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UK Centre for Coaching Excellence Scoping Project Report: National and International Best Practice in Level 4 Coach Development

Projects:

1 **National and International Best Practice:** Research international and national best practice in the education and support of high performing coaches within the 4 x 4 model of coach development

2 **Children's Coaching:** Research and develop the future shape of UKCC Level 4 and related programmes of education and support for 'high performing' children's coaches

3 **Talent Development Coaching:** Research and develop the future shape of UKCC Level 4 and related programmes of education and support for 'high performing' performer development (talent) coaches

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This report represents the views of the UK Centre for Coaching Excellence. Contributions were made by the Level 4 Scoping Team and other co-workers. Co-workers: Martin Crick, Dr Graeme Maw, Alan Olive, Dr Ian Richards, Dr Alex Twitchen, Helen Whitrod Brown, and Laurie Patterson.

Report Contents:

1 Background, purpose and boundaries of the projects

1.1 Background and purpose:

The United Kingdom Coaching Framework describes a United Kingdom Coaching Certificate (UKCC)-endorsed framework of coach education awards. In principle, these are structured by level (based on role descriptors) and domain (based on stage of development and motivation of participants). This structure has been referred to as the 4 x 4 model, although to date it has been variously interpreted by Governing Bodies of sport, and its validity and usefulness is currently under review. It is assumed that the 'pathways' will offer coaches an opportunity to specialise within a domain, while retaining some flexibility between pathways.

The UKCC-endorsed framework of awards has been 'rolled out' by National Governing Bodies of sport (NGBs). Sports take their proposals to an endorsement panel and when the proposals are agreed a Coaching Standards Group validates the award. Sports have been assisted to varying degrees in this process within a programme of priority and lesser-priority sports. The emphasis to date has been on Level 1 and Level 2 qualifications, and to a lesser extent Level 3.

UKCC Level 4 – as the top-end mode of coach education within the structure of the framework – was covered by an initial set of guidelines produced by sports coach UK. Subsequently, a working group was convened and this culminated in a report (*UKCC Level 4/5 Report for sports coach UK, September 2007*). A UKCC Level 4 Pilot Group, representing those sports with existing or developing proposals for endorsement, has continued the work of this group. It was agreed that a 'pilot endorsement' group/panel would be established to deal with existing proposals, although it was recognised that further development at this 'level' of award was required. The existing proposals are focused on a performance/high performance pathway.

The inception of the United Kingdom Centre for Coaching Excellence (UKCCE) provided an opportunity to focus attention on UKCC Level 4. As such, a team of coaching consultants were challenged with the task of examining a number of aspects of UKCC Level 4 structure and provision. The Children's and Talent Development pathways feature as two of the pathways to receive attention within this broader project, and it is the scoping of these pathways that are central to this report. Underpinning this work, and in order to develop 'high performing' coaches within each of the pathways, the UKCCE has chosen to identify

examples of national and international best practice (from both within the world of sport and external to it) in professional development and education. Therefore, it is the composite of these background aims that have provided the basis for the work undertaken in this report. In doing so, this project has worked towards answering the following questions, and the answers to these questions will form the basis of the conclusions drawn at the end of each relevant section:

1) What is UKCC Level 4 coaching? (see sections 3 and 4).
    - Establish the core attributes, capabilities and professional competences that characterise a UKCC Level 4 coach's practice.
    - What is UKCC Level 4 coaching when contextualised to the domains of children/talented development? (see section 4).

2) How do we develop UKCC Level 4 coaches (What can we learn from existing national and international best practice in professional development and education)? (see sections 5, 6 & 7).
    - Establish key principles and guidelines that should be considered in the design of a UKCC Level 4 qualification.

1.2 Project Boundaries:

In undertaking the scoping of UKCC Level 4 children's/talent development coaching, a number of boundaries to the following matters were considered boundaries to the project:

1.2.1 Boundary 1:

The definition of a 'child' varies according to the person/organisation discussing this population; for some, children's coaching begins at birth and runs through to the age of eighteen, while others concur with aspects of this classification, but argue that children's coaching either begins later or finishes earlier (depending on early or late specialisation biases). Talented participants, by virtue of being pre-'high-performance', are more often than not people aged below the age of eighteen and therefore should still be considered as children in the first instance. Hence, children form part of the 'children', 'participation', 'talent development', and 'high-performance' demographics in sport, while talented participants exist within the 'children', 'talent development', and 'high-performance' demographics.

Therefore, in trying to scope the 'children' and 'talent development' coaching domains, the lack of clear delineation between the 'children' and 'talent development' populations made it

difficult to explicitly differentiate between these two coaching domains, with the early/late specialisation biases of those people consulted meaning that this varied somewhat.

1.2.2 Boundary 2:

The coaching children/talent development domains have a number of established stakeholders (e.g. Physical Education & School Sport, Home Country Sport Councils, Youth Sports Trust, Sure Start, Positive Futures, etc.) that impact on and are affected by coaching policies such as the proposed UKCC Level 4. However, it was beyond the scope of this project to engage in consultation with all of these stakeholders; therefore, due to the primary responsibility for programme development and delivery being held by the NGBs, we were seeking only the perspectives of the sports on this aspect of the project.

Acknowledging the boundaries associated with the population of coaches (i.e. 'children' and 'talent development') being targeted within this report, a further set of boundaries required delimitations in relation to the 'national and international best practice' component of the report. The basis of these boundaries came from Carr's (1999) description of a professional, using the following key principles:

- Professions provide an important public service
- They involve a theoretically-, as well as practically-, grounded expertise
- They have a distinct ethical dimension which calls for expression in a code of practice
- They require organisation and regulation for the purposes of recruitment and discipline
- Professional practitioners require a high degree of individual autonomy – independence of judgement – for effective practice

Investigation of other professions (i.e. Law, Medicine, etc[1]) reveals that professional development is aligned with the notion of 'postgraduate-ness'. That is, the norm for most professions is to have a graduate underpinning (i.e. a degree), but it is the postgraduate development after this grounding that confirms, normally with extensive work-based practice, professional status.

[1] We will examine the development of other professions in more depth in section 5.

1.2.3 Boundary 3

The project was limited to investigating development that is either explicitly validated at postgraduate level or is considered to be 'post graduate' in nature by informed peers from the world of coach development and education.

Of particular note is the issue of defining 'best practice', since, what is best practice? Indeed, what is the difference between best and common practice? Using the second principle from Carr (1999), there is an explicit link between theoretical and practical expertise in the definition of professionalism. As such, if best practice is redefined as 'professional' practice there should be (at least some) associated theoretical rationale to support this practice. Therefore, if professional development should lead to professional coaches, the people delivering the professional development should be judged against the same criteria. In essence, the professional development methods used should have a theoretical rationale to support them. This is an important point, since postgraduate qualifications may be validated more against their content than against their delivery mechanism.

1.2.4 Boundary 4

The project was limited to investigating development where there was evidence of a clear rationale for the developmental approaches used, as opposed to just the knowledge delivered through an approach. This evidence was again achieved using informed peer recommendations.

Upon commencement of the project it became apparent that, due to the emerging nature of coaching as a 'profession', there were only a limited number of developmental methods that would fit within the boundaries of our project. However, it was also acknowledged that work being undertaken in other industries may offer valuable insight into the development of professionals. We have already made reference to established professions such as law and medicine. However, given the long established nature of these professions, the financial resources in place, and the relationship between course duration and licensing, they are probably too far removed from the situation coaching finds itself in to be truly meaningful to coaching. Therefore, we took the decision to only examine the development of these professions from a constraints point of view (i.e. duration of course, practice time, etc.; see appendix 1).

Consequently, we chose to focus on postgraduate programmes from similarly emerging professions such as business, education and public relations where those who choose to

complete these programmes are typically already practising and are using the programme as a continuing professional development (CPD) opportunity in much the same way that UKCC Level 3 coaches wishing to progress to UKCC Level 4 will do.

2 Methodology

2.1 Children's and Talent Development Coaching

To ensure that a representative picture of the perspectives of the UK sports coaching landscape was ascertained, it was important to secure the participation of a diverse range of sports in this aspect of the project. Hence, following consultation with relevant sports coach UK Coaching System Managers, a series of NGB representatives were purposively sampled from 'invasion', 'net/wall', 'striking and fielding', and 'individual performance' (comprising a balance of 'early and late specialisation' sports) were contacted, and invited to participate in the project. Eighteen representatives from nine different sports agreed to take part in the project. In each instance, the person responsible for the management of coach education within the NGB was sought for interview; of the eighteen people that participated in the interview process, nine of these people occupied a Coach Education Manager (or equivalent) role, while two were Assistant Coach Education Managers. Of the remaining participants, one participant was Head of Coaching for their sport, with the remaining six having coaching and coach education roles that particularly serviced youth coaching within their sports. The interviews lasted between 120 and 160 minutes.

2.1.1 Interview Questions

All interviews were based on the following set of questions. The exact course and content of the interviews were structured around the interviewee and the time available.

- Could you outline the current coaching and coach education landscape in your sport?
- What is the existing coach education provision in your sport? Why?
- What does 'UKCC Level 4' mean to you [i.e. what is 'UKCC Level 4 ness'?]?
- What roles do/would UKCC Level 4 coaches perform in each domain? (In terms of both job title and also 'functions' [e.g. head coach, coach mentor, programme coordinator / a decision making administrator, sessional coach vs programme coach, etc.]?
- Are the roles performed by coaches in different domains sufficiently different to warrant 'specialised' education? How are they different [do they need different knowledge? Do they have a different approach?]?
- Can you describe what 'UKCC Level 4'-standard Children's coaches look like in your sport in relation to [How does this differ for Talent Development coaches?]:
    - Skills
    - Knowledge
    - Philosophies, that are exhibited

- What is it that sets a 'UKCC Level 4'-standard coach apart from other coaches operating within the same domain/occupying the same role (i.e. a UKCC Level 3 coach)?
- How effective do you think Children's coaching is within your sport? What is good/not so good about it? Why? How would you improve it? How does this differ for Talent Development coaches?
- What do you think the learning programme content (subject matter) for UKCC Level 4 Children's coaches should be? How would this differ for Talent Development coaches?
- How do you currently facilitate coach learning within existing coach education programmes?
- How effective do you think coach education is within your sport? Specifically, to develop coaches working within the Children's context/domain? How does this differ for Talent Development coaches?

2.2 National and International Best Practice

Nine institutions/companies were purposefully sampled (against the criteria outlined in boundaries 3 and 4) and visited. Six of these institutions were directly responsible for the development of coaches.

- Four of these were Higher Education Institutions (HEIs) running Masters Degrees in sport coaching. At each of the HEIs, at least one key staff member and one student were interviewed for at least 40 minutes.
- One was a national coach training centre in Europe running a nationally recognised coach development programme. While at the centre, two course directors, one tutor, three student-coaches and one NGB coordinator (NGB liaison and Mentor) were interviewed for at least 40 minutes each.
- One was a consultancy company operating within the UK, running bespoke courses for small numbers of coaches from several NGBs. Two members of this company were interviewed for 90 minutes. No coaches were interviewed.

All three of the remaining institutions were HEIs in the UK running Masters Degrees in various domains.

- One HEI ran a Masters programme for managers within manufacturing. The course director was interviewed for 90 minutes.
- One HEI ran a Masters programme for communications managers with a publicly funded body. The course director was interviewed for 90 minutes.

- One HEI ran a Masters course that led to Chartered Teacher status in Scotland. The course director was interviewed for 60 minutes.

2.2.1 Interview Questions

All interviews were based on the following set of questions. The exact course and content of the interviews were structured around the interviewee and the time available.

- What are the goals of the course?
- How do coaches (participants) access the course?
- What is the content of the course?
- How is the course delivered?
- How is the course assessed?
- Can you tell us about how the course is funded?
- Can you tell me about any organisational or cultural factors that affect (positively or negatively) the work you are trying to do?

3 Coaching practice: an introduction to the literature

To begin our exploration of the core attributes, capabilities and professional competences that characterise a UKCC Level 4 coach's practice, this section sets out to present a short summary of the coaching research literature in order to locate some of the evidence upon which this report's findings, implications and recommendations are based.

3.1 Is coaching complex?

When asked to talk about the complexity of his coaching a very well respected team sport coach responded by saying simply, "it's not complex; all we're doing is trying to find better ways of improving our players". This response seemed to contradict the general theme of a whole host of research that says the exact opposite; that is, coaching is increasingly recognised as an inexact science and therefore "vulnerable to social vagaries" (Jones and Wallace, 2006, p. 58). So why would this coach say such a thing? Examination of research into expertise in general and coaching in particular (as is done in sections 3.2-3.4) provides some clues.

3.2 Coaching is a socially-constrained, goal-led process

Research (Côté et al., 1995a; Cushion, 2007; Jones and Wallace, 2006; Potrac et al., 2002; Saury and Durand, 1998) indicates that the context within which coaching practice takes place is effected by a number of social, cultural and situational factors that influence the coach, participant and their relationship. Coaches' practice is further challenged as the very essence of sport entails one individual or group often seeking outcome goals at the expense of another. In addition, coaches do not have access to the meaning their participants attach to their experience, creating an element of uncertainty and unpredictability "over what everyone involved is trying to do, why they are trying to do it, and whether they can achieve it" (Jones and Wallace, 2005, p.126). Consequently, coaches frequently make decisions with only partial information and often have to go with 'best fit' options (Abraham et al., 2006; Jones and Wallace, 2005).

There is also growing consensus within the literature that it is impossible to guarantee the outcome of particular strategies, even if they have worked in the past, as the nature of coaches' work cannot be totally defined or specified in advance (Jones and Wallace, 2005). In this sense coaching practice, like teaching, can be considered a "complex, dynamic, and personally constructed activity, sometimes impulsive, not always logical, and often unpredictable" (Cole, 1988, p. 26).

3.3 Coaching complexity can be managed

While there is general agreement in the literature that coaching is complex, Jones and Wallace (2005) state that it is not "wholly irrational" (p. 127). Instead, they suggest that some elements of coaching are quite predictable and others unpredictable. Abraham and Collins (In Press) and Lyle (2002) contend that coaches manage this complexity by developing a hierarchical approach to their decision making, accepting that nothing is ever cast in stone. According to Lyle (2007), the mistake would be to think of goals as unattainable; he suggests that whilst some goals may eventually become unattainable, coaches are well versed in the management of expectations over time. This notion of managing expectations over time is operationalised further by Abraham and Collins (In Press) who argue that:

> "Practically, the coaching process can be viewed as a series of decisions, initiated by and then finally checked against a goal, which generate the best fit option plan for that particular setting. This process is repeated ad infinitum, as aspects of the situation change, across any timespan, micro, meso or macro". (p. tbc)

Support for this approach comes from Jones and Wallace (2006) who propose a similar idea through the metaphor of 'orchestration', defining this concept as:

> "Coordinated activity within set parameters expressed by coaches to instigate, plan, organise, monitor and respond to evolving circumstances in order to bring about improvement in the individual and collective performance of those being coached" (p. 61).

This constant shift in practice requires iterative planning and decision making, observation, evaluation and reactions to 'goings on' (Jones and Wallace, 2006). Indeed, Saury and Durand (1998) described expert sailing coaches' practice as "highly adaptive in nature" and their planning as "very flexible and based on continuous, step by step tuning to the context" (p. 264). 'High performing' coaches are able to rapidly assess situations that do not fit their 'mental models' of expectation (Côté et al., 1995b) and make appropriate pedagogical adjustments that deviate from pre-determined plans underpinned by an explicit knowledge base relevant to the people being coached and the context within which they coach (Abraham and Collins, 1998b; Berliner, 1991; Lyle, 2002; Schempp et al., 2006).

3.4 Coaching quality is tied to knowledge

Accordingly, the quality of coaching practice rests on the coach's ability to draw on a depth of knowledge from a breadth of domains (Abraham and Collins, 1998b) in order to more accurately identify, define and solve participant development barriers through a decision making process (Rutt-Leas and Chi, 1993). The role of knowledge has since been explicitly and implicitly supported by a host of research examining the crucial role of reflective practice in the development of coaching expertise (e.g. Gilbert and Trudel, 1999b; Gilbert and Trudel, 2001; Cushion et al., 2003). By its very nature, reflective practice is a practice linked inextricably with knowledge and knowledge generation – in essence, no knowledge, no expertise!

