Career Development of Expert Coaches

Christine S. Nash[1] and John Sproule[2]
[1]Napier University Edinburgh, Sport and Exercise Science,
Merchiston Campus, Colinton Road, Edinburgh EH10 5DT, UK
E-mail: c.nash@napier.ac.uk;
[2]University of Edinburgh, UK

ABSTRACT
Careers in coaching are a relatively new phenomenon in the UK and at present appear to be limited to the performance coach. This study, using an interview approach, examined the transition of expert coaches (n = 9) through various stages in their careers. The main aim of this study was to ascertain if expert coaches could explain the process of their development to perceived expert status. The interviewed coaches could offer no real insight into their designation as experts. They did raise some questions regarding the value of current coach education provision, especially as it related to their current role as coaches of elite athletes. Their methods of development were considered to be informal, with networking with other coaches of like mind believed to be essential to their progress. The ability to contextualise knowledge and information to suit both the individual and situation, as well as appropriate mentors at the initial stages of their coaching careers were also regarded as vital.

Key words: Coach Education, Expertise, Mentoring, Professional Development

INTRODUCTION

In recent years there have been efforts to professionalise sport coaching in the UK, with the involvement of many agencies and educational institutions. Much of this has been attributed to the emphasis on sport and physical activity as part of an active lifestyle [1] and, as a result, there has been considerable demand for appropriately qualified and skilled sport coaches [2]. Careers in coaching are a relatively new phenomenon in the UK and have not yet been the subject of extensive research. However, it is clear from the scant research that is available that high levels of mobility and unclear career paths stigmatize coaching careers [3]. Quality coaching and guidance are key elements in the development of sport. Therefore, it is important to identify the fundamentals that contribute to the development of expertise. Effective coaches are those who adapt their behaviour to meet the demands of their particular coaching environment, but what constitutes an expert coach is still unclear [4-6]. As coaches develop and work with high-performance athletes, their role also changes, requiring more management skills [7]. There is a paucity of information as to how coaches make these transitions. The academic study of sport expertise is concerned with describing and then interpreting both the factors and processes that distinguish the expert, the stages through

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which expertise is achieved and whether these aspects are considered in the design and presentation of coach education courses. Therefore, the purpose of this study is to identify and understand the processes involved in the development of expertise, from the perspectives of nine expert coaches.

EXPERIENCE AND REFLECTION

Experience is a very important element in the coaching process, enabling coaches to interpret their coaching practice and develop knowledge through this authentic learning environment [8-9]. However, there are claims "that experience plays a key role within coaching performance due to the limitations of coach education" [10, p. 115]. Research has also shown that successful coaches accumulate thousands of hours of 'pre-coaching' experience while competing in sport as athletes [11]. This adds to the coach's knowledge base as non-formal learning.

Recent literature has established the importance of reflection in ongoing professional development; for example, the reflective practitioner as popularised by Schön [12-13]. This view highlights the importance of reflection in constructing meaning from actions in the workplace, which is currently topical in the area of sport coaching [14]. King [15] suggests that the process of constructing new knowledge or the process of transforming previous knowledge into new formats is actually enhanced through peer interaction. Additionally, Bleed [16] reports on the importance of socialisation in the learning process. So, promoting learning partnerships and peer tutoring opportunities within on-line environments may be useful strategies to enhance greater academic understanding in adult learning environments; again highlighting the informal learning particular to the coaching context [17].

Of particular relevance to the constantly changing coaching context is the model of intellectual skill acquisition proposed by Van Lehn [18] in which the development of problem-solving skills provides the context for learning. Research into the development of expertise in problem solving has shown that experts access a greater knowledge of the domain; organise their knowledge in ways that make information more accessible; perceive domain-related information and patterns faster and effortlessly; make use of more complex strategies and contemplate a wide range of alternatives; and make better use of meta-cognitive skills. Experts are also more efficient in monitoring the progress of their problem solving and allocating effort appropriately [19-20]. Although expertise is an area that has been extensively researched across a diverse range of domains, within the realm of sport the emphasis traditionally has been on the performer.

