for fencing coaching could be looked at.

5.7. Chapter Conclusions

This chapter re-stated the research question, which directed the investigation for this thesis. The results of the research have been summarised, with caveats for the possible limitations of the study and the methodology used. The implications of the work for the future education of fencing coaches was noted, together with suggestions for future direction and research in this field.

5.8. Concluding Remarks

The thesis set out to investigate the question, what should the British coach education system deliver to achieve a podium-level coaching effect? The research has shown that other training systems have more content and longer courses than are available in England, and it indicated that coaches need greater knowledge than they are given at present. Expert coaches said that experience and learning from others was the main way they learned to coach, rather than acquiring the knowledge set from the present formal courses. Putting this increase of experiential training, knowledge and coaching skill into the design of the British Fencing coach education programme, it is suggested this new syllabus would be likely to assist the transition of fencing athletes from the piste to the champion's podium.

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Annex A – The Questionnaire Used for the Semi-Structured Interviews

QUESTIONNAIRE

Project title: *A Study of Coaching Methodology in Fencing for the UK*

Material gathered during this research will be treated as confidential and securely stored. Please answer each question and return the completed questionnaire in the envelope provided. The return address is at the end of the document.

1. What is your name?

2. Contact details?

3. What is your sport?

4. What is the name of your governing body?

5. Do you:
    a. Participate
    b. Compete
    c. Coach
    d. Manage
    e. volunteer etc?

6. Do you have a particular weapon or sporting discipline within your main sport?

7. Are you professional or amateur:
    a. As a player?

b. As a coach?

8. Do you get paid at all?
    a. What percent of your time and

    b. income do you spend/receive for this activity?

9. Please describe what levels of coaching there are in your sport.

10. Can you describe the structure of the coaching hierarchy?

11. Please describe what you think each level of coach, educator or trainer should be able or required to do.

12. Please describe what methods of instruction or teaching (pedagogy) you have been taught yourself as a coach (as opposed to any that come with your other/main work).

13. How effective do you think these are?

14. Why do you think this?

15. Please describe how you were taught to coach.

16. Does this differ with the changing level of coaching or coach-education?

17. Where did you do most of your training?

18. With whom or which body?

19. If you are British:

a. Have you trained abroad?

b. Where?

20. If not British, where did you train?

21. Please describe the training and style.

22. What sort of athletes do you mainly coach or train with?

23. What level, age and sex are they?

24. For your top level athletes, how many have you trained and over what period?

25. Please briefly describe your training methods.

26. What is the element you spend most time on?

27. What is the element you think is most significant?

28. Do you have a training or coaching manual or book you mainly use: what is its name?

29. What other literature do you find useful?

30. Do you use your in-house magazines, or if not, would you like to be able to?

31. Please describe what records you keep.

32. May we see examples?

33. Do you use a formal (written) programme?

    a. What is the cycle?

    b. If you do, please describe the periods.

34. How do you use goals and aims?

35. In a competitive situation, what advice do you look for or give?

36. How is this delivered "on the field"?

37. Is there anything else you would like to add or say?

Name (printed) _____

Signature _____ Date_____

Feel free to contact us if you have any further questions.
The name of the main investigator, along with telephone and email contact details is:

Please return your completed questionnaire to: [a stamped return envelope should be with this questionnaire]

Annex B – Example of Completed Interview Transcript (Redacted for Anonymity)

1. **What is your name? [WS_10018 0:00]**

_____

_____

2. **Contact details?**

Given and recorded

3. **What is your sport?**

Fencing

4. **What is the name of your governing body?**

British Fencing

5. **Do you:**

    a. **Participate**

Yes

    b. **Compete**

Rarely

    c. **Coach**

Yes

    d. **Manage**

Yes

    e. **volunteer etc?**

Yes

6. **Do you have a particular weapon or sporting discipline within your main sport?**

Epee

7. **Are you professional or amateur:**

    a. **As a player?**

Not as a fencer

    b. **As a coach?**

Yes

8. **Do you get paid at all?**

    a. **What percent of your time and**

100%

    b. **income do you spend/receive for this activity?**

100%

9. **Please describe what levels of coaching there are in your sport. [1:51]**

Depends which hymn book you are singing from. My awareness at the moment is that Diploma level, British Academy Diploma level, Advanced and Basic if I remember rightly, Professor of course once you have all your Diplomas at British Academy level as far as the British Fencing system is concerned I have absolute no idea what their system is. It has escaped me. **[2:32]**