Finally, this mini-review clearly reveals that a coach's coaching process is fundamentally a cognitive one, an idea that is supported by a host of research (e.g. Abraham et al., 2006; Cushion, 2007; Jones, 2007; Lyle, 2002; Gilbert and Trudel, 2004; Potrac and Cassidy, 2006; Schempp et al., 2006). That is, a coach's actions are preceded by a cognitive process and therefore it is that cognitive process that is the fundamental driver of coaching. For clarity, however, this does not mean that coaching is not about 'doing'; it obviously is.

3.5 Summary

So what is coaching practice? In essence, it is a socially-constrained, dynamic and complex process that good coaches manage rather than control using a breadth and depth of knowledge to constantly make decisions that fit with long-, medium- and short-term goals. In summary, it can reflect all of the descriptions outlined below:

Coaching is socially-constrained and goal-focused

- The goal of coaching is to facilitate the progression of participant(s) towards improving sport performance and associated personal benefits.
- In pursuit of goals, coaching is both predictable and unpredictable (due to the, at times, apparently random nature of the physical and social environment and/or human behaviour) and, therefore, subject to social constraints.

Coaching takes place in a dynamic, social and cultural context

- The coaching process can take place in a variety of contexts (e.g. practice, competition); each context will have an influence on the way in which the process works.
- Coaching is a process that occurs within, and is influenced by, a social setting involving multiple stake holders (i.e. NGB, Government Policy, Club Policy, Parents).

Coaching is a cognitive, decision making process

- A coach's practice can be deliberate, based on critically reasoned decisions and plans designed to achieve nested, long-, medium- and short-term goals.
- Coaching can be unpredictable, requiring coaches to 'orchestrate' (in either predictable or unpredictable situations) the process by consistently making and implementing decisions through recognising and solving problems encountered in all aspects of coaching (i.e. planning, delivery, etc.) and then adopting and/or adapting methods to maintain progression towards identified goals.

Knowledge is crucial to coaching

- Decision making is dependent on having a depth of knowledge in a breadth of domains to support the problem recognition and solving process.
- Maintenance of (higher performing) expertise in coaching is underpinned by a critically reflective process.

4 UKCC Level 4-ness

In this section we draw on evidence generated from our interviews with NGBs, as well as coaching and other relevant academic and professional literature to identify and describe the characteristics of a UKCC Level 4 coach. We begin by presenting a set of statements that characterise the attributes and capabilities of a UKCC Level 4 coach, followed by an exploration of the underpinning rationale for each. In doing so we will suggest how this might look in the case of a UKCC Level 4 children's/talent development coach. We draw the section together by outlining a set of professional competences that exemplify what a UKCC Level 4 children's/talent development coach would be expected to know and do, thus providing a goal against which we can explore the development of a UKCC Level 4 coach in sections 5, 6 and 7.

The following statements identify the attributes and capabilities of a UKCC Level 4:

1. Professional[2] attributes consistent with personal excellence[3] that underpin and consistently lead to deliberate[4] effective coaching practice.
2. Knowledge in a breadth of domains[5] to a depth relevant to the role[6] of developing the participant and developing self.
3. Cognitive capacity to synthesise and integrate knowledge.
4. Capability to take informed goal-directed decisions and actions, using analytical, intuitive and/or innovative cognitive processes[7].
5. Professional perspectives including a commitment to continued self-development, individual autonomy and ethical practice[8].

[2] Characteristics of professionalism that involve a theoretically and practically grounded expertise; see Carr (1999).
[3] Characteristics of excellence as identified in talent identification and development literature; see Abbott & Collins (2004).
[4] Deliberate practice is defined as being effortful in nature, with the main goal of personal improvement of performance rather than enjoyment, and is often performed without immediate reward; see Erickson et al., (2006).
[5] Knowledge and understanding (K & U) of the participant, K & U of the sport, K & U of Pedagogy, K & U of integrated problem solving and decision making, K & U of the context, culture and politics of sport, K & U of developing self; see Lyle (2002), Abraham & Collins (In Press).
[6] Recognition that coaching roles at Level 4 differ sufficiently in line with the goals of the various participants that the required depth of knowledge in various domains will change dependent on role; see Cote & Gilbert (2009).
[7] Coaches at Level 4 engage in practice that is underpinned by thoughtful and considered planning and orchestration that recognises and copes with the complexity of coaching. They also react to issues that occur on a moment to moment basis within training and/or competition settings, using a decision making approach that is intuitive yet reflective of a nested set of goals and informed beliefs; see Abraham & Collins (In Press), Jones & Turner (2006), Lyle (2010).
[8] Engaging as a professional carries a weight of expectation, much of which is described in the previous footnotes. The issue of ethics relates to having a set of personal beliefs and values associated with the coach's role and approach to completing that role, which can be verbalised and defended; see Carr (1999), Thompson (2000).

Note: the relevance of these statements is to describe the attributes and capabilities that should be exhibited in the practice of qualified UKCC Level 4 coaches. As such, these statements should be considered beacons of UKCC Level 4 practice, rather than criteria for assessment. Whilst UKCC Level 4 programmes should be designed to enable coaches to experience, be developed and assessed against these statements, it is important to recognise the limitations (in terms of time and resource) of a formal UKCC Level 4 coach education programme and it's relative contribution to a coach's development. As such, it is anticipated that all coaches selected to undertake a UKCC Level 4 course will already be demonstrating a number (or all) of the attributes and capabilities as a consequence of their developmental journey to that point in time. Moreover, it should be recognised that each individual coach will have developed their own unique profile in terms of 'level-ness' against these attribute and capability statements; hence the importance of individualised professional development and education at this level (*see section 5.4 for more detailed discussion on this point*).

4.1 What is the nature of a 'high performing' (UKCC Level 4) coach?

Interestingly, this question can be in part answered by examining the world of Michelin star gastronomy and amateur cookery. Have you ever wondered why people buy cookbooks? Are they trying to become the next Michelin Star chef or do they simply want to have some more **ideas** available so they can cook something special now and then? We would imagine that more of the readers of this paper fall into the latter of these two categories. But what has this got to do with a report on coaching development? Quite a lot, one could argue.

If you think about the 'high performing' chef, they have an in-depth **understanding** of why different foods, spices and herbs taste like they do and why different cooking approaches change the final flavour and texture, etc. of the food. This enables the chef to create new dishes, not to mention selling recipe books to exploit this creativity! By contrast, the willing, enthusiastic, but lower level cook who goes out and buys the book can follow a procedural recipe to recreate a dish like the innovative chef…so long as everything goes smoothly. However, if even a small part of the procedural recipe starts to go wrong in practice, the enthusiastic cook is soon at a loss as to what to do since they lack the in-depth knowledge needed to solve the problem.

It would appear, therefore, that 'high performing' coaches are constantly seeking to maximise effectiveness through challenging personal 'practice theories' (ideas) through reference to formal 'theories of practice' (understanding) (Strean et al., 1997; Thompson,

2000). This professional attribute enables the 'high performing' coach to: (a) present a personal, reasoned explanation for their strategies and goals; (b) explain and provide reasons for actions taken to meet their goals; and (c) evaluate the personal and collective effectiveness of their strategies (Thompson, 2000).

Ideas and Understanding – A clarification:

We have already used the terms 'ideas' and 'understanding'; however, we suggest that spending a little time considering the meaning of these words can clarify why both are important in coaching. Simplistically, ideas are often about things that we can do but where do ideas come from? They can come from other people, they can come from guess work, or they can come about through understanding. Distinguishing where ideas come from in this manner is important because it can lead to more critical thought about why we do what we do. Such a level of critical thought led Anderson (1982) to develop a theory that identified how knowledge could be split into two broad domains; declarative knowledge and procedural knowledge. Declarative knowledge can be defined as the 'why' knowledge or the knowledge of '**understanding**', while procedural knowledge is 'doing' knowledge or '**ideas**' concerning how to do something (see Abraham & Collins, 1998, for a more in-depth discussion of this topic within the coaching environment). This separation is important since it explains how it is possible to have one without the other; i.e. the coach who does something (procedural) based on 'ideas' without sufficient understanding of knowing why (declarative). It also displays how if we spend more time understanding why things happen new ideas are more likely to develop.

4.1.1 What do we want?

So what type of coaches do we want? Do we want the innovator who is constantly searching for new knowledge and insight so that they can develop new coaching ideas or the coach who uses other people's recipes; or do we need both? Importantly, both have their place. Not every coach has got the time to learn about all of the ingredients of coaching and will benefit their participants far more by using tried and tested recipes and adding their own insightful tweaks to personalise them. However, everyone must recognise the limitations of this approach if the utopian dream of coaching – *participant-centred coaching* – is to be achieved. True participant-centred coaching requires individualisation of coaching which is dependent on having an in-depth knowledge of all the ingredients for the creation of successful coaching programmes.

Indeed, developments in participant modelling have highlighted the need to recognise the role of coaches being defined by participant motive, need and entitlement relative to stage of development and sporting context. In other words, 'high performing' coaching is not a 'one size fits all' concept; what works at one developmental stage or with one performer will not necessarily be equally effective elsewhere (Côté et al., 2007). In exposing such a misconception, we like the analogy of the maths teacher – will the same one take a primary school child all the way through to PhD? This is somewhat unlikely, so don't expect Sir Alex Ferguson to be a 'high performing' coach of a children's under 7's football team; equally, youth soccer coaches should avoid trying to be Sir Alex Ferguson.

The following NGB representative quotation illustrates this nicely:

"You'll find that Academies are appointing highly qualified coaches and asking them to work with under 11's, but they don't know how to do it. It's not their fault – the course hasn't prepared them to work with the people they're being asked to work with."

Consequently if we want 'high performing' (UKCC Level 4) coaches there must be a recognition that long-term, contextualised, development programmes are crucial to the achievement of this goal – we will identify just how crucial later in this report. Short-term coach education programmes can only develop coaches of limited ability simply because that is all they have time to do. In many ways this situation is similar to developing effective first-aid givers or developing fully fledged doctors.

Indeed each of the NGB's reported both a want and need for UKCC Level 4 children's/talent development coaches. The following NGB representative quotations illustrate this:

"I think there is a market need [for UKCC Level 4 children's/talented development coaches]*, and I think that the more we professionalise the sport, there will be as well. But also, I think, from a 'status' point of view as well – people will want to get on it…People just want to add to CV's, don't they? The more it becomes professionalised, the more it will* [be demanded by the market]*, because if you put that on your CV the more you're gonna get the jobs that you want – people are paying lots of money now for* [sport] *coaching."*

"The population of child participants is relatively large, so we should be able to identify a market for that – but if we could get some help on that it would be brilliant; that's what we're looking for, 'how can we work together to do that?'"

"The present structure in [sport] *has a format that demands that coaches operating in certain jobs must have a minimum qualification level in order to access that position. Most of the job specs will say 'minimum level X.'"*

However, when we explored the need for long-term, contextualised, development programmes, each sport raised concerns regarding feasibility, occupational status (the level of voluntary versus paid, and part-time versus full-time coaching workforce), the reward environment, coaching role, coach motive and supporting pathway. The following NGB representative quotations illustrate this:

"What we've got to be careful of – when planning for ambitious coach ed courses (for all the right reasons) – is that we don't overload things too much (i.e. time required to undertake more challenging courses and the cost of these) to a point where we've got the best coach ed courses in the world, but nobody on them...our livelihoods depend on these courses, and clubs depend on having coaches – so it's better to have coaches who have been on a couple of 3-4 day courses than to not have anyone."

"And this is the difficulty with everything to do with the UK Coaching Framework – if you had a blank sheet of paper it'd be dead easy; but you've got an existing system that you're trying to change . . . we're miles away from actually changing the whole system in terms of different types of coaches".

"There isn't an occupational role for coaches to progress to Level 4 in each of the pillars. Within the culture of the sport, coaches associate coaching expertise with the performance of the participant; typically, the longer a coach stays in the sport the more they want to work with older participants that can produce higher standards of performance."

"The motive to coach children in [sport] *is predominantly related to being a parent and tracking their own child through – it's unlikely that they would stay in the sport coaching under 11's long enough to want to undertake a level 4."*

In summary, there appeared consensus among the NGB's in recognising the value of coaches of children and talented young participants. However, there are clearly concerns about the market needed to support stand alone (single sport) UKCC Level 4 programmes in this domain – it is worthy of note, therefore, that several sports indicated support for multi-sport, collaborative provision at this level (an issue that we will return to in section 5). This sentiment is captured nicely in the following comment by a NGB representative:

"When you get to medium- and smaller-scale sports, my personal view is that if you develop something for coaches across sports you could really have a massive take-up on that, and I see that as something that is either the role of sports coach UK or the UK Centre for Coaching Excellence."

4.2 What does a UKCC Level 4 children's/talent development coach look like in practice?

Evidence reviewed in section 4.1 would suggest that UKCC Level 4 children's/talent development coaches are thinking about how to improve their participants' development and/or performance. In short, UKCC Level 4 children's/talent development coaches are continually making decisions (that are then actioned) in order to stimulate, challenge and facilitate the meaningful growth and development of their participants towards identified goals. Accordingly, a coach's practice involves a constant internal dialogue that compares their pre-determined plans, set learning tasks and accompanying teaching strategies with the reality of their participants' progress towards the set goals within a session. This constant shift in practice requires the coach to make decisions about whether to change the plan based on observations, evaluation and reactions to 'goings on' (Jones & Wallace, 2006) in order to make appropriate adjustments that deviate from pre-determined plans (Saury & Durand, 1998). Consequently, Abraham and Collins' (In Press) conclusion that a

coach's practice is predominantly a goal-led decision making process would seem to be a fair one.

It is important to recognise that the decision making process involved here is not a "one-time per session procedure nor a method for presenting clear answers. The main point of effective coach decision making is that it represents a constant 'test and adjust' process in the ongoing search for the best available solution at that particular time and under those particular conditions" (Collins and Abraham, 2009, p. 4). This process is repeated ad infinitum, as aspects of the situation change, across any timespan. In order to demonstrate this process we offer a model (Figure 1) of coach decision making drawn from research with high performing coaches. The model suggests that when high performing coaches make decisions about their practice they consider the child/talented young participant[9], sport-specific needs, and the learning environment in order to develop practice that builds on where the child has come from and helps prepare them for where they wish to go.

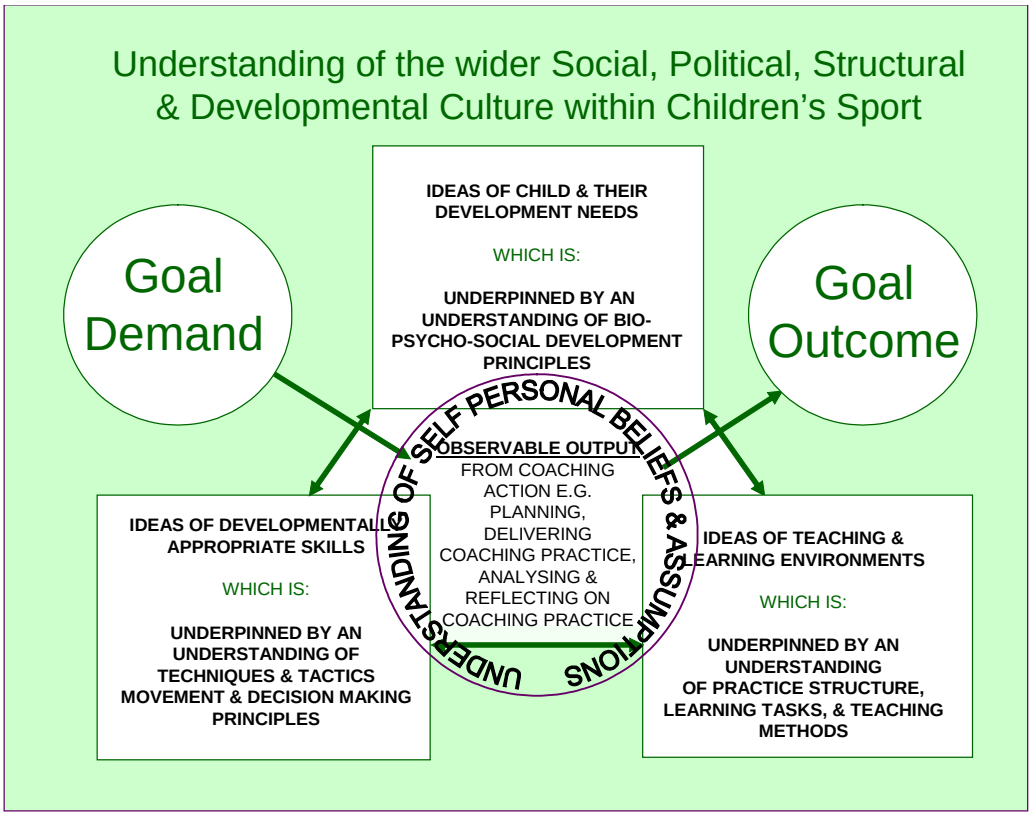


Figure 1. Summary of the Coach Decision Making Process (Adapted from Abraham & Collins, In Press)

[9] Note the term child will be used to represent both children and talented participants for the rest of this section.