Situated learning theory proposes that connecting learning to student interests will further the contextual relevance of knowledge [21]. Wilson [22] contends that gaining skills and knowledge, and then constructing meaning within situated learning settings, require cognitive processes in authentic contexts as opposed to the artificial simulations that are often found in coach education courses. Exponents of situated learning argue that through social interaction, authentic activity, and participation within communities of practice, students are better able to construct meaning in practical ways so that knowledge may be applied outside of formal learning settings [21, 23].

This situated learning approach infers that coaches need to be aware and have knowledge and understanding of learning theories, self-reflection, motivational climate and knowledge construction as well as the technical detail of their sport. Consideration should also be given to the pivotal role of the coach in creating this learning environment for athletes [24]. How some coaches construct their knowledge appeared to be a determining factor in their development and subsequent recognition as expert or otherwise. In general, "little explicit

mention has been made regarding the coaches' need for continual learning and their professional development has been largely ad-hoc and driven by the individual coach" [25, p. 224].

Apprenticeship is still prevalent within sport coaching – a viewpoint which may have merit in the early stages of career development, but much depends upon the 'master coach' and their ability to pass on relevant information. According to experienced coaches, learning from successful coaches is still considered an effective method of achieving the development of expertise [26].

METHOD

This preliminary investigation examines the development of expert coaches and relates this to the educational and training opportunities that are currently available. This study analysed the views of coaches in three different sports; swimming, hockey and football. The primary question asked of the coaches was how they had learned to be an expert coach. This was accomplished by examining what they felt had helped develop them as coaches as well as considering life experiences in their evolution into expert coaches. The key premise is that knowledge arises from many sources and is interpreted in a number of ways. It is not just an intellectual exercise, but involves emotions, the senses and physical activity (in this case coaching). There is no single way to acquire knowledge; it is complicated and complex [27].

PARTICIPANTS

The selection of the nine expert coaches for this study was based on the following four criteria, which have been used in other expert studies in sport coaching [28-30]: i) they held the highest available coaching award from their national governing body; ii) they had a minimum of 10 years continuous coaching experience; iii) they were coaching at a representative level; for example, national or district level; and iv) they had developed national performers on a regular basis. More detailed information regarding the participants is contained in Table 1.

Questions regarding the appropriateness of these participants in expertise in coaching research should be considered. Recent studies have shown these and similar criteria identify coaches of elite athletes, but not necessarily those coaches who have achieved expertise [31].

Table 1. Expert Coach Details (n = 9)

Coach	Sport	Sex	Level of Award	Highest Educational Qualification	Years in Coaching	Number of Performers Developed
F1	Football	M	5	HND	12	4
F2	Football	F	5	Postgraduate	18	6
F3	Football	M	5	HND	14	3
H1	Hockey	F	4	Degree	14	8
H2	Hockey	F	5	Degree	16	6
H3	Hockey	M	4	Degree	21	11
S1	Swimming	M	5	Postgraduate	17	7
S2	Swimming	M	5	Degree	22	14
S3	Swimming	F	5	Degree	15	6

The coaches in this study were generally able to recall details from their backgrounds relatively easily. Perhaps this demonstrates their reflective skills, although not explicitly considered as part of their development as a sport coach or merely a memory for detail. All of the information contained in this study is self-reported by each coach. For example, the level of coaching award and number of performers developed is based on their recollection and understanding. Each coach was heavily involved in leading a minimum of five coaching sessions per week, very often with competition participation in addition to the coaching sessions. They all had support personnel; for example, assistant coaches, physiotherapists, strength and conditioning specialists, who supplied varying input in terms of time and commitment.