10. **Can you describe the structure of the coaching hierarchy?**

[2:39] Without giving names I would say, Professors of the Academy and of British Fencing, ex-Professors of the Academy, i.e. no longer members of the Academy and possibly International Coaches. **[3:03] [3:17]** Very badly, no it is a melting pot of ingredients that do not really go together it is just a mish mash it is not structured no there is no structure. **[3:36]**

11. **Please describe what you think each level of coach, educator or trainer should be able or required to do.**

[3:50] Basic level a coach should have the knowledge of the language of fencing in other words the movements of fencing and to be able to teach them competently at a pretty good beginners standard. Intermediate level the coach in my opinion should have experience with his fencers at competitive levels, domestic levels where he is with his fencers at domestic competitions, Diploma level highest level should be striving to achieve his fencers if they are young fencers for them to make the Great Britain team, England team whatever team, Scotland team, Ireland and so on and be with them and have an understanding what they need to do to get to that level and be able to teach at that level in other words be a competent coach at International level almost. [4:59]

12. Please **describe what methods of instruction or teaching (pedagogy) you have been taught yourself as a coach (as opposed to any that come with your other/main work).**

[5:19] As it was taught to me it was taught to me as parrot fashion as a script and for a young coach you assume this is correct and you learn the script and in other words to quote the late Brian Pitman “you become a sausage machine, churning out the same sausages every week”. That is how it was taught to me and in my opinion that is what a lot of coaches still do. They are sausage machines and they still have the same sausages no variety. So from that point of view I think you need to get if you want to be a sausage machine you need more

variety you need the ability to get your information for recipes and ideas from various sources, don't be a sausage machine, don't go by the book in other words. [6:21] [6:42] From my unique position as under 20 coach and going to International Competitions I was in a position to see how their styles, International styles were different from UK styles in comparison you could say how England football was different from Italian football, they are two different types of styles and I had to find out, I wanted to find out why it was different for them and us, was it the coaching or was it the fencers were training different and in my opinion it is the style was changed by the coaches, something new, new ideas, and we have not caught on we are still on in my opinion doing artistic fencing almost, it is that old and I think that is mainly, I wanted to find out why they were better why they beat out fencers and how they did it, was it new moves not it wasn't it was all the same moves it is the same thing for hundreds of years the fencing movements have been the same it is just that it is timing is different, tactics are different, footwork is different, it is all different and that is not filtering down across the Channel to us, so I taught myself, I went out and got a, I spoke to coaches International coaches, I found out from them what they do why is it different, I spoke to top International German coaches and Swiss coaches, French coaches, Polish coaches and I took videos and made notes I made endless records of top fencers and what they did. [8:45] [8:52] Totally different, I have changed my coaching techniques into purely a pupil lead lesson, I no longer give a signal which was traditional from my early coaching tuition, was I drop my blade you attack, I put pressure on your blade you disengage, I beat the blade you return the beat and so on and so on. Everything as I was taught was coach lead I no longer give a coach lead lesson as always the pupil has to make the move, if they want me to attack they have to entice me to attack so they can parry or counter attack, if they want to do a compound attack they initiate the preparation without a signal from me I work from no blade contact, I have not taught beat attacks for the last 6 or 7 years, I have not taught Prises de fers for the last 5 or 6 years, it really is simple. [9:58]

13. How **effective do you think these are?**

[10:04] Very effective in a young fencer, not easy on an older fencer, young because they are willing to learn and try and perhaps they don't know any different, frustrating then they get them as under 17 fencers and they come into the under 20 squad they are still using the old English system, British system, it takes them a year to 2 years to see that it is different when they go abroad, unfortunately we only get 5 competitions a year to do it. And for many years I have had coaching courses, sorry, training camps where I have employed German top International senior German coach the top Swiss coach and Polish coaches to come over and teach the system they fence, and to hammer it into the fencers this is a winning system it must be because they always beat us with it. So if they can beat us with it when we go abroad why can you not learn it and beat people in this country with it, why do you feel you have to fence a British fencer as a British style. [11:17]