There was some degree of consensus amongst the perspectives of NGB representatives and coaches with the notion emerging from the literature (Abraham and Collins, In Press; Collins and Abraham, 2009; Lyle, 2010) that 'high performing' coaches work towards 'nested' goals[10].

The following NGB representative quotations nicely illustrate this:

"The coaches that I know that are very successful have this awareness of what's appropriate now, what's possible now, and what's possible in the future and how that is layered..."

"The best coaches see the connection between everything; they see the interconnectivity of everything rather than seeing things individually. And they understand trade-offs between things . . . one of my favourite sayings is 'a decision that is not good for tomorrow is not a good decision to make today'...[Better coaches] *always make a decision today to help tomorrow".*

4.2.1 Working through the process from a coach's perspective

In essence, we argue that children's coaches' practice (i.e. the **observable output**) entails the constant integration and **constructive alignment** (Biggs, 1996) of the **interdependent** declarative and procedural knowledge relating to the child, developmentally-appropriate skills, and teaching and learning to identify and solve problems in order to progress their participants towards short-, medium- and long-term goals. Indeed, coaches that spend time considering these three areas while planning prior to their session are more likely to be attentive to the child's needs, clearer with learning task instructions, and be able to provide specific, congruent feedback more frequently. In addition, coaches that reflect in (during the coaching session) and on (after the coaching session) the **constructive alignment** between the developmental objectives, the selected learning tasks and the associated teaching behaviours are more likely to enhance the learning experience of the child and subsequent progress towards specified goals – interestingly, a goal of planning!

Key Concept: Constructive Alignment.

The 'constructive' aspect acknowledges that children construct their own meaning through the learning activities; learning is <u>not</u> something that is transmitted from coach to child but is something that children create for themselves. Therefore, coaching is the catalyst for learning. The coach's primary task is to facilitate children's engagement in learning activities that provide a scaffold to achieve their desired goals – remember, what the child does is actually more important in determining what is learned than what the coach does. The 'alignment' aspect refers to the coach establishing a learning environment that <u>connects</u> the

[10] The 'nested' principle infers that coaching can be a deliberate process based on critically reasoned decisions and plans designed to achieve nested, long-, medium- and short-term goals.

developmentally-appropriate skills, learning tasks (i.e. focus on single or multiple skills; opposed or unopposed practice; blocked, random or serial practice; drill, modified game or game, etc.), coaching behaviour (i.e. timing and type of feedback; open or closed questioning; demonstrations; and re-enforcement behaviours, etc.) and assessment (i.e. meaningful, authentic assessment that provides feedback against the learning for both child and coach) to the child's personal and sport-specific goals.

4.3 Ideas

So, for example, a coach of a group of mixed-ability 8-year old children working in an after school programme at a local primary school, may be focusing in the short-term, on developing their fundamental movement skills and associated personal characteristics in order to build their perceived and actual competence, whilst working towards a medium-term goal of developing transitional movement skills to provide a platform for life-long participation and the achievement of personally referenced excellence (Bailey et al., 2009) in sport and physical activity. In order to achieve these goals the coach will require **ideas** about the **developmentally appropriate skills** the children need to develop (i.e. fundamental and transitional movement patterns, increased awareness of space, time and possession, etc.). Equally, the coach will have **ideas** about the **personal characteristics** development needs of the children (i.e. grouping participants by physical maturation, focused on increasing perception of competence and confidence, promoting positive social interaction through team games, etc.) and, finally, the coach will have **ideas** about the types of **teaching and learning environments** that they need to create (i.e. modifying the space, task, equipment, people and speed, etc.) in order to enable the children to realise their potential and make unrestricted participation choices across their lifespan (Bailey et al., 2009).

Conversely, a coach of a talented 14-year old basketball participant may agree a medium-term goal of supporting the participant's progress towards being selected for an under 16 national league team, while keeping in mind potential for progressing to professional senior teams. In order to achieve this goal the coach will draw on **ideas** about the **developmentally appropriate skills** that the participant needs to develop (i.e. individual position-specific skill development such as improving their shooting and/or tactical skill development such as improving their decision making in zone defence, etc.). Equally, the coach will have **ideas** about the **personal characteristics** that need to be developed by the participant (i.e. emphasis on physical, mental and social development, etc.). Finally, the coach will have **ideas** about the types of **teaching and learning environments** that they

need to create in order to enable the participant to achieve their personal and sport-specific goals (i.e. blocked, single skill, un-opposed drill progressions vs variable, multiple skill, opposed, modified practice, etc.).

There was some degree of consensus amongst the perspectives of NGBs in reflecting the need for UKCC Level 4 coaches to possess ideas informed by a breadth and depth of knowledge about the participant. A NGB representative illustrated this nicely in the following quotation:

"Great coaches consistently develop participants...looking at the outcome of all their participants rather than one or two...not necessarily performance driven; they're doing age-appropriate work in age-appropriate volumes in age-appropriate intensities – they're very planned out, but at the same time it's not overly structured so that it discourages kids. And they're patient, and they recognise the kind of variation in development that naturally occurs between different participants, and so they would be looking to improve certain qualities with each individual based on where they were at. In contrast to the ones that get it wrong who have one approach for the entire group".

4.4 Understanding

Building on this we would argue that the **ideas** outlined above should be **underpinned** by an **understanding** of the biological, psychological and social (bio-psycho-social) development needs of the child, techniques, tactics, movement and decision making principles, and practice structure, learning tasks, and teaching methods. This can only be achieved through the coach developing a breadth and depth of knowledge in each of the areas.

However, on talking to the NGB representatives it quickly became apparent that this was an area of concern for NGBs. When asked to describe UKCC Level 4 coaching, the NGB representatives often chose to highlight areas that are absent from their coach education programmes, whilst trying to explain what understanding they thought that UKCC Level 4 coaches <u>should</u> have:

"Coaches' understanding of these things is perhaps not there at present; we're asking an awful lot of this coach, aren't we? Currently, we say as a Level 1 you can go off and coach children, and it's like 'aw no'; we're just closing our eyes to the fact that they've got no skills to coach children - they've not! They struggle to hold a session, they struggle to maintain discipline, never mind plan and prepare to deliver some development...We want the coach to be able to deliver an appropriate session that meets the needs of the participant".

"Our NGB has done a lot of stuff to develop their coaches' understanding of the game...but what we've developed is a collection of coaches that know a lot about the game, but not a lot about those that play it; therefore, they often put on inappropriate practice, as they don't know their clientele...there is a need to be knowledgeable about [the sport]*, but also a need to know about kids...you can know a lot about* [the sport]*, but if you don't know about your players, what you know about is nullified because you put on the wrong stuff, or you go*

about it the wrong way, or you create the wrong environment, or you make them scared, or whatever".

4.4.1 Understanding of the Child

So, deeper **understanding** of a child would come from developing a sound knowledge of the following principles.

- All human development is facilitated and constrained by an interactive dynamic of biological, psychological, and sociological factors that change as children grow chronologically.
- Children's skeletal, muscular, and nervous systems develop at different rates throughout childhood, and the variance associated with this has significant implications for each individual child's physical development and, consequently, their sporting performance and improvement.
- Further, this biological development will have most obvious connotations for children's psycho-motor development. That is, each child's capacity to demonstrate the movement skills fundamental to sports participation (e.g. balancing, travelling, controlling objects) will vary according to (the maturity of) their physical make-up. Hence, as developing these psycho-motor behaviours is critical to all children, whether they progress to elite-level sport or life-long participation, coaches should be considerate of each child's individual needs.
- Children have been found to possess a variety of reasons for participating in sport, but these essentially comprise a mixture of desiring skill development, physical development, and social interaction (Bailey et al., 2009).
- These motives, however, will likely change over time with younger children seeking excitement and pleasure, while older children strive for achievement and satisfaction (Bailey et al., 2009).
- Evidence (Freeman, 2001) suggests that key correlating indicators of learning and development include participants' self-regulatory and meta-cognitive skills (e.g. goal setting and performance evaluating), and that these appear to begin developing around the ages of 9-11. These psychological skills are particularly important for enhancing motivation, optimising focus and ultimately leading to improved learning.
- Cote and Gilbert's (2009) 4 C's perspective on positive youth development offers a useful framework from a psycho-social perspective, with key messages for coaches to understand their participants relating to *competence* (individualise competence information that is positive, but that is also realistic in relation to what participants can observe through peer comparison), *confidence* (enable competence to be evaluated by participants according to self-referenced improvement and effort), *connection* (promote positive participant- peer, parent, and coach interaction and the demonstration of pro-

social behaviours by encouraging cooperation and recognition of the needs and abilities of others), and *character/caring* (promote moral reasoning and provide opportunities to demonstrate character and caring).

- Childhood includes certain critical social development periods; initial interactions with adults and other children in early school years and the transition that occurs as they move from primary to secondary school are regarded as significant milestones that can influence children's longer-term social competence.

The following NGB representative quotation illustrates the importance of participant- rather than performance-centred delivery:

"Many coaches are providing 'watered-down' performance programmes to kids that are only doing one or two hours per week of [sport]*, whereas they should be offering a programme to keep them in the sport based on exercise, based on fitness, based on social-psychological well-being. But all of these coaches are going on education courses that are based on the vertical, performance-oriented structure".*

4.4.2 Understanding of Skills

Equally, a greater **understanding** of developmentally appropriate sport-specific skills would come from developing a sound knowledge of the following principles:

- A fundamental basis to the development of both performance excellence and lifelong participation requires the incorporation of a wide variety of cognitive, perceptual, and motor skills into the development programmes of all children.
- Children aged 0-6 require informal learning opportunities in the home and pre-school environments, aimed at developing rudimentary movement skills (e.g. pushing, kicking, reaching) and a love/enjoyment of physical activity.
- From approximately 5/6 to 8/9, children benefit from a broad range of fundamental skills (e.g. hopping, skipping, jumping, sending, receiving and pivoting) in a playful context, with these contributing to participation in sport and developing more advanced skills in later years.
- Then from 8-12, appropriate opportunities should be provided for participants to learn a wide range of transferable sport skills (e.g. creating space for self and others).
- As participants progress in training age and skill, fundamental skills should assume proportionately less of the practice time, with sport-specific and decision-making skills emphasised to underpin the development of future successful performance and involvement in more specialised activities.

Interestingly, a number of sports reported concerns about a traditional pre-occupation with adult-based technical and tactical skills at the expense of developmentally-appropriate, sport-specific skills (i.e. adult practice being imposed on children).

The following NGB representative quotation nicely illustrates this:

"There was a technical manual that contained drills and practices, and the coaches' understanding in delivering those varied from level to level depending on their development. What's happened is, the technical director wrote it [technical manual] *in consultation with some high performance coaches, delivered it down into the camp structure that we had at the time - the pathway on regional camps and national camp - and then, because those coaches were from the community game, they took the technical manual into the community game; the community game wasn't ready for it! But they've just seen some pictures of practices, drills and they've copied those, rather than developing their own programmes based on participant needs. I think all along this, the framework, we forgot the person we're coaching; we believe we're dealing with and adapting coaching sessions, but again that is dependent on the coach being able to do that and their* [coach's] *stage of development".*

4.4.3 Understanding of Learning and Teaching

Finally, a greater **understanding** of learning and teaching would come from developing a sound knowledge of the following principles:

- Coaches influence the learning climate and participants' learning through behaviours and practices such as the manner of their interactions with participants, the way tasks are structured and managed, and how performance is judged and acknowledged.
- Careful **planning** is required if learning is to be strategically facilitated across the long- (e.g. seasonally) to short-term (e.g. individual session) continuum. To achieve this, bio-psycho-social and sport-specific targets must be established and worked towards through consideration of the overall management of sessions (i.e. use of space, time and equipment), selection of learning tasks and cues, and identification of learning assessment methods.
- Certain coaching behaviours, when used appropriately, can greatly facilitate learning (see Abraham and Collins, In Press, for some elaboration on this idea).
- For instance, **demonstrations** can be very effective for learning (especially with new skills), but not so effective at other times (e.g. refining already learned, or introducing complex, skill), and even ineffective or harmful on certain occasions (i.e. situations in which one specific technique is not necessarily required to achieve an outcome) (Hodges and Franks, 2002). Hence, coaches need to think about how they use this behaviour with their children.
- Coaches should also consider what type of **feedback** (i.e. informational, behavioural, correctional, re-enforcing, motivational, positive or negative, etc.) they should be providing, when, and how often. Whilst younger children trying to master new tasks may benefit from more (amount) immediate (timing) feedback to encourage quick improvements, less (amount) delayed (timing) instructional feedback may prove most beneficial for retention, transfer and learning. Too much feedback may overload the child and create coach dependence (Chambers and Vickers, 2006).

- Instead of telling children how well they did, they should ask them, relevant and challenging **questions** that provoke children's curiosity, improve understanding of skills, focus attention, increase confidence and develop decision making/problem solving skills. However, coaches must also pay attention to avoid inappropriate excessive questioning which can create anxiety and defensiveness within children (when the learner feels like they are being tested; Chambers and Vickers, 2006; Morgan, 2006).
- The **type of practice** tasks coaches devise for their children can impact on children's learning. This can also be linked to the overall **structure of the learning programme** within which children participate.
- In terms of the **practice type**, while *blocked* and *constant* practice of a skill leads to improved short-term performance, *random* and *variable* practice is associated with better learning in the medium- to long-term (see Abraham and Collins, In Press, for a review). Hence, coaches need to consider the associated trade-off between short-term feelings of competence and longer-term retention within their coaching when selecting practice tasks for their children.
- The larger-scale **programme structure** within which children participate and progress through can be adapted to most effectively promote long-term participant development towards excellence and/or life-long physical activity.
- During the early stages (sampling years, i.e. 6-12) of participation, with an emphasis on playful activities (i.e. deliberate play), the coach's role is mainly to act as a "resource person" (MacDonald, Côté, & Kirk, 2005, p.4) who can modify the environment or supply directive feedback and instructions in order to quickly correct errors (NB, this approach does need to be balanced with the need to develop self regulatory skills in the older end of this age group).
- As children get a little older (specialising years, i.e. 13-15) coaches should shift the emphasis of their practice structure in order to retain the sense of (deliberate) play that perhaps made initial participation so appealing, but now also introduce a more intensive direction towards learning and improvement (i.e. deliberate practice).
- With a further maturing of age, children will either become more intensely involved in development (investment years, i.e. 16+) or they will seek to participate for other reasons (recreational years, i.e. 13+). Within the latter, coaches should carry on the role they performed during the specialising years. To assist participants' ongoing development, however, the coaches' technical and tactical instruction should become more focused, with an increasingly "serious" (MacDonald, Côté, & Kirk, 2005, p. 5) approach to participants' practice involvement.
- Ongoing throughout childhood is the necessity for coaches to make formative and, sometimes, summative **assessments** of their participants' development. These

judgements, which in certain contexts (e.g. youth Academies) dictate participants' retention within development programmes, occur to some extent in every context. For instance, at the beginning of all coach-participant relationships, coaches will make an appraisal of their participants' attributes which will then inform the types of goals them deem to be appropriate. Furthermore, coaches are then required to make ongoing decisions regarding the type of challenges they regard as being pertinent for each participant, and then increase/decrease (depending on what is appropriate for each individual) the demands of the tasks they create so as to facilitate their participants' progression towards 'improved performance' (with 'performance' referring to the holistic sense of child development here).