COACH INTERVIEWS

In total, nine separate, semi-structured interviews [32] were conducted, one with each of the coaches concerned in this study. The purpose of the interviews was to investigate the processes the coaches had gone through to become expert coaches, focussing on their backgrounds within coaching, coach education and their career pathway. The questions for the interviews were constructed by the lead researcher in line with the main purpose and gathered from expertise literature [11, 29, 33-35]. This resulted in the development of four main areas of questioning: life experiences; educational experiences; coaching experiences; and development of expertise. The questions associated with each area were then given to a second researcher for discussion. Both researchers agreed that the questions were appropriate in terms of their potential to elicit responses to the topic under investigation. All of the interviews for this study were undertaken in a place of the coaches' choosing at a time that was most convenient to them, and carried out and recorded in an area free from distraction. At the end of each interview, the researcher provided a summary of the coach's response to verify understanding and accuracy [36]. This summary afforded the main researcher the opportunity to highlight the most salient points raised by the coach at that point in the interview and to ensure congruence between the researcher's interpretation and the coach's intention. The interviews lasted between 120 and 130 minutes.

DATA ANALYSIS

These interviews were inductively analysed, using an ontological approach to transformational learning [37], through quotes and themes found in the words of the participating coaches. This allowed for depth and "richness" of response to be reflected in the results. The approach also allowed these experiences to be placed in proper social and cultural contexts over time, in order to help answer questions about how a coach may develop expertise.

A selective thematic analysis [38] was undertaken through which each transcript was read repeatedly and categories/patterns/themes that contributed to the core theme were identified [39]. All interviews were tape recorded and transcribed verbatim. Labels were then assigned to these categories, patterns and themes and later standardised across transcripts. Next, across transcripts, those categories and patterns that dovetailed together in meaningful yet distinct ways were developed into five major themes. These themes were experience, knowledge, personal qualities, networking and philosophy. From there, sub-themes were developed under each of the major themes. For example, under the category experience, sub-themes were mentors (e.g. "I thought everyone had a mentor"; "it really helped me develop"), reflection (e.g. "I question myself"; "now it's an integral part of my coaching") and playing (e.g. "I understand what the players feel"; 'playing has helped me coach").

Following Miles and Huberman's [40] research, causal networks were then developed for each transcript to depict the linkages between components of the core themes. Networks were developed and compared at the ideographic level (i.e., at the level of the individual participant, focusing on particularities) and through the creation and use of uniform labels across networks, a level of generalization across individual occurrences was achieved across participants. The core themes, sub-themes and linkages were reviewed and agreed with the research team through negotiated consensus.

RESULTS AND DISCUSSION

There were considerable similarities to report both from the background and current practices of these sport coaches. All of these coaches had been introduced to sport at an early age by a close family member, usually a parent. They all had positive memories of their early sport involvement, being able to identify at least one individual who made an impact on their participation; for example, a coach or a physical education teacher. The majority of these coaches (n = 7) had sampled a number of sports before concentrating on their main sport(s); for example, athletics, tennis, golf, martial arts and rugby. Although they identified family support as a key element of their initial involvement and continued interest in sport, they perceived this support to be positive. This perception had close correlations to studies undertaken with elite athletes [41].

All of these coaches started coaching while they were still playing or participating in their sport, on a very limited basis, which follows an already established pattern in other studies [42, 43]. They all made a conscious decision to move into coaching more formally when they finished playing, albeit at different ages and stages of their lives. Coaching was what they aspired to do, and at the time of the interview they viewed themselves as sport coaches rather than being engaged in any other professional activity. This was not how all of them earned their living, however, as most (n = 6) were employed full-time in other work.

All of the coaches stated that they were interested in and concerned for their athletes as people rather than merely as competitors. This viewpoint manifested itself in many different ways; for example, concern about external pressures, school, jobs, exams, relationships, time management issues and many more. They considered that if the participants were to concentrate on their training then the coaches had to facilitate them being able to do so. The coaches considered many aspects of their practice activities to be no different from that of other coaches, although they acknowledged that their success, measured by results, player development and coaching appointments, was better than other coaches. The coaches were not able to suggest reasons for this success, but through analysis of the interviews the core themes of experience, knowledge, personal qualities, networking and philosophy were identified. Each of these themes contained a variety of subcategories which emerged from the interviews with the designated expert coaches. What also became apparent from these coaches was the emphasis they placed on contextualising all of the variables to suit their own personal, authentic coaching situations.

The purpose of this study was to examine the processes involved in the development of expertise, using the views of these nine expert coaches. The following review considers these coaches' views under the headings identified by the core themes identified in this study of experience, knowledge, personal qualities, networking and philosophy.