14. Why **do you think this?**

15. Please describe how you were taught to coach.

[11:33] I was taught to start basically from I think blades engage position and blades engage in cease assuming right hander to right hander, blades engage and cease and from that again I disengage I take the blade away you attack, I put pressure on the blade or I change the engagement you counter-disengage and so on, I was taught at unrealistic distance with the blades crossed then Epee with a high point in cease very similar to foil, not so exaggerated high point but points high. Interestingly if you look back at old video footage from the 1962 Tokyo Olympics, 64 Bill Hoskins fencing it was all blades across Prises de fer very close, very un-proactive, fencing now is more pro-active than ever it used to be and if you look at that video footage and compare it to today's video footage the points now are maybe a foot apart they don't cross blades, you can very interestingly, I do this quite often I let my pupils watch videos of modern fencing and I say count how many times the blades touch, and it is very very few. An interesting experience happened in France we were at a competition in France there was a German against an Italian, 3 minutes of the de period, first period had gone and the score was 4-3 to the German and I said to the boys "they have not touched weapons at all, in all that time" not one touch have they not one beat not one parry it was all tempo it was all tempo they were working each other out and wrong footing each other it was that easy, people have gone off the blade it is not a blade any more. Today I was watching the coaches giving lessons and it all engaged in sixte every one of them, every one of them starts with engage in sixte, and I was pointing out to the boys I said "look all of them engage in sixte" every one of them pupil has to follow what the coach does, these were pre-competition warm up lessons unrealistic, already you are teaching them from a young age to search for the blade so when the blade is not there they are not comfy. [14:26] [14:30] This is where I look at the Hungarian system as well and they engage blades in cease and you don't need to you do not need to as a coach, and I have mentioned this to the Hungarian coaches and I say "why, do you have to get a touch of the blade, you want them to do a compound attack but it starts with a touch of the blade?" So already they are searching for a contact to feel comfy and confident before they start their second their compound attack. [15:02]

16. Does **this differ with the changing level of coaching or coach-education?**

[15:54] Of course it has to you have to adapt you have to change and interestingly enough the system I am teaching I did not teach until I tried it myself, totally with no lesson from any coach I tried this at the Slough Open many years ago, 10 years ago or more must be 11 years ago, with no lesson I went there to fence absence of blade attack on preparation, attack on tempo, attack on their recoveries, stick with them and I got to the last 16 and I won all my fights in the first four and it was unbelievable. I thought this is too easy why is this easy to

beat these Brits and I tried it before I taught it and the more that I do it the more I am astounded at how simple it is to use tempo and distance. **[16:47]**

17. **Where did you do most of your training?**

[17:00] Initially was the early stages was the Academy with their courses in Brighton the Brian Pitman courses and we went to another place I cannot remember where it was now just to get my Diplomas because I thought that was the only way to do it and as I said before I think I fell into the mould of this is how it is done, in fact it was David Austin I remember he said to on one of his opening speech on one of the courses was "If you have come here to learn how to coach you have come to the wrong course, we improve your coaching, we do not teach you how to coach" which I thought was a bit wrong, not the right comment from the Chairman of British Academy. This I feel as I progressed I fell away from the Academy because I was convinced it was the wrong system of whoever was in charge it was wrong, where did they get their information from where do they adapt and change the system, another good example here is the Award system for youngsters, you know the Grade 9 British fencing one the upper grade British Academy uses they are wrong they are so wrong, if you look at the Sabre ones they are wrong. They are awful but they have still be going for 15 years or more, someone needs to sit down and say this is how we teach our youngsters it is wrong. I don't use them I just give the badges away. **[18:51] [18:56]** Diploma, Epee, Advance Foil no Sabre, with the Academy, I have no British fencing system. **[19:08]**

18. **With whom or which body?**

19. **If you are British:**

    a. **Have you trained abroad?**

    b. **Where?**

[19:23] The French styles talking to Patrick Picot, Odebury, these are all Olympic fencers, Schrecki, talking to the fencers Walter Stephen a German, Senior National Coach, Gabrielle Neilbar, who was the coach for the Swiss team also trained in Tower Bishops heim, Tchisowkski from Poland these are all people that I have worked with. **[20:03] [20:12]** These are all people I have worked with and I was astounded we all seemed to come up we were all singing from the same hymn book, all the ideas were the same. **[20:20]**