4.5 The Hidden Curriculum

The previous section (4.4) reflects the more obvious domains of knowledge that can be drawn from figure 1. However, within figure 1 there is also an element of 'hidden curriculum'; these being: Understanding the Organisational, Performance and Cultural Goals, Norms and Constraints (or more simply understanding the coaching context!); Understanding Self, Beliefs and Assumptions (i.e. helping the coach to better understand their influence and role in and on their coaching); and Understanding the Process and Practice of Coaching. Each of these domains offer further insight into the actions, decisions and behaviours of high performing (UKCC Level 4) children's coaches.

4.5.1 Understanding the Coaching Context

In order to understand the actions decisions and behaviours of coaches, it is important to acknowledge the specific 'coaching context' within which they act (Côté et al., 2007) and multiple stakeholders (e.g. parents, other coaches, physical education and school sport, national governing bodies, decision making administrators and other policy makers) that influence their practice. In addition, a number of participant development models from a broad range of authors (Abbott and Collins, 2004; Bailey and Morley, 2006; Balyi, 2002; Côté et al., 2003; Martindale et al., 2007) are being used in varying degrees to inform the prescription of coach education and, subsequently, practice across a range of statutory and non-statutory bodies that engage children in sport.

Consequently, research in participant development argues for coaches to take a long-term developmental approach to coaching children, matching both curriculum and teaching approach to the needs of the child; not to the needs of the coach. Children's coaches should therefore pay attention to the biological, psychological and social (bio-psycho-social) development needs of each **individual** child in order to provide a platform for future

engagement in sport and physical activity. Importantly, coaches must look beyond 'here and now' markers of physical skill and maturation and consider factors that "distinguish between potential and the ability to translate that potential into performance" (Bailey et al., 2009, p. 57).

4.5.2 Understanding of Self, Personal Beliefs and Assumptions

Much of coaches' actions, decisions and behaviours are directed by tacit knowledge, the acquisition of which "takes place largely independently of conscious attempts to learn and largely in the absence of explicit knowledge about what was acquired" (Reber, 1993, p. 5). Indeed, this learning underpins many of our assumptions and deep-seated beliefs that we are, consequently, not particularly aware of (Strean 1997). It is also why, almost unconsciously and automatically, social norms are developed; i.e. football coaches act like football coaches, athletics coaches act like athletics coaches, etc. In essence, assumptions and beliefs are an expression of a coach's life history and, as we know, history has a tendency of repeating itself! Therefore, it is not until we become aware of these assumptions (tacit knowledge) that we can become truly critically reflective and consequently more able to think through our explicit decisions (Strean, 1997). In short, while tacit knowledge is unavoidable in any setting, not least coaching, it is those coaches who gain an explicit awareness of, and critically reflect on, this tacit knowledge who are best able to make the most use of it (Abraham & Collins, In Press).

There was some degree of consensus amongst the perspectives of NGBs in reflecting the need for UKCCE Level 4 coaches to possess a high level of self-awareness. A NGB representative illustrated this nicely in the following quotation:

"Level 4 [coaches]*, to me, are the initiators and innovators, but they're also the ones who reflect the most about what they're doing. They don't just do it because they're doing it, they do it because they've thought it through and they understand why they're doing it, and they're trying to take their participants onto a different level...that's the key thing – self-awareness."*

4.5.3 Understanding of Process and Practice

Given the breadth and depth of factors that the coach has to cope with and the knowledge required to do this, the really innovative skill that 'high performing' coaches exhibit is the synthesis of ideas from these five interdependent areas to inform their decisions, actions and behaviours when engaged in **planning**, **delivery**, **reflection** and **organisational** roles (i.e. the **observable output**). As such the decision making process is a little more complex than perhaps the model (Figure 1) might first suggest. Certainly, a coach "who has mastered this process will have a broad and deep capability, which enables them to cope with the

unexpected, see beyond the obvious and have the awareness of (and critical rejection of) alternative ideas" (Collins and Abraham, 2009, p. 5). Broad procedural rules for making choices (heuristics) are used by 'high performing' coaches to minimise the number of options and maximise the coverage of possible solutions (Abraham and Collins, In Press; Lyle, 2002). Drawing on extensive knowledge and past experience, 'high performing' coaches recognise patterns and similarities across different situations and are able to construct a 'mental model'[11] from their observations and analysis, which can then be measured against their repertoire (Gilbert and Trudel, 2001) to anticipate likely events and respond to shifting conditions (Lyle, 2002; Schempp et al., 2006).

There was some degree of consensus amongst the perspectives of NGBs in reflecting the need for UKCC Level 4 coaches to possess a capacity to synthesise knowledge to make informed, goal-directed decisions and actions. NGB representatives illustrate this nicely in the following quotations:

"The best coaches see the connection between everything; they see the interconnectivity of everything rather than seeing things individually, and they understand trade-offs between things...a decision that isn't good for tomorrow is not a good decision to make today... ['high performing' coaches] *always make decisions today to help tomorrow."*

"That's the art of coaching to integrate those three things together. What I see the best coaches doing is they have a very good understanding...they are very good at theorising about how those things fit together and what they need to do for that participant in order to get those things to work better together [making reference to the three components of the decision making model – see figure 1]*...if you're talking about Level 4 coaches, they should at least understand the relationship* [interdependent relationship between all of the components of the decision making process – see figure 1] *between these things."*

There seems little doubt that decision making plays an important part in coaches' everyday practice and is a significant component of coaching expertise (Lyle, 2010). However, the exact nature of optimum decision making is less clear; while Classical Decision Making (CDM)[12] may serve coaches to develop more innovative 'professional' solutions, the social-situational context and associated pressures typically influence coaches to engage in a more Naturalistic Decision Making (NDM)[13] process. For example, in team sports, much of the coach's decision making in training and competition settings can be categorised as semi- and non-deliberative; that is, there is an element of time pressure which influences the coach's desire to find the first available solution – not necessarily the most appropriate

[11] Mental models are characterised as flexible and adaptive structures that integrate the interdependent domains of knowledge to provide rich internal representations of coaching situations (Côté et al., 1995).

[12] CDM reflects a position where "making choices is best achieved by careful research of the various possibilities, a weighing up of the alternatives, consideration of the various pros and cons, and the generation of a final 'best fit' answer" (Collins and Abraham, 2009, p. 23-24).

[13] "NDM describes decision making where there is a dynamic interplay of experience/knowledge, a high level of complexity, and the environment, and where the generalisability of laboratory-based research would be questionable" (Lyle, 2010, p. 6).

(Collins and Abraham, 2009; Lyle, 2010). Indeed, coaches often describe their decisions as intuitive[14]; however, we must recognise that 'high performing' coaches' intuition is sharpened by years of experience and bolstered by extensive knowledge to make many of their judgements and decisions; "A criterion that separates the 'high performing' from the less 'high performing' is not the amount of intuition used, but rather the superior performances and solutions that the process yields" (Schempp et al., 2006, p. 157).

An additional hallmark of the 'high performing' coach is the efficiency of their decision making; Siedentop and Eldar (1989) attributed this automaticity to a perceptual ability to discriminate the important from the unimportant early and respond quickly, with often well-established routines and practices. Schempp et al (2006) also point out that the instructional routines of 'high performing' coaches become so familiar that they can respond instinctively to a situation rather than having to give it careful and rational analysis before arriving at a decision. Consequently "their coaching activities take on a natural fluidity and timing" (p. 153), while "practice openings, closings, demonstrations, explanations, activities, participant movement, equipment distribution and even interactions with participants are performed with seemingly little effort, but result in remarkable outcomes" (p. 158). According to Lyle (2002), these 'cognitive shortcuts' are based on their tacit, propositional and procedural knowledge and fit comfortably with the NDM paradigm.

However, coaches engaging in a NDM process alone will only consider potential solutions up to a point at which they identify one that fulfils the minimum criteria for a desired goal to be achieved (Collins and Abraham, 2009). That is, it is the most appropriate action that emerges from the limited data, confusion of factors, or time pressure under which the coach operates. The availability of data, the uncertainty of outcomes, the time available, and the limits of our computational capacity mean that the action decisions are not arising from a completely rational, analytical and considered process (Lyle, 2010). So, while NDM approaches may be the preferred option, it would appear that there is evidence to suggest that this approach may not lead them to the 'optimum answer'; "Perhaps the answer lies in the inherent levels of accuracy, or rather lack of accuracy which characterises the performance coaching environment" (Collins and Abraham, 2009, p. 24). Moreover, in order for coaches to pursue continuous improvement and avoid stagnation they must constantly challenge their assumptions, knowledge and actions – as such, when and where appropriate (in particular, during planning and reflection), coaches would be well served by adopting a CDM approach.

[14] Wierzbicki (1997, p. 69) defined intuitive decisions as "quasi-conscious and sub-conscious information processing, leading to an action, utilising aggregated experience and training".

4.6 Implementing the coach decision making model in practice

To conclude this section, we illustrate the application of the decision making model within a children's coaching context. Obviously this is pretty difficult to achieve within a report! Therefore, picking up from the previously stated viewpoint that planning is integral to the facilitation of learning, we shall draw upon appropriate ‘child’, ‘sport’, and ‘teaching and learning’ considerations to apply some of the associated principles that have been overviewed in Section 4.5 within a vignette and associated session plan for a specific situation.

The following vignette and accompanying plan illustrates how Martin, a children’s football coach, uses the coaching decision making model (Figure 1) to inform his planning for coaching practice.

4.6.1 Vignette

Martin is an enthusiastic football coach who works full-time within his local professional football club's youth development system. Although the majority of his working week is spent coaching within the club's grass roots community programme, his real passion is his role as the under 11 boys academy team coach. The academy philosophy at this club recognises the use of football as a vehicle to support the 'holistic' development of its participants. This was a key reason why Martin was drawn to the academy, as he also believes that football can be used to develop a broad base of transferable physical, psychological and social skills that will provide a platform for lifelong participation in sport.

Martin is in his third year of coaching this particular group of boys, and during this time he has changed the emphasis within practice time from fundamental movement skills to transitional sport and decision-making skills. Over the course of the last three seasons Martin has emphasised the development of fundamental movement and technical sport skills by drawing on a range of blocked, random and variable practices. While delivering these skills Martin has also worked on the hidden curriculum of developing children's psychological skills in becoming better and more independent learners. Whilst he has always used deliberate play and various forms of modified games to apply these skills in sport-specific contexts, the emphasis of his teaching behaviour has not been on developing concepts of team play and tactical understanding.

Moving into the fourth year he is keen to harness the previously learned fundamental and transitional movement skills (particular focus on short, sharp acceleration, stopping, changing direction and body positional change in response to movement of ball, team mates and opponents) in an integrated fashion to focus on the development of tactical principles that apply across invasion sports. In preparation for the forthcoming season, Martin wants to create practices that emphasise defending territory, regaining possession of the ball, retaining possession of the ball, and creating space to attack and exploit. With these goals in mind, Martin has decided he wants to focus tonight's practice on:

1. Movement off the ball to create space for self and others.
2. Identifying team mates in space and sending effective passes.
3. Appreciating the risk-reward associated with a penetrative pass versus a lateral routine pass.

As with all of Martin's sessions, in addition to his desire to develop his participants' technical and tactical skills, of equal importance to him is that every child leaves the session with a sense of personal achievement and enjoyment.

Building on Martin's own experiences as a participant in football he prefers to design games-based practices that develop skills which combine movement and sport-specific techniques, perception and decision making. In doing so he sometimes encourages free play and experimentation – during which times he sees his role as one of facilitating the organisation of their games – while at other times he uses adaptations and game conditions to guide his participants towards specific goals. During these more structured games, Martin likes to draw on a range of divergent questions that encourage children to take responsibility for their own learning and develop their understanding of techniques and tactics whilst on other occasions he uses a combination of teaching behaviours including positive re-enforcement, demonstrations, corrective feedback to guide their learning.

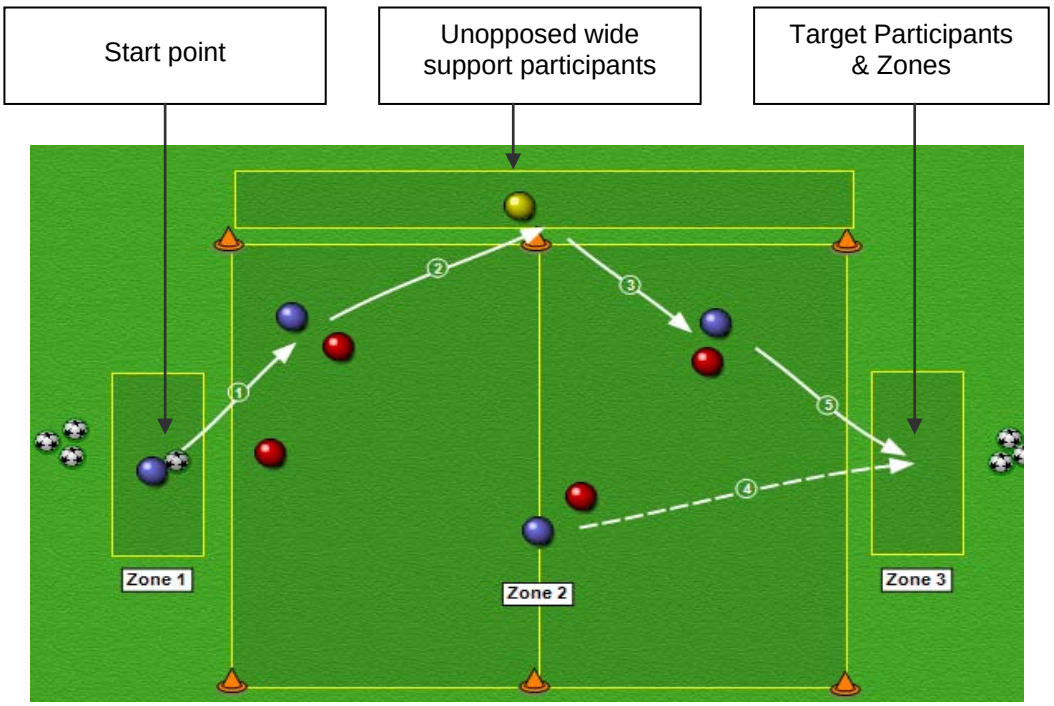
Drawing on these principles, Martin has decided to construct a variety of deliberate play scenarios (with increasingly demanding game conditions) in working towards the goals of tonight's practice. In order to reduce the technical complexity of the task and allow greater focus and attention on tactical decisions (i.e. goals 1, 2 and 3, above) Martin has decided to use a throw-catch game. Whilst planning, Martin considered the factors that would impact on his participants' capacity to meet the demands of the learning tasks and their subsequent feelings of competence. Therefore, to make the tasks appropriately challenging whilst also retaining a realistic opportunity to experience success, Martin decided to split the groups according to their ability and physical maturation. In addition, Martin recognised that by running two games simultaneously he would provide greater opportunities for practice and enable him to observe and help children at their own level. Martin intends to use rotations as an opportunity to speak individually with children and provide differentiated, personalised feedback away from their peers and to engage them in observational learning by directing their attention to specific technical and tactical cues.

Martin has particular concerns that some of his participants are not as forthcoming as they used to be and tended to operate on the periphery of the session – he is conscious that his participants were at an age where they were beginning to recognise that other children can do things more easily than they can. Consequently Martin planned the structure and rules of the game scenarios to include unopposed wide support positions, thereby enabling these children to play a central role within the game but without the pressure of opposition. He also wants to use the game-based scenarios to promote positive participant- peer interaction by encouraging cooperation and recognition of the needs and abilities of each participant.