EXPERIENCE

The background of each coach demonstrated involvement in sport, some at an elite level, and Coach F3 thought:

I think there are some valuable experiences and insights that I've had as a player that perhaps I've used to coach. I think that's very important. I don't think I would be as good if I hadn't played football.

Coach F1 reflected:

I never really enjoyed school that much – I enjoyed the gym classes though – that's why I wanted to go into sport. I guess coaching is just an extension of that.

According to Saury and Durand [44], the experience of expert coaches has been measured in three ways: the length of time in coaching, practical experience and practical knowledge. These coaches feel that proficiency is acquired more through practice, early sports experience, and encounters with mentors. They could also identify a key individual who helped or mentored them in the early stages of their coaching career. Coach S3 felt that:

I was very lucky when I started because I had such great support. It wasn't anything formal, but Jim performed the job of a mentor to me and really made it easy for me to ask him anything. I suppose I just thought that every other coach had someone like him.

and Coach H1 thought:

I am sure that Hugh played a huge part in making me the coach I am today. He was always around, giving advice, helping me out and generally making me feel useful.

High-level coaches believe that there is a need for a more formalised mentoring programme to allow aspiring coaches with opportunities to acquire hands-on experience and observe mentors during all phases of competition [45]. The coaches in this present study all benefitted from individuals who they considered mentors in the early stages of coaching, but none of them believed that a mentor would assist them in their present situation. Much of this was attributed, in the coaches' opinions, to their perception of a mentor. These coaches felt that a mentor was someone who assisted them or other coaches when they initially started coaching. They were uncomfortable with the notion that a mentor could also help them develop at their current level of knowledge and skill.

This is interesting given that these coaches had clearly identified their own strengths and weaknesses within their present coaching environment, but agreed that they had no guidance about how to enhance their skills. The hockey coach (H1) made the point that:

Most of the time I feel isolated as a coach – all of the emphasis is on the players and the team. If I have a problem I feel I have to solve it by myself. I think that problem solving is now one of my strengths.

Problem solving is one of a number of skills that can develop through experience, but only if the coach has both the confidence and knowledge to question themselves and their

programmes through reflection [46]. Coach F2 explained:

> *I now use myself as a resource, my own source of knowledge. I've been a player, a coach, a spectator, an organiser, I've seen the game from a number of perspectives over the years. I question myself but not through lack of confidence but to improve my coaching and ultimately my players.*

It was the view of Coach S1 that the way in which practice sessions were planned and implemented reflected his experience and insistence on quality:

> *What you do at training, how you maintain the concentration and intensity of the set, how you insist on quality starts and finishes to each distance – all this goes into competition. If you don't demand this in practice, how can you expect it in competition. I never used to think this but when you think about it, I mean really think about it, it's about experience – watching competitions and training and treating them both the same.*

This coach's practice was consistent with the findings of Hodges and Franks [47] who claimed that expert coaches integrate their experience of the elements of competition to make training sessions both relevant and intense.

KNOWLEDGE

Knowledge to these coaches is perceived as having two sub-categories: learning and the specific type of knowledge. Previous research has shown that 36% of coaches considered coach education courses very important to their development [48]. All the coaches in this study were in the 64% of coaches who did not share this view of formal coach education with Coach S3 stating:

> *I have a very busy schedule, training, competition and work – I do not feel that coach education courses are useful enough to make time for.*

Similarly, Coach F2 also thought:

> *I felt like I knew, or thought I knew, what they were telling us on the course and it was things I had already been doing. Perhaps I had just picked up the best way from other coaches, perhaps it was just coincidence, I never really thought about it before.*

Yet, other experiences of formal learning were considered helpful by some coaches, with Coach H3 reflecting:

> *My thinking has been transformed from a rather simplistic one towards a more critical thinking as a result of my degree study – it's helped my coaching too.*

All of the coaches had experienced higher education, seven of the nine having attained a degree, with one obtaining postgraduate qualification (a Masters in Public Health). They had all experienced the independent learning philosophy which underpins studying at university level. Coach F1 considers that:

> *I learned to think about coaching in a much wider context when I was at college. It wasn't just about what you did at the session – everything fits together and I suppose I had never considered it that deeply before.*

The coaches also thought that despite various changes and restructuring of coach education courses delivered by national governing bodies, there was still little recognition of how coaches develop and expand their knowledge. Initially, provision of coach education courses had met some of their needs, especially expanding their knowledge in sport-specific areas of drills and techniques, but none of these coaches had recently attended a coach education course. Perhaps, this reflected their experiences of formal coach education courses not delivering what they perceived to be important. This was exemplified by the swimming coach (S1) who declared:

> *I find that I have to concentrate much more on the quality of the strokes and repetitions during training. At this level, quality reps are much more important than quantity – I try to insist on this during training, but this point was not made during my coaching courses.*

Of interest is that these coaches were generally recognised as expert by their peers and the national governing body within their field, they had never been asked to evaluate or contribute to the development of coach education courses in their chosen sports.

The football coaches especially highlighted the sport skill specific nature of their training opportunities and the "false" nature of the attendant assessments, Coach F2 adding:

> *The coaching situations in the assessments do not represent the coaching that I am doing – the kids all behave, or we coach one another. You also have to coach according to a formula to pass the assessment.*

A hockey coach (H1) raised the issue as follows:

> *Why do we bother having coach education courses with assessments? We never fail anyone and the technical and tactical knowledge that I now use is never assessed anyway.*

It has recently been suggested that as coaches fulfil very different roles and that there is no one definitive method of developing coaching knowledge [49]. If coach education is to be of benefit to practising coaches, then it has been recommended that the components and variables are significantly changed as coaches develop to better meet their needs in the developmental continuum [50]. This could be accomplished by involving expert coaches in the development and/or delivery of knowledge. Perhaps these formal courses need to adapt their approach to incorporate changes in course delivery, taking into consideration the time

pressures of potential candidates and reviewing assessment procedures focussing on learning as it has been suggested that the available coach education courses are presented and assessed in a format that does not encourage learning to take place [51-52].

An examination of the different types of knowledge that expert coaches have constructed throughout their lives requires consideration to be given to many aspects. Coaches identified a number of ways of enhancing their knowledge, gained from both sport and other life experiences. None of the coaches were able to identify the types of knowledge that they routinely used or how this knowledge made them more effective as coaches.

Coach F2 highlighted the importance of both knowledge and experience in the competitive element of coaching, stating:

> *I don't know why I'm getting the results. I don't know that I do anything different from other coaches. I have the same issues with players, practice time, equipment and money. I've had a lot of experience, I think I know the game inside out. I mean the games are where you show what you know – one team against another – it's kind of a battle of wits – one coach against another. You have to know your players inside out and it helps if you know the other players and the team's style of play. It's a bit like chess.*

As "sport expertise is extremely difficult to characterise with a succinct list of requisite aptitudes," it must also be presumed that the same is true of sport coaching [53, p. 20]. The experiences of these coaches "raise the issue of whether mental processes and movement skills are activated by features of the environment and operate outside of conscious awareness, or whether people consciously control nonconscious processes." [54, p. 361]. This raises the concept of automaticity or tacit knowledge in expert coaching [55] highlighted by Coach H3, who considered that:

> *I'm not sure how I make decisions about my coaching – sometimes I just decide to try things and sometimes they work. It's not planned, it's just a reaction to something happening on the pitch.*

Coach S2 added:

> *I find it easier to react to situations now. It's like I've been there before and I know what's worked in the past. I go on automatic pilot sometimes – not really thinking, just reacting.*

Sternberg [56] considers that tacit knowledge, which is what these coaches appear to be utilising, generally increases with experience. More recently, research has suggested that the use of tacit knowledge is positively affected by educational achievement [50]. Studies have noted that declarative knowledge, taught in a breadth-first manner rather than a depth-first, forward reasoning manner, produced subjects who performed better in problem-solving situations [57-59]. Perhaps this should be an approach adopted in the design of coach development packages.