20. **If not British, where did you train?**

21. Please describe the training and style.

[20:34] Our style in this Country, **[20:39] [20:47]** Faster footwork, pro active never stop, controlling, always controlling say in control, and setting up your opponent to be in your area of excellence as you know [21:04] said it is a great way of putting it making them fall into what you want them to do not waiting, controlling the attack as they come from them controlling where you want them to be, and being pro-active on your footwork, preparations with the feet, the body and not so much the blade and the arm everything is preparation visually no beats it is not as tactile thing any more and that how I think it has changed in a big way. **[21:39] [21:43]** No, Johann Heidelberg talks about as system whereby you fence he fences in closer so if someone is doing a step beat lunge or step lunge or step flèche which is too tempo, denying them the build up of speed because the Russians used a lot of speed and very fast step lunges, and so he would step in he would close the distance or he could do the step lunge so they were out of their excellence and he talks about a completely different he want to maintain his area of excellence controlling where he wants them to be and that is different it is all footwork based, fast footwork continuously. **[22:38]**

22. What sort of athletes do you mainly coach or train with?

[22:43] Mainly youngsters, youngsters take things on board very easily, your club fencer does not take it on board you have to put the sausage machine into action, which is obviously a bit annoying but youngsters take this on they are quicker so for me it is the 13, 14, 15, 16, 17 up to 20's early 20's but even saying that even my 7, 8 year olds and 9 year olds are in the same system, as well as teaching my 17 year olds. **[23:15]**

23. What level, age and sex are they?

[23:31] I have had National Champions, senior National Champions, Junior Champions, BYC Champions, [redacted], yes [redacted] some very good successes there yes, Olympic [redacted] well that was wheelchair fencing, and she was [redacted], three years before Sydney. **[24:04]**

24. For your top level athletes, how many have you trained and over what period?

[24:09] It has got to be my new ideas, well not my new ideas my interpretation of what I think it should be. **[24:21]**

25. Please briefly describe your training methods.

[24:32] Get them proactive get them working on their feet, work on the flèches, fast flèches, taking the time from your opponent, controlling the timing of the opponent, a lot of fitness and speed, footwork has to be, fast and it is short so we will do 8 seconds fast footwork and then a minute rest, 8 seconds fast footwork another rest, and so on we keep doing that, lunge fast

and half a flèche fast, and work on visual signals, any pairs work we do has to be done with what you attack when the visual signal was there to go what you see the timing that goes what I am looking for not a signal as a coach would do it but when the distance closes or you have controlled the distance then you go and we do a lot of pairs work loads of pairs work, even my 7 year olds, pairs work, pairs work, pairs work, we keep changing the pairs don't let them go with their best friends, lots of pairs work. Because if they have to get the un-orthodox attack from different fencers not the perfect attack from a coach. **[26:04]**

26. **What is the element you spend most time on?**

[26:07] Timing

27. **What is the element you think is most significant?**

[26:13] Controlling the timing.

28. **Do you have a training or coaching manual or book you mainly use: what is its name?**

[26:22] Yes Tchikowski Venue the one by Johann Heidenberg and one by his name has gone out of my head the tennis one, it is called, Winning Ugly, Brad Gilbert, Olympic tennis player World Champion. Winning Ugly very good book and that is about it. **[26:59]**

29. **What other literature do you find useful?**

[27:04] Psychology, I am working on psychology at the moment, you know mind games, and getting the fencer's mind to work, I find there is a four tear level of training like a four sliced pyramid Aztec state pyramid and the base of the pyramid is fitness and health, the bigger the base the fitter they are the more you can hold up and the next slice of the pyramid is technique you still have to learn technique of what the moves are, third slice up is tactics so if you have very limited technique you cannot apply much tactics remember it is a pyramid the greater your base the more technique you can use the greater your tactical application and then right at the top is psychology that is my four slice pyramid. **[27:50]**

30. **Do you use your in-house magazines, or if not, would you like to be able to?**

No, you buy a golf magazine, there is pages in there how to improve your swing how to improve your put, I have never seen any fencing magazine that says how to improve your flèche, how to improve your timing, so what the kids read it what do they get from it old news nothing they can use, rubbish. **[28:31]**

31. **Please describe what records you keep.**

[28:33] Yes I keep records of all my International fencers I have, I catalogue all the International fencers all their opponents so for instance when [redacted] was fencing in [redacted] I had four pages small A5 pages of his opponent in the [redacted] so he knew exactly what move he had he knew in advance by observation exactly what he was

going to do so we were forewarned and forearmed exactly what to do and this is one thing that I think fencers have to do even adults any level you must analyse you have to keep records you must make sure you know exactly what they are going to do don't just go on the Piste with an empty head, that only comes from observation channels. **[29:27]**