4.6.2 Plan

General Details:					
Date:	26-01-2010	Time:	16:30-18:00	Venue:	Sports Hall
Session Objectives:	1. Movement off the ball to create space for self and others 2. Identifying team mates in space and sending effective passes 3. Appreciating the risk-reward associated with a penetrative pass versus a lateral routine pass				
No of Participants	18 – 20 participants			Age	10-11yrs
Participant Considerations:					
Physical:	Generally good level of agility and co-ordination amongst the group; some participants' object control, speed, strength and power more advanced than others.				
Psychological:	All participants are measuring themselves against each other; most are able to combine basic skills efficiently; some participants are strong at being able to scan and take decisions based on information – others need additional support – time and space / scaffolding questions, etc.				
Social:	Strong feelings of connectivity and teamwork within the group – important to remind those with greater confidence and ability to be sensitive and supportive of their peers.				
Technical:	Some participants are modifying basic skills to create their own sequences in response to the game constraints; some are still refining basic movement skills and need support in applying them to bigger games.				
Tactical	Some participants are demonstrating excellent understanding of time, space and selection of appropriate technique – others need support to progress from 2v2/3v3 to 5v5 scenarios.				
Specific individual points to consider:	Mike & James – very recent growth spurt – appear to lack confidence on ball when under pressure. Richard, Ben, Ian and Sam – strong, physical, technical and tactical ability Speak with Max and parents – check on injury status.				
Content Considerations:					
Technical	Bounce pass and overhead pass – N.B. focus on body position and movement today.				
Tactical	Spatial awareness – check for scanning skills – work in triangles – pass selection and decision making.				
Movement skills	Emphasise change of pace and direction – signalling with body positioning, communication – hand-arm signals.				
Teaching and Learning Considerations:					
Learning tasks	Use blocked and variable practices for warm-up progressions. Modified throw-catch invasion game scenarios to reduce the technical complexity. Use wide support participants to provide overload conditions and encourage penetrative passes. Increase game complexity using conditions and zones. Start with small 4v4 game – split group into 4 teams working on two pitches simultaneously – progress to 8v8 – revert back to 4v4 if necessary.				
Teaching methods	Use participants within demonstrations to organise and explain activities. Use specific positive re-enforcement to emphasise cooperative behaviours and achievement of objectives. Focus on divergent questioning – use convergent questioning and corrective feedback where necessary to guide learners. Use rotations to provide differentiated, personalised feedback and direct observational learning to specific tactical cues.				
Specific individual points to consider:	Ensure that Mike and James have an opportunity to play the role of unopposed wide support participants. Assign leadership responsibilities to Richard, Ben, Ian and Sam – encourage them to use a range of verbal cues and movement to create time and space for their team-mates to receive the ball.				

Game Scenario 1:



Organisation & Game Objectives – 4v4 with 1 unopposed wide sender-receiver:

- Ball starts in zone 1 with the blue participant. The ball is transferred into zone 2 to a team mate using hands.
- Objective for the blue team is to work as a team and move the ball into the opponents' (red team) target zone 3 – 1pt for a successful catch by a blue participant in target zone 3. Upon scoring, the ball will start with a red participant in zone 3 and they will attack through zone 2 towards zone 1.

Game Conditions:

- The ball must remain in the air and participants can't travel with the ball.
- When in possession of the ball, both teams are able to use the unopposed wide support participant (yellow participant) but they can only operate in their designated area.

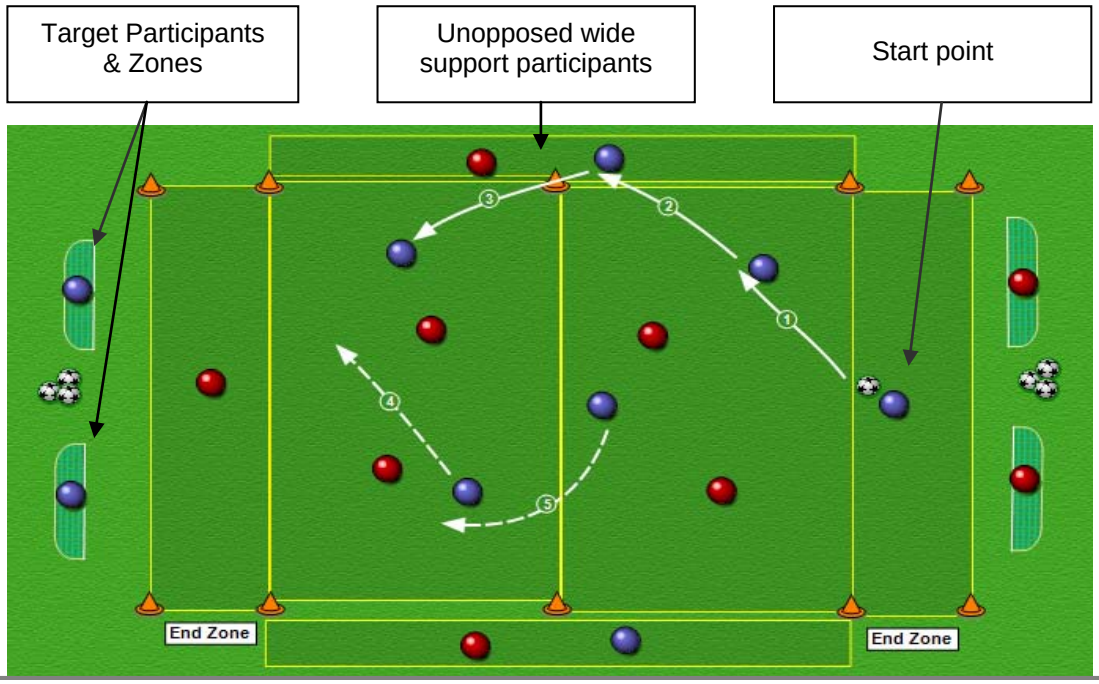
Game progression:

- The ball can either be passed aerially or through a bounce pass.
- Once the ball enters into Zone 2 then the ball must go wide to the designated unopposed wide participant (yellow).
- The designated unopposed wide participant (yellow) may enter zone 2 after they have received and sent a pass – in this instance another participant from the team in possession MUST take the place of the yellow participant in the wide channel.

Teaching strategy | Sample questions:

- Question 1: On winning possession of the ball what strategy do we need to use in order to transition quickly?
  Answer: Provide good width and depth to the field through positive and intelligent movement away from the participant in possession of the ball.
- Question 2: If a defender is tight to your team mate, what side in relation to defensive pressure should we pass the ball?
  Answer: The opposite side to pressure.
- Question 3: What is essential in relation to attacking team shape when the ball is played into the wide support participants?
  Answer: We don't all get attracted to the ball and look to maintain width and depth.
- Question 4: If the defensive participant is screening the line of the ball into the target participants what other passing techniques can we use to effectively transfer the ball?
  Answer: Look to either play the ball with a more 'looped' technique or quickly change the point of attack to prevent the defender cutting the line of the pass off.

Game Scenario 2:



Organisation & Game Objectives – 9v9 with 2 unopposed wide sender-receivers & target participants:

- Ball starts in End Zone with the Blue participant. The ball is transferred into the first of the two middle zones.
- The team in possession can overload each zone by one participant. The participants on the side can operate up and down unchallenged and support as additional overload mechanisms.
- The ball can either be passed aerially or through a bounce pass.
- If the reds win the ball then they will operate in the opposite direction. If blues score then the ball will start with the reds in their End Zone.
- Any spare participants will work with the coach, analysing performance to then help support and feedback to team mates.

Game Conditions:

- The ball can only be transferred one zone at a time with the objective of getting the ball into the target participants.

Teaching strategy | Sample questions:

- Question 1: When defending as a team what type of principles will be important if we want to prevent the forward pass into the target participant?
  Answer: Team need to quickly become compact on the side of play and force play backwards or across the field.
- Question 2: If we have the opportunity to overload each zone by one participant, how will we utilise this overload?
  Answer: By maximising zone space and supporting quickly- create good angles of support.
- Question 3: If the attacking team can overload the zone they occupy, is the danger with the participant in possession or their team mates advanced of the ball?
  Answer: Participants advanced of the ball
- Question 4: So what should we do about this?
  Answer: We need to mark the participant advanced of the ball. Immediately put pressure on participant in possession to make distribution predictable (force play in one direction) and difficult.
- Question 5: If the defensive team cut off the forward pass between the 2 middle zones, what strategy could we implement?
  Answer: Utilise the un-opposed wide support participants to adjust point of attack. (These participants must be encouraged to operate quickly along the side of the field).

Participant rotation notes:

- Each participant must spend one game of the five being a target participant.
- Each participant must spend one of the five games as a wide support participant.
- Any resting participants will analyse the game using the following questions:

Whilst Martin's plan has the potential to shape his coaching practice and serve as a guide for delivery, he cannot completely predict his participants' behaviour, nor the accompanying practice adjustments he will need to make. Consequently, once practice begins, his effective interactive decision making and ability to respond to the differing needs of each of his participants becomes very important. Martin's practice is therefore likely to involve a constant interplay between his intentions within the plan, selected learning tasks and associated teaching behaviours, and how he adapts to the situation as it unfolds based on his previous experience and knowledge of his participants.

4.7 UKCC Level 4-ness

Our aim at the beginning of this section was to identify and describe the attributes and capabilities of a UKCC Level 4 coach. Drawing on evidence generated from our interviews with NGBs, as well as coaching and other relevant academic and professional literature, we have highlighted different procedural 'ideas' in association with declarative explanations in order to develop an 'understanding' of 'high performing' children/talent development coaches' practice. In doing so, we offered a framework for coach decision making to display how having and applying a knowledge of the child/talented young participant, developmentally-appropriate skills, and teaching and learning can lead to a more comprehensive (i.e. UKCC Level 4) approach to delivering developmentally-appropriate coaching practice for children/talented young participants. We have illustrated that 'high performing' coaching practice rests on the coach's ability to draw on knowledge from several linked domains to develop optimal learning environments (Berliner, 1991); it involves a continuous process of decision making about when and how to intervene in order to maintain momentum and progression towards the achievement of specified goals.

We draw this section together by re-presenting the UKCC Level 4 attribute and capability statements followed by a set of professional competences[15] that exemplify what a UKCC Level 4 children's/talent development coach would be expected to know and do. They refer to the role and function of the coach, but are also expressed in ways that indicate the level of the coach's practice (e.g. "complex and unpredictable situations", "advanced training and competition programmes", "resolving atypical coaching issues").

The following statements identify the attributes and capabilities of a UKCC Level 4 Coach:

[15] "Professional competences are about 'judgement', that is, decision taking with a realisation of why the decision has been taken (preferably based on evidence) and in the context (normally) of more advanced performance-related activity. This further implies that the learning deemed appropriate to achieving professional competences will be such that 'advanced' learning will be encouraged" (Lyle et al., 2010, p. 16).

1 Professional attributes consistent with personal excellence that underpin and consistently lead to deliberate effective coaching practice.
2 Knowledge in a breadth of domains to a depth relevant to the role of developing the participant and developing self.
3 Cognitive capacity to synthesise and integrate knowledge.
4 Capability to take informed goal-directed decisions and actions, using analytical, intuitive and/or innovative cognitive processes.
5 Professional perspectives including a commitment to continued self development, individual autonomy and ethical practice.

Typically, holders of the qualification will be able to:

1. Reflect continuously on coaching practice, challenge personal assumptions and beliefs to improve future performance.
2. Seek out, synthesise and apply relevant concepts, theories and principles.
3. Make and critically reflect on decisions in complex and unpredictable situations.
4. Recognise and resolve problematic and atypical coaching issues through the generation innovative strategies and solutions.
5. Build and maintain effective coach-participant relationships.
6. Design and implement an optimal learning environment to impact on participants' performance needs.
7. Adapt interpersonal, teaching and instructing behaviours to the needs of the participant(s) and context.
8. Develop participants to be autonomous decision makers.
9. Design, implement, monitor, evaluate and regulate advanced training and competition programmes that are congruent with participant need and entitlement.
10. Design and implement a planned and strategic approach to performance improvement.
11. Develop and manage an appropriate support structure to facilitate meaningful growth, development and improved performance.
12. Manage change in the context of the wider sporting, legal, political and socio-economic landscape.

Note: Several months after initially writing these statements we came across the Chartered Teacher development that exists in Scotland. This transpired to be a useful benchmark in that it was operating to a similar philosophy to that of the UKCC Level 4 development. That is, teachers are only able to access the course once they have accrued several years of experience. Furthermore, the course is specifically aimed at developing them as a practising

teacher (as opposed for preparing them for managerial posts). The specific standards that are defined by this status are:

The Standard:

- *Professional values and personal commitments*
- *Professional knowledge and understanding*
- *Professional and personal attributes*
- *Professional action*

Each of these standards is then split into core competences in a similar way to what we promoting here (we return to this in Section 5). However, the language and demands of The Standard compare favourably with the five attributes and capabilities offered here. A full description can be found at: The Scottish Government (2002, March 22, 2006). Standard for Charter Teacher 2002. Retrieved 17th May, 2010, from http://www.scotland.gov.uk/Resource/Doc/46932/0023989.pdf

5 Developing Level 4 Coaches

Having outlined the attributes, capabilities and professional competences of a UKCC Level 4 coach, we now turn our attention to exploring the factors that can contribute to the development of 'high performing' coaches. In doing so, we primarily draw on evidence generated from our interviews with the nine institutions/companies introduced in section 2.2, as well as coaching and other relevant academic and professional literature. Furthermore, relevant comments drawn from NGBs relating to the development of UKCC Level 4 coaches are also included.

5.1 Overview

What underpins the development of a 'high performing' coach? Evidence from several sources would suggest that the answer to this question is a combination of work ethic and curiosity, playing and coaching experience, formal courses, and serendipity (i.e. being in the right place at the right time; being exposed to new ideas or ways of thinking via reading, other coaches, sport scientists, etc.; Abraham and Collins, 2006; Erickson et al., 2007; Jones et al., 2004). However, although formal courses are included within this list, many of these formal courses are not directly focused on coaching development; rather, they include undergraduate and postgraduate degrees in varying areas such as Physical Education (PE), Business, Leisure, Sport Science, etc. In fact, typically, coaches are not complimentary about formal coach education courses, identifying them as providing a basic level of knowledge and being hoops to jump through in order to be given the certificate to coach (Abraham and Collins, 2006; Jones et al., 2004). Indeed, Abraham et al. (2006) summarised the ad hoc nature of the development of the 14 'high performing' coaches interviewed in their study as:

> "… a broad range of methods of development across the coaches, such as coaching courses, academic qualifications, playing and coaching experience, reading, and so on, and that there was a genuine desire among all of the coaches to become better and continually improve. However, what was equally apparent was the lack of any underlying structure that brought all of these development methods together. Consequently,…these coaches has (have) developed through their own diligence as opposed to an explicit, ''big picture'' approach. In short, these coaches are knowledge magpies and not filing cabinets." (p. 562)

While the research referred to here relates to coaches operating in the British system, ideas presented at the International Coaching Conference in London in 2008 would suggest that

the problems experienced in the UK are similar across the world. In fact, the only big picture, longitudinal approaches to coach development presented were from multi-sport and or Olympics-driven coach development schemes such as Germany's trainerakademie (Nordmann and Sandner, 2009), Holland's TopCoach5 (Klooster, 2008) and Canada's National Coaching Certification Programme (NCCP; Bales, 2008).

A question therefore arises: how important is formal coach education in the development of coaching expertise? Evidence would suggest this is not very important; however, just because it hasn't been so far doesn't mean that it couldn't be. Indeed, evidence from well established professions such as law, medicine, and teaching displays that formal, extended and rigorous learning is fundamental to the achievement of licenses to practice. As an emerging profession, therefore, it would be unusual for coaching to not have a formal, extended rigorous developmental process.

Consequently, the following sub-sections of the report will offer some research-, best-practice-, and NGB-informed perspectives to inform suggestions on developing UKCC Level 4 coaches.

5.2 Developing the innovative coach

There is an obvious irony appearing whereby 'high performing' coaches are developing their athletes through a systematic and structured process yet their own development has generally been un-coordinated, serendipitous and experiential in nature. Furthermore, the role that formal coach education has played within this development is generally small and potentially even irrelevant. But why would this be the case? A solution may be found in Druckman and Bjork's (1994) comments about the teaching/training techniques they reviewed within business:

> "One problem with many of the techniques examined was that they were largely responses to consumer needs – proposed quick fixes from widely recognized problems. If they had been developed in conjunction with knowledge gained from research and evaluated in a systematic manner, the techniques would have benefited from the latest advances in theory and methodology. Such benefits could well have rendered them more effective for improving performance." (p. 5)

While this comment was not written about coaching development, we have little doubt its sentiments could be equally applied to coaching development methods. In fact, what we are

arguing is that if **'high performing' coaching** practice draws on theory and experience in order to produce innovative practice, then **'high performing' coach education** development practice should do the same.