PERSONAL QUALITIES

According to Abrahams and Collins [59], there are no formulaic coaching personalities or

sets of behaviours which lead to coaching success. However, personality traits were initially considered to be determinants of excellent performance [60]. Many of these coaches considered that certain of their personal characteristics contributed to their coaching success. Coach S2 pondered:

> *I guess I'm more confident about my coaching now. I don't worry so much, because I know I can adapt to most situations that I come across.*

Coach H1 thought:

> *I used to have one set way of doing things – that didn't always work. I suppose I'm much more open-minded now, both to situations and individuals. Everyone and every situation is different, so I can't have a one-size-fits-all approach.*

Coach F3 was still motivated by his coaching, saying:

> *I still love going out onto the pitch, even when it's raining or freezing. I still get that buzz and the players respond to that.*

These coaches all displayed characteristics which demonstrate their commitment to both their coaching and their athletes. This commitment has been shown to be an integral component within effective coaching as shown by Côté et al's Coaching Model [61]. This can also be demonstrated by the commitment of the coach to provide high-quality training programmes for their athletes, as Coach H3 showed:

> *The team really motivates me to continue – I feel that if they are willing to put the time in to improve then I have to show the same commitment to their training. I have to make sure that the programme is right – and spend the time making changes after practices – I tinker with it all the time just trying to find that one small thing that will make all the difference.*

Expert coaches of team sports have been shown to invest a great deal of time and energy preparing both themselves and their team for a competition [45]. Coach H1 maintained the realities of the situation for her:

> *I put a lot of time and effort into my coaching – I spend more time preparing, thinking about and worrying over my coaching – more than I do in my actual job.*

This is reinforced by coach S2, who stated:

> *Although I'm involved in sport as part of my job, it's not the same as being a full-time coach. I mean there is so much more I could do – I can see that – but I don't have the time or resources to do all the things I want to.*

The team-sport coaches maintained that an integral part of their role was the effective deployment of resources and that this consumed a large quantity of their time, especially organising the various support mechanisms at their disposal. Recent research has suggested that there needs to be more research into the practice of expert coaches and the integration of sport science findings [62]. The swimming coaches stated that although the organisation of sufficient training time was a factor, they tended to be more reactive to situations that arose. This was also highlighted by Durand-Bush and Salmela [30] who noted that "coaches play a crucial role in orchestrating the environment and removing constraints for athletes to endure intense, high-quality training" (p. 101). Coach F1 explains how he developed:

> *I remember starting out – it was when I was still at school. Looking back, I was clueless but I didn't know that at the time. What I really remember is wanting to do everything, be everywhere, be involved, ask questions, find all sorts of new things that I could do. I guess I caught the bug, but well…..I'm not that haphazard now.*

Coach S1 contemplated:

> *Do I have a structure to my training? Yes absolutely, but at certain times of the year there are meets every weekend. You have to sit down with your swimmer and prioritise and also work out when you are going to fit the training in. It all depends on what's going on and what's important at that time.*

Coach H3 added more detail:

> *Macro cycles, micro cycles, testing and all that sort of thing helps you plan a yearly programme, but if you look at it in isolation you're constantly changing things. There has to be progression, there has to be a goal, but things change and you need to be able to deal with that.*

The coaches in the present study had a vast array of information about their athletes, detailing many aspects of training, competition and performance, along with personal details, differentiating the individual athletes. None of these coaches were paid as full-time coaches, although, as previously mentioned this was how they viewed themselves. They understood both the effort and investment on the part of their athletes to achieve elite status and were prepared to commit themselves to this challenge. Coach S1 summed up this perspective:

> *I'm prepared to do whatever it takes to help them reach the top. If I have to spend more time on the poolside or in the gym, I'll do it. If I have to find out more about lactates, about biomechanics, about anything they need, I'll do it. I'm committed to taking them however far they want to go.*

NETWORKING

Many coaches attribute their development of coaching knowledge to their own experiences and observing experienced coaches [17]. The coaches in this present study agreed with this, but indicated that forums for sharing information and experiences were not encouraged by

their sports organisations and that any developments were generally informal and tended to be among friends and close colleagues. Coach S2 evidenced this as follows:

> *I suppose it just developed over time – there's a lot of time at meets spent hanging around. A number of coaches are at all of the meets, so I guess we just found ourselves chatting more, going for coffee, eating lunch together and naturally from there we just started talking about swimming. We all had a lot of similar problems and it helped to talk about them.*

One of the hockey coaches (H1) explained their situation:

> *We've tried to set things up on a more formal basis in the Institute with all the coaches, but it didn't work for a number of reasons – difficult to schedule with everyone's coaching commitments; also it seemed staged, you know, with an agenda. These things should be spontaneous and deal with real issues.*

These situations generally tend to be unplanned and generally haphazard, but if considered in conjunction with reflective practice can be exceptionally important and useful to the coach [63]. This random approach to networking is typified by Coach F3:

> *I've got some close friends in coaching and it's great to meet up and natter over a beer or two. It's like putting the world to rights, but also sorting out some things in coaching. It's not even about the sport – some of the people I talk to are involved in other sports, but that all helps too.*

Situated learning depends on interaction among people [64] within socially and culturally constructed settings [21-22]. Certainly all learning, and arguably all human interaction, involves situations, contexts, and activities. However, Wilson [22] argued that gaining skills and knowledge and constructing meaning within situated learning arenas require cognitive processes in authentic settings as opposed to the artificial simulations that are often found in coach education courses. Throughout the interview process, these coaches both explicitly and implicitly highlighted the importance of these informal networking opportunities as a medium for discussing issues and problems. This impinged on their own knowledge development and coaching practice and they appreciated the enormous benefits they gained from these networks, as summed up by Coach S3:

> *It's great to be able to pick up the phone and have someone on the other end who's got similar problems. You have to develop that trust, but we're all working towards the same goal and the very thing about talking about it is having a sounding board. I mean I make my own decisions, but to have someone else listen to your thoughts and your reasons and question you really helps.*

The coaches, perhaps as a result of their dissatisfaction with formal coach education courses, deemed themselves to be self-taught at this stage of their development. This dissatisfaction is not confined to the UK, but is prevalent in both Canada and Australia, despite recent radical reviews of their coaching structures [41, 50]. These reviews may have

occurred after the coaches in this study undertook coach education courses, but there is little indication that the revised courses have encouraged any change in perceptions. Coach S1 thought:

> *There's so much information available now on the Internet. You can download programmes geared towards specific swimmers, clips of the top swimmers technique, nutritional information and lots more. I think the trick is knowing what to use and what not to. There's so much that you can't possibly take it all in, never mind use it.*

It seems reasonable to assume that coaches will not always be able to access all the information that they need from their sport, especially at the elite level. Networking is one method by which these expert coaches are able to gain knowledge, but coaches need to be able to access the data they need quickly and easily. This is perhaps one of the processes that could be improved to allow coaches to develop and subsequently attain expertise.

PHILOSOPHY

Research evidence has suggested a relationship between philosophy (or beliefs) and actions [65]. To gain insights into people's beliefs, Ennis [66] suggested that "beliefs often must be inferred from their actions. They reflect a tacit understanding of personal, social or professional truths that have been constructed over time through enculturation, education or schooling" (p. 164). This would suggest that a coach's philosophy would be developed prior to them commencing coaching and their very act of coaching should reflect their philosophical stance. Coach H1 considered her philosophy:

> *I guess the way I coach has a lot to do with the way I enjoy sport – it's hard work, but there has to be a reason to keep coming. My motivation and enjoyment are part of the reason I keep going and it's got to be the same for the kids. I want them to have a positive experience like I did, but I also know that a lot of them are not going to achieve the levels they want to – so it's also about managing their expectations.*

Coach F2 remembered back to her childhood:

> *My dad was the one who really encouraged me in sport. I guess my mum was interested too, but she stayed at home with my brother and sister while my dad took me to the games. He always wanted me to enjoy football, but also wanted me to put the effort in – I guess that was where I got my ideas about coaching from – you know, it's not always about the best players but sometimes the ones who give you 110% are the ones who make it in the end.*

Coach H3 considered that his views of the culture of sport in the UK had informed his philosophy:

I wish that people had a better understanding of what we do, and recognised the time and the effort that goes into any sporting performance – that needs a big culture change, but would probably help getting more people involved, both in sport and coaching. I guess that's not going to happen in my time, so I just have to get on with it.