32. **May we see examples?**

33. **Do you use a formal (written) programme?**

[29:29] No used to not any more, why not, I don't know takes a lot of time periodisation I don't do I suggest it to them I can give a training programme but I don't do one myself I don't have a system where I write things down only tactically what I see. **[29:51]**

a. **What is the cycle?**

b. **If you do, please describe the periods.**

34. **How do you use goals and aims?**

[29:54] Psychologically set a goal and then get it in the head it is a psychological thing because you can lose it very quickly in your head. Most of the people have the tactical and technical ability but not the psychological ability from using their head. **[30:11]**

35. **In a competitive situation, what advice do you look for or give?**

[30:17] I give how much do you want it and how much are you working for it that simple, don't let them do what they want to do.

36. **How is this delivered "on the field"?**

37. **Is there anything else you would like to add or say?**

Name (printed) _____

Signature _____ Date_____

Feel free to contact us if you have any further questions.

The name of the main investigator, along with telephone and email contact details is:

Please return your completed questionnaire to: [a stamped return envelope should be with this questionnaire]

Annex C – Example of Information Sheet Given to Interview Sample

Information Sheet

Researcher: David Kirby
University of Birmingham (School of Education)
Contact email:
Contact phone:

This research is being conducted as part of the work the thesis for an MPhil at the University of Birmingham.

British Fencing is trying to raise the standards of elite fencing in the UK, and England is preparing to elevate the abilities and effectiveness of the national coaches.

There are general ambivalences in the current framework of policy priorities for UK sport generally, especially the elite. The area of sports' provision and sports' development is changing, and the fields of community and talent or elite developments are drifting apart. The model of the pyramid describing sport development is now making way more for the concept of a 'house of sport'. There are other contemporary concerns, for example sport and health; coaches have to be more cognisant these days of the meaning of fitness of their athletes. Coaches need to be better trained, perhaps. As the changes in sports development occur, a need for coaches to become managers and business people increases.

The purpose of the research is to look at methods and strategies of coaching in fencing and other sports in UK and abroad and to discover some "best practice" at home and elsewhere in order to relate this to the UK's coaching of fencing and coach education requirements for the 21st century.

Interviews will be recorded and transcribed. It is intended to publish the results, findings and recommendations of this research through suitable media, including Journals, in-house magazines, news articles, theses, books and electronic media.

Participants to the research have the right of anonymity and their personal information will be stored in accordance with the Data Protection Act (1994). Individuals have the right to see the data held about them and to request the correction of any errors of fact; this would be done immediately. Application to see the personal data held should be made to the researcher in writing. A means of suitable personal identification may be required so that the data is only released to the relevant individual.

Participants would be able to see the data from their interviews and indeed the final results of the research on request. It is intended to publish the resulting paper in appropriate media.

Participants have the right to withdraw at any time without giving reason. An individual's request to withdraw from the research would be acted on immediately without question. Application to withdraw may be made by any means, preferably in writing, to the researcher.

Annex D – Example of Consent Form Signed by Interview Sample

CONSENT FORM

Project title: ***A Study of Coaching Methodology in Fencing for the UK*** - 2007

Material gathered during this research will be treated as confidential and securely stored. Please sign below to signify that you agree to the collection and use of the research data arising from your participation in this research project, and that you agree the with following statements (Economic and Social Data Service, 2005).

Data presented in written form for this research project will be anonymised, so individuals' opinions and information will not be identifiable or attributable in the published versions.

I have read and understood the information sheet.

I have been given the opportunity to ask questions about the study.

I have had my questions answered satisfactorily.

I understand that I can withdraw from the study at any time without having to give an explanation.

I agree to the interview being recorded and to its contents being used for research purposes.

Name (printed) _____

Signature _____ Date_____

Contact Details:

Email: _____ Phone:

_____

Address:_____

_____

_____

PostCode:_____

Feel free to contact us if you have any further questions.

The name of the main investigator, along with telephone and email contact details is:

ECONOMIC AND SOCIAL DATA SERVICE (2005) **Informed Consent (Example Forms)** [online], Colchester: Economic and Social Data Service, http://www.esds.ac.uk/aandp/create/consent.asp [Retrieved: 13 May 2007]