It is fortunate, therefore, that as we put this report together sports coach UK are publishing a comprehensive review on coach learning and development (Cushion et al., 2009). This review covers a broad range of approaches and theories relating to coaching development, some of which we will refer to when we examine coach learning in this report. Interestingly, one of the key conclusions of the review reinforces our own message here; that there appears to be a lack of quality formal coach education available. However, while this review covers many issues and raises many excellent ideas for the future it doesn't provide suggestions for current practice.

Consequently, despite the review developed for sports coach UK, we are still left with the same question; how do we develop the innovative coach? We have identified in this report that coaching is a goal-led decision making process and that the best coaches make decisions that take account of ideas and thoughts (some complementary, some contradictory) emanating from a broad range of sources. However, coaches clearly do not arrive at this level of expertise quickly. Indeed, Anderson (1982) suggests that 100 hours of learning and practice is required to get any significant development in a cognitive skill, while the progression from novice to 'high performing' coach is thought to be somewhere in the region of 10 years/10,000 hours (Erickson et al., 2007); so what are the building blocks along the way and how long do they take? Obviously knowledge is important, but then so is confidence, as is knowledge use, self-regulation, approach to learning, etc. These collective considerations prompt six key questions:

1 Who could/should be able to do level 4 courses?
2 What should be taught?
3 When should it be taught?
4 How should it be taught?
5 Who should do the teaching?
6 How should learning be assessed?

Hence, these become key questions for coach education if it is to become more structured and systematic in its support of developing 'high performing' coaches ,and we will provide some insight into each of these questions in the next sub-sections and return to offer some explicit answers in Sections 6 and 7.

We believe much can be drawn from our representation of coaching in figure 1. As a model of educational practice it states that an educator (i.e. the coach in this case) can make effective decisions if they have thorough knowledge of the needs of the learner (i.e. the athlete), the subject matter to be covered (i.e. the sport-specific content), learning and teaching (i.e. pedagogy) and the culture within which they operate. Accordingly then, if this works for a coach working with an athlete, it can work for coach education (or educators) working with a coach. As such, the learner is now the coach, the subject matter is broadly that covered in figure 1, the key learning and assessment theories are drawn from adult learning and the culture that needs to be considered is the attitudes and policies of key personnel and organisations impacting on coach education. We have summarised this in figure 2.

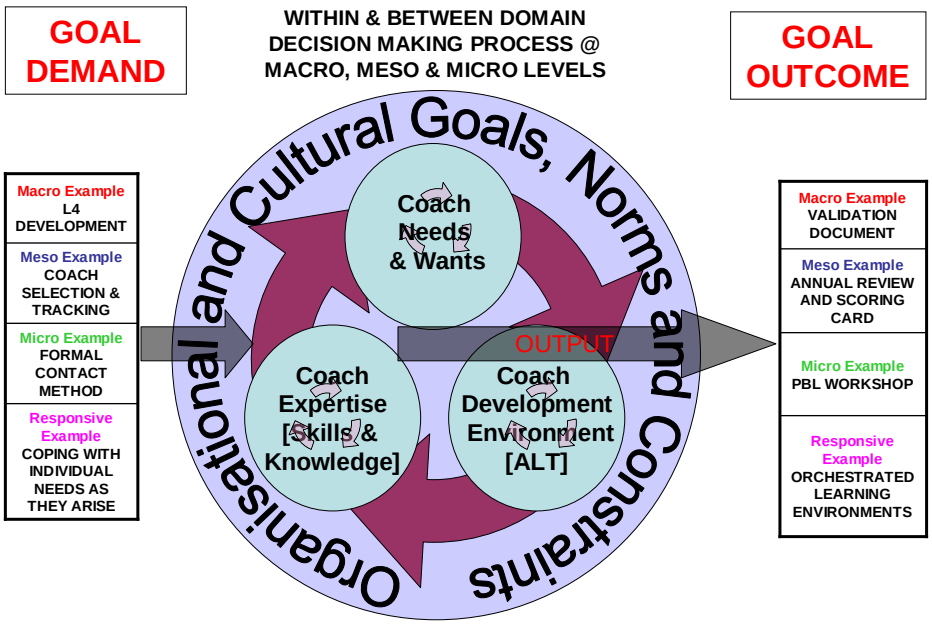


Figure 2: A Model For Coach Development (ALT: Assessment, Learning and Teaching)

As with figure 1, figure 2 is a first person model; that is, the model reflects the process that a coach educator would go through to develop 'high performing' coach development practice. The coach educator in this instance could be someone (or even a group of people) who is/are: (i) designing a complete course (**a Macro Goal**), (ii) considering how to evaluate the impact of the course on coaching practice (**a Meso Goal**), (iii) planning a programme of delivery and assessment (**Meso/Micro Goal**), and/or (iv) responding to challenges as they arise within a learning environment (a **Micro/Responsive Goal**).

There is obviously a lot that we could expand from that list and more than can be covered in this report. Consequently, for the sake of brevity, we will focus on the macro goal of course design in order to display how this model can guide the development of innovative and 'high performing' coach education.

5.3 The Coach Educator

Before we consider each of the questions posed above against the ideas offered in figure 2, the first criteria to consider in the development of innovative coach education is whether the coach educator is capable of delivering this? This may sound obvious, but our experience is that often people have not recognised how they may limit the development of others. We are not suggesting that this has been a deliberate attempt to undermine the development of others; it is just the reality of the situation. Sports have often been guilty of putting people in charge of major educational initiatives who simply don't have the expertise to complete the task. This is often the reason why the short term fixes, as Druckman and Bjork (1994) refer to, emerge. People without expertise try to fix the most obvious thing that is wrong and often fail to see the underpinning problems that are really the issue (Abraham and Collins, 1998a). After all, we only know what we know; our decision making is constrained by personal theory which in turn is built on our personal 'repertoire' of experience (Gilbert and Trudel, 1999a).

For example, in the UK there has been a rush to introduce a competency-based training approach to coach education. There is much intuitive support for this approach in that it focuses on outcomes (how) as opposed to the process (why). Thus, for someone to be competent to practice they must be able to demonstrate that competence. Thompson (2000) argues that such an approach has five other major strengths:

> "Reducing (but not eliminating) personal preference of the assessor in deciding who is competent and who is not; Removing much (but not all) of the vagueness and confusion over what constitutes professional practice; Recognizing and rewarding existing level and areas of competence; Reducing the anxiety and uncertainty over the criteria by which candidates will be judged; Being transferable - success in one geographical area can be more easily recognized in another area if a candidate should move." (p. 119)

However, Thompson goes on to identify that problems also exist with competency-based approaches, stating:

> "Competences are very much in keeping with technical rationality. We also need to keep in tune with the uncertainty and messiness of the 'swampy lowlands'; The standardized nature of competences can encourage a uniform approach and, in so doing, discourage creativity and imagination; What counts as competent practice is predefined. Practitioners, too, must have a say in what constitutes good practice rather than accept it as a given. That is, we need to adopt a critical approach; The competence-based approach recognises the importance of underpinning knowledge but offers little guidance in how it can be used. Therefore working towards achieving competences will not, in itself, facilitate the integration of theory and practice." (p. 121)

So, even though many governing bodies are now delivering traditional discrete elements of sport sciences, physiology, psychology, and biomechanics, within their courses (Potrac et al., 2000), the outcome nature of the delivery and assessment probably means that only limited levels of this knowledge are truly integrated into practice. Furthermore, the stretched time resources of many coach education programmes inevitably means that an eclectic approach is taken to their delivery, often leaving little if any time for critical consideration of that knowledge; a key factor in integrating theory into practice (Nelson et al., 2006; Thompson, 2000). In essence, an uncritical approach to coaching development may lead to the development of "'skilled robots' rather than 'knowledgeable doers'" (Thompson, 2000, p.121).

Insufficient expertise in coach education may also limit the development of coaches due to a lack of understanding of the subject matter they are delivering. For example, Collins et al. (1991) suggest that providing a model of the content to be taught to a learner can help the learner get an overview of the content before they have to go into more detail (an idea that is similar to the whole-part-whole approach). Therefore, in order to develop a clear model of the content that is to be taught, the educator must have an excellent understanding of their subject. However, the need for an educator to really examine their own understanding of a subject only comes when they realise that they need to teach that knowledge, and so the final development of a model of their subject may only come through the experience of teaching it. In essence, there are two limitations that a coach educator may bring: the first is whether they have the requisite expertise to challenge a coach; the second is whether they have a clear enough overview of their subject in order to deliver it in a meaningful way for the learner.

The question is, therefore, how many coach educators and/or coach education managers would be well enough informed to go through this type of debate? Our experience with National Governing Bodies would suggest not many. Indeed, the most recent UKCC Level 4 developments have deliberately engaged with Higher Education (HE) and/or had a consultant from HE assigned to them in order to facilitate this type of debate and, at the very outset, this should be recognised as being good practice. This is not good practice because the expertise lies solely in HE; rather, it is good practice because there is a recognition of the need to develop broad churches of expertise in developing UKCC Level 4 coaches. Indeed, anyone involved in developing programmes to support 'high performing' coaches will need to look beyond their normal boundaries to facilitate this.

So, are all NGB coach educators out of their depth and therefore doomed to do a poor job? The simple answer to this is that there is no conclusive evidence to answer the question. However, it is fair to say that the constraints of NGB coach education would suggest that there has not been a need to engage in the type of debate referred to above prior to the introduction of the new UKCC Level 4 coach award. As such, there has been no infrastructure put in place to support coach educators and managers operating at this level so, if there are higher-order thinking coach educators and managers, they operate in spite of the system not because of it. Therefore, one of the first steps towards improving coach education and development may be to improve the selection **and** development of coach educators.

In discussing the role of (coach) educators within the different programmes who participated in this work, the focus of discussions related more to the recruitment of educators who operated at a face to face level, as opposed to a programme development level. Irrespective of this focus, the responses received from participants reflected the notion that quality was paramount in both selection and de-selection of tutors. The following quotations are representative of the responses from the participants in the project:

*"Course directors and tutors need to overcome scepticism (held by the 'learners') about what **** (course) can offer."*

"Bring in the best practitioners to deliver excellence; get expertise, don't expect 2nd best."

"Outside core modules, the pedagogy of the tutors changed. Assessment became a hurdle rather than a test of progress."

"Tutors are selected (and deselected) by reputation, expertise and our experience of them delivering. They have to have a background in elite sport. We often make use of current national coaches."

"It's not the assessment that worries me, it's the assessors. We could write a checklist now of things we're looking for – but if I'm not an expert coach or assessor, and they haven't mentioned that word I might not give them a tick whereas you as expert coaches or assessors will go, 'woah, they're way beyond that'."

"The people we use have a role as translator of scientific information; if you need experts, you get experts."

"We must be able to stimulate, offer neutrality, by being outside the formal review of coach performance, and bring capacity, expertise and ability to deal with egos."

"We must be able to take complex ideas and make them accessible or find someone else who can."

"They should be able to identify, and get people to talk about, the elephant in the room."

"We need to be sensitive to the self-presentational/impression management issues of coaches."

It is perhaps the first and last few quotes in the list above that serve to highlight the challenges facing educators at this level of operation. Tutors are not working with blank canvases in these programmes and there may even be significant resistance to content or at least a resistance based on tutors needing to prove themselves as being useful to a coach's development. Ultimately, this will be dependent both on the message to be sold and the way it is sold. This becomes more apparent when we explore areas specifically related to assessment, learning and teaching in sections 5.7.3 and 5.7.4.

5.4 Goals

The concept of goal setting with athletes has been in existence for many years now. When working with high performing athletes, goals are often seen as being a key factor in planning for improved performance with key outcomes identified against performance benchmarks. It would seem to make sense, therefore, that when working with and developing coaches to benchmark their performance against the requirements of 'high performing' coaching in order for meaningful developmental goals to be set. Without a clear idea of what coach education is trying to do, how do we know if the education system is relevant and/or how can we measure if it is working?

However, developing goals for coach education is easier said than done, even with statements about Level 4ness and associated professional competences offered in section 4. The problem with terms such as 'innovative', 'knowledgeable', and 'goal-led decision makers' is clarifying what these actually mean in terms of outcomes because the context can considerably change the knowledge and skills required. For example, a coach of a talented 14 year basketball player may be judged more on their ability to plan long-term

programmes and their development of players for the professional game. In contrast, a coach of a high performance league team may be judged more on their ability to manage a group of elite athletes who have to meet the demands of 2 games a week against various opponents and collect league points. Hence, both coaches need to make 'high performing' decisions that lead to consistently innovative practice, but these may lead to very different coaching practices. What we have generally seen is that the goals of coach development take a 'one size fits all' approach leading to comparatively bland, de-contextualised learning outcomes or, referring back to competency-based approaches, pages of competencies that try to account for everything but just end up being very prescriptive.

An alternative to these approaches would be to agree on some key indicators of coaching expertise but to then test these indicators with recognised 'high performing' coach educators and coaches in order to develop some consensus about these indicators and how they might be evidenced dependent on the context of the coach. In taking this approach, coach educators would immediately start answering all six of the questions raised earlier. Furthermore, failing to consider what the goals of coach education are almost always means that educators get caught in the trap of identifying content and curriculum without really considering what the output is; putting the cart before the horse.

Upon reviewing responses regarding the goals of development at the level of 'professionalism', it becomes very apparent that the ability to think critically and engage in reflective practice is very high on the agenda. There is explicit support for improving the problem solving and decision making of coaches from the coaching specific courses, particularly in the process of managing individuals.

"They have to interrogate their own practice."

"Just because you put 'critical' in every learning outcome doesn't mean that what you're presenting one with is at an appropriate level."

"We did have a very clear view of what coaching was about and we did have the 'decision making', 'planning' core at the centre of it; albeit then saying 'contingent', 'messy', 'social', 'cultural', 'pedagogical problems', etc. But we did have a view as to what coaching was."

"...align our aims and what we're looking for in our students to achieve with the national qualification framework for level 7. So we align it with that in terms of developing a systematic understanding of particular concepts but then [have] *this emphasis on being able to problem solve and be creative in it."*

"...to be very proactive and independent and autonomous and to be able to know how to then investigate things further and tap into resources and personnel and expertise that they do know."

..."we're expecting that they should be interdisciplinary, critical, applied, be able to solve problems creatively and you'll find all of those in the descriptors that we align to."

"One of the key goals of the programme is that it has to ultimately facilitate their ability to get jobs in coaching."

"Critically reflective and analytical, whilst also being better at managing the process."

"Ours goals are to develop capability and capacity."

"Essence of coaching is managing the individual."

"Everyone can learn, some have more aptitude. My job is to raise awareness and consciousness, so that they [the coach] *can answer the question 'where do I get new knowledge'."*

"We need a course that offers 'Value for Money' and ultimately a course leading to increase in salary."

"The completion of the course is rewarded by a salary increment."

"Our goals come from our notion of improving; Knowing, Thinking, Deciding, Acting, Evaluating. Explicitly the aims are:

- *Coaches can plan and lead design of high level training and competition for elite, development and potential populations*
- *Lead athletes in goal oriented pedagogical and responsible way with social competence*
- *Develop performance in association with support team; sport scientist, PDs medics etc*
- *Develop ability for lifelong learning as a coach to make critically informed decisions in practice*
- *To educate other coaches within the system (These are taken from course documentation)."*

Interestingly, there was only limited acknowledgement of specific professional competences and so it may be fair to question the SMARTness of the goals explored. However, this lack of detail may be an artefact of interviewing since respondents may only give conceptual responses. It is of interest, therefore, that one institute did have clear ideas of the process and outcome of their course (displayed in the last quote). If we take this overall set of ideas and combine them with the outcomes for Chartered Teacher status referred to earlier in section 4, there appears strong support for the five attribute and capability statements and some support for the need to clarify these into more defined professional competences.

Finally, the emerging idea that this level of development should lead to tangible outcomes of enhanced career opportunities or just an increase in pay is worthy of note, especially if coaches are going to need to commit financially in order to complete UKCC Level 4

programmes. There are some obvious difficulties for coaching in this domain, not least the lack of formal career pathways and/or tight financial budgets for employing coaches.