Coaches start coaching from a wide variety of backgrounds which implies an equally wide range of beliefs. The teaching profession has shown a similar broad diversity of backgrounds, but research indicates that exposure to teacher training programmes does not appreciably change these beliefs [67]. Previous studies examining expert coaches indicated they had developed clear philosophies regarding the organisation and delivery of high-quality training sessions [44, 46]. Coach S1 agreed with this:

I like to vary things in practice sessions. I mean I've seen coaches who were so by-the-book that their warm up never changed – what is the point of that? If the kids know what to do all the time, why is the coach needed? You can vary things, but still get across the main points, insist on quality; everything that you want them to do has to be done the way you want it.

Coach F2 made a valid point regarding the practice environment created by coaches and how important this is in determining quality:

I'm so fed up with seeing coaches set up practices, using lots of cones and grids, then standing back and watching. You need to get in there and make sure everyone is concentrating, know what they're doing and more importantly, why they're doing it.

The beliefs of coaches play a part in their long-term development, but generally the coaches in the present study found them difficult to articulate. Although they clearly had well developed beliefs regarding their coaching practice, they did not consider them to be an important aspect in framing both their role and their practice. These coaches did not connect their beliefs with their tangible coaching approach. These beliefs have also been shown to have an impact on both learning and the approach to learning [68].

CONCLUSION

There is an obvious need for cooperation between education providers and sports organisations to meet the needs of coaches. For sport coaching to develop and become established as a profession, barriers need to be removed. Many of these barriers appear to be situated within the organisational structures of the sports themselves. Coaches need to be recognised for their abilities and the availability of educational opportunities that meet the needs of coaches at the performance end of the spectrum need to be addressed as a matter of urgency. This may involve coaches and the national governing bodies moving away from sport-specific delivery and seeking input from external experts to cope with the increasing demands of high-performance sport. For example, research on ways of enhancing coaching knowledge found that expert coaches acquired knowledge in a variety of methods, including attending coaching clinics and seminars, reading books, networking, observing other coaches

and mentoring [69]. This study found that expert coaches did not value their formal coaching clinics, but did consider their informal networks to be of immense benefit. In their developmental pathway, mentoring and observing other coaches had also played an important role.

Abraham et al. [31] made the point that much research carried out into expertise in coaching has not always used the most appropriate participants. The coaches selected for expert studies possibly are elite coaches and not necessarily expert. Perhaps more attention has to be paid to the determination of expertise and a further examination of currently accepted criteria is warranted. The UK Coaching Certificate (UKCC) intends to raise the standard of coaching by considering "kitemarking[1]" both coaches and coach education courses to ensure they conform to certain standards. Before this happens, genuine expert coaches need to be identified, who demonstrate coaching practice that withstands scrutiny [70].

There is need for the support and nurturing of networks among coaches at local and regional levels and appropriate connections with other professionals across organizations as needed. Coaches in these forums must be supported and encouraged to share their expertise, organise and plan around common goals, as well as generate a stronger voice to influence quality experiences for young people in competitive sport.

According to the coaches in the present study, coach education courses in their current form do not enable coaches to meet the needs of high-level performers. One question that has to be asked is whether or not the national governing bodies are the most appropriate deliverers of this type of information to these already practising coaches. The key themes identified by these experienced coaches of knowledge, experience, personal qualities, networking and philosophy are not currently integrated into formal coach education courses in the UK.

The main aim of this study was to ascertain if expert coaches could explain the process of their development to perceived expert status. The interviewed coaches could offer no real insight into their designation as experts. They did raise some questions regarding the value of current coach education provision, especially as it related to their current role as coaches of elite athletes. Their methods of development were considered to be informal, with networking with other coaches of like mind believed to be essential to their progress.

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[1]The Kitemark® is the world's premier symbol of trust, integrity and quality.

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