5.5 Understanding the Coach's Needs and Wants

In the previous section we have identified how the goals of coach education need to be matched to the context and requirements of the coach undertaking the coach education. Furthermore, in the first section of this report we identified that participant-centred coaching was a utopian goal for coaches. Against these arguments the logical progression for coach education would be for it to become coach-centred so that it is designed to meet the needs and wants of individual coaches. As we have perhaps already indicated, this would represent a step change for coach education. This critique aside, however, how would coach-centred be created?

The first consideration may be to identify what the difference between 'needs' and 'wants' actually is. Simplistically, 'wants' are what the coach wishes to get out of a course; 'needs' are what the educator thinks the coach should get out of the course. It obviously helps, therefore, if wants and needs are closely matched. (At a more complex level there would also be other agents who have wants and needs, such as coach managers, that also need to be considered – we will come back to this issue later in this report). The simple reason for this is that the coach is more likely to engage in coach education if they think they are getting what want.

Theoretically, this would be supported by Deci and Ryan (2000) who suggest that individuals will have higher intrinsic motivation to engage in an activity if they can gain a sense of relatedness, competence and autonomy from that activity. For example, consider the links between Deci and Ryan's ideas and why so many coaches have developed expertise through their own diligence. Firstly, the coaches have autonomy of choice when they decide about what to engage with and when. Secondly, the coaches gain feelings of competence by deciding what ideas and knowledge they find useful and can work with while choosing to ignore those they don't (especially as no one is looking over their shoulder to check understanding). Finally, by making these choices, they are more likely to gain ideas and knowledge of how to relate better to their athletes, other coaches, parents and officials. In essence, self-driven learning is by its very nature intrinsically motivating.

Unfortunately, this cherry picking approach to self-development inevitably leaves gaps in a coach's repertoire of skills and knowledge (Abraham and Collins, In Press) because self-

development is directed by coach wants when the coach may not be aware of what they need. Furthermore, only very few coaches adopt the 'own diligence' approach to development; most coaches don't do this because they don't have the competence and/or confidence and/or support to know where to start.

By inference, therefore, one of the major issues for organised coach education is that it must work hard to make sure needs and wants become aligned as quickly as possible, even if this means helping coaches identify that what they want isn't what they need. This is why effective goal setting can be so powerful since this works as a direct method for aligning needs and wants. All too often, however, coach education is developed with little reference to the coaches attending the course. Consequently, a coach may simply accept that their wants are irrelevant and buy into the needs offered by a course – they may even enjoy it! However, without any link to the coach's own practice, knowledge and skill transfer from education may well be poor. Furthermore, because the coach fails to gain a sense of ownership of any new material delivered, they struggle to develop self-monitoring and feedback procedures, relying on the 'high performing' coach educator to identify if progress is being made. Deci and Ryan (2000) refer to this situation as the learner developing 'learned helplessness'; i.e. the course and the tutor becomes a crutch of development rather than an instigator of self-development. Remove the course and self development will very quickly slow down.

Continuing from Deci and Ryan's (2000) ideas about relatedness, competence and autonomy, a question that has been addressed to some extent within the British university sector is a student's capacity and readiness to learn, especially when ideas become more complex and interconnected. Both Entwistle and Peterson (2004) and Perry (1988) identify that in order to understand how individuals learn it is important to understand how they receive and perceive knowledge. We would equally argue that this is also crucial in order to understand how individuals perform in cognitive tasks such as coaching (Abraham and Collins, 1998). Summarising the work of Entwistle and Peterson (2004) and Perry (1988) suggests that our perception of what knowledge is progresses through three broad stages. People in the first, *dualistic,* stage perceive knowledge to be black and white, right or wrong and it is held by 'authorities'. People in the second, *multiplistic,* stage perceive knowledge as being subjective; there is no right or wrong answer and everything is therefore open to opinion. People in the third, *relativistic*, stage recognise that some answers are better than others and this is normally down to the rationale supporting the answer. However, in the early part of being relativistic people, will still be very open to changing their mind if an alternative argument is presented. The final stage of the relativistic journey is termed

committed relativist; here a person feels they are aware of all relative arguments and settle on one answer, and will robustly defend their position when challenged.

Entwistle and Peterson (2004) claim that very few people achieve this stage of committed relativist simply because of the cognitive and met-cognitive demands required to reach the stage. That is, to reach committed relativist stage requires such a breadth and depth of knowledge (the cognitive bit) and a capacity to organise this knowledge and develop coherent arguments and counter-arguments to the point where an acceptable position is reached (the met-cognitive bit), that only so many people have this capacity and the work ethic to get there. In fact, Perry (1988) argues that many people find the multiplistic stage to be a watershed. The reason for this is attributed to many people not liking the idea that there are multiple reasons for things being the way they are, and that they will need to work out why things are the way they are, and which one is best in one context and why this will change in another context (i.e. why many people try the same thing and expect different results). Hence, it is much more common for people to retreat to the safer position of dualism, where there is just black and white. Furthermore, some of these people may actually become quite skilled at using the problems of the multiplistic stage to their advantage, suggesting that people offering alternative solutions or ideas are 'overcomplicating' things or blinding people with science – a strong argument to those also struggling to work within the multiplistic stage. If, however, the learner responds well in the multiplistic stage, they become well placed to progress towards expertise. However, this progress is dependent on continuing to learn which will need to be supported via both the learner's own determination and appropriate, structured and systematic support.

Finally, and potentially most problematically for coach education organisations looking to recruit experienced coaches to fill mentoring positions, it is very difficult to tell the difference between an experienced and confident 'dualist' and a confident and experienced 'committed relativist'. However, if the development of 'committed relativists' is a goal of coach education (and we would argue strongly that it should be), then coach education managers may well have to accept that they will have some difficult decisions to make in selecting appropriate mentors so that when the 'watershed' moment occurs for new coaches at the multiplistic stage, they are helped through by those who understand the difficulties of this stage, rather than dragged back by those with an anti-intellectualism agenda (Thompson, 2000).

To conclude, therefore, what Perry (1988) and Entwistle and Peterson (2004) offer us is, firstly, the quality of someone's coaching is likely to depend not only on their knowledge but also on their ability to cope with and use this knowledge. Furthermore, a coach's capacity,

willingness and readiness to learn how to coach are also likely to be affected by their stage of development. If these ideas are combined with those from Deci and Ryan (2000) it becomes apparent there is a need for coach education to consider how it can develop more individualised programmes. Furthermore, these individualised programmes not only recognise obvious gaps in knowledge and delivery skills, but also important meta-cognitive skills (Abraham and Collins, In Press). Once again then, there is much here to provide insight in order to answer the four questions posed earlier.

It is encouraging that in all of the visits made, developing a course that was structured around the wants and needs of the coaches/course participant was seen as being important in running effective development opportunities. This was typically achieved through exploring the participants' (coaches, teachers and middle managers) practice and comparing that to some level of standard. This standard could be the tutors' interpretation of research examining the practice or, even more explicitly, against 'agreed' national standards.

Of real interest is the comment regarding the general ethos of how a Masters Degree is perceived by students/participants; is it developing new researchers or is it providing professional development for practitioners? In order to justify Masters status, course design teams have to display how they are meeting the standards of higher order thinking and criticality. Typically, this has been achieved by taking a deeper approach to examining and completing research and, as such, there is an argument that many Masters Degrees are taught by researchers in order to develop new researchers (c.f. the Mini-Me effect from Austin Powers). If Higher Education wants to be involved in the development of UKCC Level 4 coaches it needs to find ways of avoiding the development of higher order researchers and to focus on methods of developing higher order practitioners. Typically, the Higher Education institutions visited in this report were working well at focusing on developing higher order practitioners – an issue we will return to later.

Given that both of these arguments are pointing to the importance of aligning needs with wants against relevant standards it makes the establishment of clear goals and outcomes all the more important.

"Needs and wants are rarely aligned when the process starts, but 'wants' might be a way into exposing a 'need'. By the end of the programme, wants and needs are more aligned, but this will always be shifting sands."

"...we've explored the roles that they had or the concepts of coaching or decision making, or any of the things where we're trying to say, 'what's central to what you're doing?"

"...to kind of open their eyes, right at the beginning, to say, 'look, there's things there that you may not have considered...If we talk about planning, you'll have thought about planning, but if we talk about the concepts of coaching, the chances are you haven't been thinking that way'."

*"First module leads to critical self appraisal and target setting against standard of ********* – this then forms the plan for the route through the core and optional elements of the programme."*

"...but in their reflecting on the practice they'd identified an obvious deficit, this was an opportunity for them to pick on somebody else's courses to give them that."

"It may be resource inefficient but ideally, just like we want to develop athletes, we want to develop coaches…so that they decide their way of education, but also feeding in with what they don't know."

"...you're taking experienced people from business and then putting them through something which is matched at M level but is very obviously a CPD opportunity. It's not an opportunity to become a researcher, it is professional development. We have to juggle the notion of business as a practice versus business as a science."

"We need to be sensitive to the self presentational/impression management issues of coaches when challenging them on their practice, especially if their athletes are close by."

"Delivery and support must be embedded in coaches' practice. It must take a relentlessly unobtrusive approach to supporting coaches; I once spent 15 hours with one coach in a single day."

The final two quotes offered here reflect directly with the issues of epistemological development and feelings of competency referred to earlier. The first of these two quotes recognise the need to allow coaches to retain control over their identity, especially if the support of their practice is occurring in their own coaching sessions with athletes. While there may be some coaches who are happy to be critiqued in front of their athletes, there are others who would find this potentially embarrassing and undermining, especially if they thought they were being perceived negatively by their athletes. The second of the two quotes reflects the problems of progressing coaches on to a different way of thinking. As discussed previously, in finding relevant support to facilitate the epistemological development of coaches, especially if this is to also impact practice, such an embedded approach may well be crucial – an idea we will return to later in section 5.7.

5.6 Recruitment and Selection of Coaches

The previous section provides an insight into some of the factors that may need to be considered if a policy for the recruitment/selection of coaches on to a professional development programme is to be established. In essence, there will need to be some pre-programme qualities in place in order to allow coaches to make the most of higher order professional development and for the 'educators' to target programmes appropriately – in

other words entry criteria. This, however, is problematic; while the notion of learners needing to be self-determined (amongst other skills, discussed in section 5.6.3) is well evidenced (Abbott and Collins, 2004; Deci and Ryan, 2000; Mallett, 2005), there are no obvious measures for assessing this skill. Assessing epistemological (i.e. is the coach still in the black and white dualistic stage or in the shades of the grey multiplistic stage? etc.) development is just as difficult - if not more so - because people's thinking in this instance can be very context-specific. There is, then, the more obvious criterion of whether people actually know enough to gain entry. Higher Education has used a points system based on previous qualifications (A' Levels or BTEC Diplomas, etc.) as entry criteria for people getting onto degrees for many years. However, as many lecturers in HE will attest, entry qualities are not necessarily a good predictor of exit qualities. In short, it is likely that assumptions have to be made about readiness and suitability based on indirect measures. This might typically be achieved by looking at prior accredited learning (i.e. degrees, coaching awards, etc.) or examining the amount and type of prior experience; for example, Erickson et al. (2007) identified that "minimum amounts of certain experiences were deemed necessary but not sufficient to become a high-performance coach (e.g. playing the sport they now coach and interaction with a mentor coach for all coaches, leadership opportunities as athletes for team-sport coaches only)" (p. 302). Other potential options might be references attesting to the qualities of the coach from respected others and/or interview. However, the robustness of these typical forms of entry criteria can be challenged through critical thought against the theories of self-determination and epistemological and talent identification/development when reviewing the outcomes of any selection criteria.

In this project we only came across one explicit reference to use of theory in recruitment policies; however, selection methods were being used that could be linked to cognitive, motivation or talent development theories. Perhaps critical to one of the questions guiding this project, question 3 (see section 1.1), all of the agencies involved in this project were recruiting previously qualified and experienced practitioners. This is an important qualifying factor when examining the work of researchers such as Erickson et al. (2007) whose work examines total history of coaching expertise and thus includes entry into coaching and continued development (i.e. Erickson et al's (2007) work refers to coaches who are already at the high performing stage as opposed to those working towards the high performing stage).

The quotes displayed below relating to selection can be broadly split into 4 main themes; the first explicitly references the need for people who accessed the programmes reviewed to

have significant levels of experience. There was one reference to a theoretical framework devised by Robert Hoffman suggesting that coaches recruited to the course being run needed to be at the 'journeyman' stage development. Hoffman's use of this term refers to someone on a journey towards expertise as opposed to the typical understanding of a sportsman making a living from limited talent. Indeed, people at this stage are identified as someone who

"…can see their actions in terms of long-range goals or plans. They are consciously aware of formulating, evaluating, and modifying goals-plans. …the competent performer lacks the speed and flexibility that emerges at higher levels of expertise but has a sense of mastery and the ability to cope with and manage a variety of situations." (Klein and Hoffman, 1993, p. 206).

The quotes then go on to suggest that operating in relevant environments that enable connections to be made between the work place and delivered content is important. The next set of quotes reflects the need for the participants in higher level learning to have a drive and goal for the learning they are engaged in. The final set of quotes refer to more meta-cognitive mental skills, such as curiosity, which link well with self-determination and epistemological development, as referred to earlier.

"...we thought there were a group of people out there who were experienced enough to have decided that the next step for them was to reflect on the existing practice that they already had."

"We have our entry requirements and then we interview, normally interview all of them and then we'll discuss, in line with their applications or in line with their qualifications, their background, their experience."

"There is a level of market demand, however all people have to be a practising coach."

"You look at the criteria and ask, 'who don't I want on this? what haven't they got?' as an entry criteria. On our High Performance one [UKCC Level 4 programme]*, I did a chronological one where if you're a national head coach, you come on it; if you're an age group coach, you have to work for 2 years in the programme; if you're a national league coach you've got to have done 3 years, if you're a regional coach you've got to have done 4 years…so it shows there's some consistency of delivery and a level of expertise…what we didn't want was some young coaching degree student coming in and going, 'I've coached national league, can I come on your course?' And it will be similar for the Children's* [/Talent Development UKCC Level 4 course] *as well – 'show me what experience you've got' – and that'll be the difference between a Level 3 coach and a Level 4. Cos with Level 3 you can come on it if you've got a Level 2. So for Level 4 we need some evidence of your experience as well as your level-ness – so you automatically start thinking about 'what are the criteria, skills, qualities of that person applying?"*

"We need to acknowledge experience within the criteria for course applications – for example, 'you cannot apply for this course until you have 5 years' experience [post-Level 3]*'. Now, we're not saying 'age', we're saying 'coaching experience."*

"Ideally, we want coaches with 5 years of experience and with qualifications to enter postgrad provision."

"In theoretical terms, we're looking for them to be in the region of apprentice or journeyman based on Hoffman's 5 stages towards expertise."

"There needs to be flexibility in recruitment but experience and motivation to learn are both crucial."

*"The ****** must be at the top of the initial pay scale (6-8 years of experience) before they can even apply for the course."*

"My own view, but slightly idealistic I guess, is that we should actually be looking for evidence of people working in the level 4 environment for a considerable period of time and then they can go on the Level 4 course because then they can make use of it."

"They should be able to evidence a reflective approach, experience of developing people."

"Must be experienced as a coach, are they reflective, were they a top sportsman."

"The coaches should be full-time, working with a stable group of athletes in order for us to work with them effectively…they must be in a position where they will come across performance issues."

"...their coaching, their careers aspirations, how they think they're going to benefit from this MSc. What's driving them? How motivated they are. How they're going to potentially balance their work with MSc study."

"Selection is almost through self selection by the coaches themselves against criteria above."

"They need to be ambitious."

"Students need to enrol with an agenda."

"How curious are you or how much awareness do you want?"

"They need to be prepared to examine the evidence base to their practice."

"Mature, intellectual, think with new stuff in action, readiness to be uncomfortable, prepared to be frustrated, open mindedness is too simple."

"Don't look for answers, come for insight, students need to be able to read - realise that this is bloody hard."

"Good character, focused, intelligent."

"They should be intellectually ready and curious, must be up for the challenge, they must be ready to read primary sources."

5.7 Understanding Coach Expertise – Developing Curriculum

Drawing on the ideas offered earlier in this report about coach expertise, figure 1 offers a structure for examining what creates 'high performing' coaching and thus start making informed decisions about the required curriculum in a coach education course.

5.7.1 Understanding: The Athlete, the Sport, Learning & Teaching

We have already made reference to the need for development in each of these domains in our explanation of figure 1, identifying how all of these domains can be underpinned by theoretical ideas from a range of sport science and educational disciplines. This was also supported by the participants involved in the Child/Talent Development aspect of this project. A key decision to be made by coach educators is to decide how much of each is required. For example, is expertise required by a coach in each of physiology, psychology, biomechanics, pedagogy, motor control, etc.? Or does the level of expertise depend on the role and function of the coach (c.f. our comments about identifying coach needs and wants)? In fact, is the expertise actually about being able to draw from each of these disciplines in order to understand and solve athlete development problems? We clearly do not have space here to give a full answer to these questions, nor would we want to since the answer will be dependent on the context and goals of the coach education programme. However, this area is crucial to get right since 'understanding self', and 'understanding process and practice' (see subsequent sections) is hugely dependent on coaches having standards against which to reflect and think about. This is much more constructive and critical if coaches have the theory to provide the standards; however, if coaches consider any theory delivered to be irrelevant to their context, then it will be paid lip service, at best, or just ignored, at worst.

5.7.2 The Hidden Curriculum

The previous section reflects the more obvious curriculum that can be drawn from figure 1. However, within figure 1 there is also an element of 'hidden curriculum'; Understanding Self (i.e. helping the coach to better understand their influence and role in and on their coaching), Understanding the Process and Practice of Coaching, and Understanding the Organisational, Performance and Cultural Goals, Norms and Constraints (the coaching context) - each of which offer further ideas for curriculum.

5.7.3 Understanding Self

We have already identified how the work of Entwistle and Peterson (2004) and Perry (1988) identifies that coach education needs to consider more than just knowledge and skills in the

development of programmes. Indeed, coach education must also help coaches gain a better understanding of how their approaches to thinking, reasoning and behaviour affect their coaching. Such an approach is often referred to as the development of meta-cognitive characteristics (i.e. how coaches are thinking and operating).

For example, drawing of the work of Orlick and Partington (1988), Abbott and Collins (2004) identify that the following mental skills/meta-cognitive characteristics are crucial in the development of talent: Effective and Controllable Imagery; Focus and Distraction Control; Realistic Performance Evaluation and Attribution; Role Clarity and Commitment; Planning and Organisation; Goal Setting and Self-reinforcement; and, Engaging in Quality Practice. While Abbott and Collins' (2004) work examines the development of talented athletes, the mental skills they identify have been found to underpin excellent adult performance in a number of domains such as music and business. Subsequently, it would seem fair to expect excellent coaches to be equally proficient in these areas; albeit these meta-cognitive characteristics would need to be operationalised so that they have relevance for coaches. For example, a coach displaying effective and controllable imagery may think through a coaching session before delivery, considering potential alternative approaches dependent of athlete reaction.

Probably the most commonly referred to meta-cognitive skill in coaching and education is the skill of reflective practice (Gilbert and Trudel, 2005; Nelson and Cushion, 2006; Tripp, 1993), and this is clearly supported by the quotes in section 5.5. However, if coaches are going to engage with this approach to understand themselves, the skill needs to be recognised as being more than talking through practice. Strean et al. (1997) provides excellent insight into the complexities of developing reflective practice with coaches, drawing on the work of Brookfield (1995) in identifying that helping coaches reflect on their deepest beliefs and assumptions takes a great deal of work. Indeed, reflective practice may be of limited value until coaches have a good enough understanding of theory against which they can critically reflect on and judge their experiences. Consequently, a good deal of time needs to be allocated to just getting coaches to recognise that they have deep seated beliefs in the first place, since they have probably developed through implicit learning processes over a prolonged period of time (Abraham and Collins, In Press).

5.7.4 Understanding Process and Practice

Closely related to coaches developing a better understanding of themselves, and still largely coming from a meta-cognitive point of view, is the concept of helping coaches gain a better understanding of what their practice actually entails and how they can get better at it. For

many coaches the process of coaching is largely un-thinking. This may seem a strange comment at first since coaches obviously think when they plan sessions or intervene during a session. However, it is the quality of, and approach to, that thinking which often goes unconsidered. For example what do coaches think about when they coach? Our evidence would suggest that many coaches think against short-term agendas that are limited in breadth and scope. We have already alluded to the notion that conscious consideration of theoretical principles in the domain of teaching and learning is often lacking when coaches are asked to solve coaching related problems (Abraham and Collins, In Press).

We have started to explore how the concept of decision making can help us explain and understand coaching practice to a deeper level (Collins and Abraham, 2009). Indeed one of the key issues from this work suggests that, although we are often led to believe that as we become better at something our practice becomes more automated and unthinking, for coaches, the opposite should happen. In order to maintain innovation, coaches have to constantly challenge themselves to come up with better and/or new ideas, and this requires them to increase and improve thinking. One approach to this may be to teach coaches how to think and problem solve against the ideas offered in figure 1. This should encourage coaches to consider a greater breadth of ideas in their practice; a skill seen as being fundamental in fields such as medicine and computer programming (Davies, 1994; Johnson et al., 1981; Zeitz and Spoehr, 1989).

5.7.5 Understanding the Coaching Context

Again, there are some obvious links with understanding self and understanding process and practice, since both of these domains require coaches to think about more than just their athletes. Coaches never operate in a vacuum and have to deal with multiple stakeholders other than the athletes they work with. These include other coaches, administrators, policy makers and, perhaps most importantly, parents. If coaches are very lucky, all of these people will be working to the same agenda; however, it is more likely that coaches will need to manage expectations and change if they are to deal successfully with each of these stakeholders. Consequently, coaches will need to have some background in policy development, leadership and management, conflict management, counselling, etc. at some point in their development.

One issue in particular that came to light when talking to NGBs was the need to make the content of development relevant to the role of the coach, but that this might be difficult due to the history of coach development that already exists in the sport:

"You'll find that Academies are appointing Level 4 qualified coaches and asking them to work with under 11's, but they don't know how to do it. It's not their fault – the course hasn't prepared them to work with the people they're being asked to work with."

In addition to the need to match content to the role of the coach, the need for a focus on the 'hidden curriculum' when planning for curriculum content, was also highlighted by several of the participants in this project. This was typically explored through the notion that coaches needed to explore and understand their practice and the processes that guide this. The quote stating that 'exploring practice is more than just reflection' suggests that there is still a need to reflect against standards and to come up with new working strategies to deal with the complexity of coaching.

"...coaching process is where we really interrogated what coaching was, but there was no doubt that the people that we were working with were coaching."

"...they had never questioned their own practice in the light of, for example, the kind of models that you're coming up with or models that I've come up with."

"If a coach can deal with the athletes, understand them, and adapt to them, I mean how far do you want me to go?...have emotional intelligence and empathy to be able to read it when they need it. Knowledge of the sport is irrelevant in many cases, depending on the coach. I mean, there is no one answer; just like Lyle's book would say, it's a completely complex, dynamic situation. So you could have a coach in there who's a perfect reflectionist and able to continue on, and he or she would make a great coach."

"Philosophy of the course was to avoid explicit science modules; rather, focus attention on process, coaching isn't just the application of science."

"However, independent study allows students to find specialist sport science knowledge."

"Would like to do more of an integrated science module in order to challenge their knowledge."

"The curriculum was partly drawn from performance profiling against what world class performance in [sport] *is."*

"Curriculum is developed along the way by responding to the needs of the learner."

"Coaching at the highest level is about people management, micro-politics...negotiating outcomes with athletes, monitoring and reacting to 'goings on', about decision making and engaging with the complexity of the process. It's much more than just being reflective, positive communication, being athlete-centred (whatever that means), mentoring...which appears to problematically dominate the thinking of some."

"Whole organisational issues emerge, not just coaching issues."

In addition to these statements, it is well worth reading the explanation of, and reflection on, the curriculum and systems employed by the Trainerakademie in Germany, which can be found at:

Nordmann, L., & Sandner, H. (2009). The Diploma Coaches Study at the Coaches Academy Cologne of the German Olympic Sport Federation: Current state and new developments. *International Journal of Coaching Science*, 69-80.

5.8 Understanding Coach Development and Learning

As evidenced by the review of coach learning literature (Cushion et al., 2009), the domain of adult learning is vast, with a wide range of theoretical perspectives – certainly more than we can cover here. Consequently, we offer what we perceive will be some key issues facing coach development at a professional level, with some ideas for consideration that come from relevant theory and best practice in use.

5.8.1 Professional Coaches Are Not Students

When looking for best practice in knowledge development, people often look to the Higher Education (HE) sector for ideas since this is where 'higher learning' occurs. However, this can be a dangerous assumption, as highlighted in the quotes from participants in section 5.5. HE has evolved from a system where young minds are developed, where naïve dualistic students learn from the professors. While times have moved on in HE, this basic tenet still stands. HE has developed and evolved for the 18 year old school leaver going into full time learning and not for a professional undergoing professional development. Consequently coach education needs to be wary of adopting a HE approach to professional development, since it may not sufficiently take the needs of the professional into account to ensure relevant and targeted educational opportunities are developed.

5.8.2 Professional Coaches Already Put Theory into Practice

The notion of 'theory, then practice' is a false (and probably patronising) one when we consider the idea of coaching being an intentional activity. By the very nature of intentional coaching (we assume that this is what experienced coaches are trying to do!), experienced coaches must be adhering to some 'theory' of practice; otherwise, what is driving the intention? We suggest, therefore, that a theory-practice gap doesn't exist with experienced practitioners. Instead, the gap that is more likely to exist is between the more formally[16] informed theories of academia and those theories/beliefs and values employed by coaches derived from their own learning experiences.

Progressing on from the problems of adopting HE models to coach development, it is therefore important that the 'theory, then practice' approach is avoided. Research examining memory identifies that learning is more efficient and effective when new ideas are presented

[16] empirically, discursive and peer reviewed

in a way that is meaningful and contextual to the learner (Christina and Bjork, 1991). The most obvious way of doing this is to situate learning in the context of the learner (coach); i.e. in their practice (we will return to this later). Therefore, to make ideas really meaningful and contextual to the learner, new 'taught' ideas should link to the knowledge, beliefs and values (i.e. the personal theory) of the coach, even if this means the coach's knowledge and beliefs are challenged (Abraham and Collins, 1998b). Consequently, if a coach educator feels that new theory may be of use to a professional coach, both educator and coach must seek to link this new theory with the existing knowledge and beliefs of the coach that have necessarily come from their practice, otherwise there is no context and no meaning.

5.8.3 Coach Education Must Lead to Improved Coaching Practice – Transfer of Learning

Belling et al. (2004) have identified that there are generally three broad influences on the successfulness of transfer of learning from training to practice; these being, characteristics of the individual learner, aspects of their workplace and facets of the learning experience itself. We have already identified key characteristics of individual learners' ability and willingness to engage in educational settings in a previous section, but what can coach education do about enabling workplace and educational environments that encourage the transfer of knowledge and ideas in to practice?

While it could be argued that coach education only has limited control over workplace practice, it is obvious that this must be a serious consideration in the design of coach education programmes. This becomes all the more obvious when learning theory suggests that much of the learning of a coach needs to be situated in their practice (Cushion et al., 2003) since this can remove much of the transfer 'distance' between learning and practice. Although somewhat simplistic in nature, Kolb's (1984) experiential learning cycle of 'concrete experience', 'reflective observation', 'abstract conceptualization' and 'active experimentation' offers useful insight here. If we consider that classroom-based education works heavily on the abstract conceptualization element of Kolb's cycle (i.e. this is where new ideas and knowledge may be delivered), then it may be some time before the coach has an opportunity to come up with new ideas (active experimentation), and then implement them in practice. The concept of situated learning is that all of this cycle of learning occurs in and around practice as much as possible, especially if there is a quality mentor to work with. Unfortunately, coach education (and coaching for that matter!) is often at the mercy of power relationships and deeply held beliefs which are often anti-intellectual and anti-change in nature. Consequently, while learning situated in everyday coaching practice is probably crucial, the realities are that the work environment is not conducive to generating new ideas or supporting active experimentation – in fact, it might even be resistant to these processes.

So what should coach education do? The first thing is not to throw the baby out with the bath water – just because coaching environments may not be supportive of situated learning approaches doesn't mean that situated learning can't be an incredibly powerful approach to coach development. However, the growth of an environment that is truly supportive of work-based learning may take some time due to a myriad of pressures from, and attitudes of, those with a vested interest in the work environment (i.e. athletes, other coaches, administrators, line managers). The more these people buy into a challenging and open work environment, the more likely it is that a work-based learning approach can occur.

However, just how much of a coach's learning needs to be based in practice is open to debate, with Druckman and Bjork (1994) suggesting there may be some fundamental principles of practice that may be better developed in more controlled settings such as classrooms where there is more of a didactic interaction with an educator. Or, put another way, it may be easier to develop abstract ideas offered by theory (e.g. anxiety and its effects on performance) in closed settings prior to actual use in practice. Indeed, given the limited capacity of memory (Smith et al., 2001), it could be argued that trying to learn about anxiety and its effects on performance purely from practice is impossible; simply because there is too much to think about while trying to coach at the same time.

So if more didactic classroom-based approaches are to be used, and greater distance is to be put between learning and practice, what type of didactic approaches encourage transfer of learning back to practice? We have already talked about developing learning content that is meaningful and contextual to the learner. Jones and Turner (2006) have had some success in achieving this using a problem-based learning approach where coaches are asked to engage with delivered knowledge through 'real world' problems. There can be some issues with this approach, though. For example, the learner may simply learn the specific process that led to solving the problem as opposed to the broad principles of how the theory can influence problem solving and decision making in coaching in general. Suggestions to avoid this would be to ask how the decision would change if certain aspects of the problem changed; taking a 'what if….' approach. This approach varies the problem and encourages the learner to transfer their ideas to a related problem but in a manner that doesn't allow a simple re-application of a procedure. This idea is often referred to as the 'contextual interference' effect (Bjork, 1993).

5.8.4 Coach Education Must Lead to Improved Coaching Practice – Assessment

It is obvious that approaches to teaching coaches can impact positively or negatively on a coach's experience of coach education and that this may have consequences for transfer of

learning. However, one key issue often missed in discussions about transfer of learning from formal learning programmes is the manner in which assessment is conducted. A fundamental question for all coach educators to answer is, 'how do we know if a coach is better as a result of completing formal coach education?'; since, if the answer to this question isn't known, how does the coach educator know what to assess? This becomes all the more important because assessment in formal learning plays a major role in the direction of effort from the learner (Abraham and Collins, 1998a).

There is no simple answer to this question; however, there is one key benchmark - completion of an assessment should provide opportunity for valuable and relevant feedback and guidance to the learner (coach) that they are progressing towards becoming a better coach. If an assessment doesn't achieve this benchmark, then the assessment is probably a waste of everyone's time. So, are essays useful, are presentations useful, are practical assessments useful, are exams useful? The answer is, 'it depends', since all of these questions can be answered through reference back to the key benchmark, and this benchmark is reliant on there being an agreement on what a better coach is. As indicated by figure 2, therefore, the decision making of a coach educator/coach education organisation cannot look at coach education in isolation of the coach and the coach's needs and wants. In short, coach education programmers need to have a very clear idea as to what the goals of a programme of learning are. For example, is it increased knowledge of their athletes through sport science, is it increased self awareness and self reliance, is it improved decision making ability, improved planning, improved delivery, etc. etc.? This may seem like we are advocating multiple assessments of coaches – something that probably wouldn't go down well with coaches as they'll very quickly start to feel controlled and not at all autonomous! It is fortunate, therefore, that we would actually advocate reducing assessment and just make the assessment that is developed more encompassing. However, and just to reinforce the point, coach educators need to be very clear about what they think a good coach is and how that coach develops over time.

5.9 Resourcing High Level Development

Broadly speaking there are three key areas of resourcing that are relevant in running professional development; physical, human and time. There is, then, an obvious fourth - financial resource - that underpins all of these resources. We have already discussed the need to quality assure the people involved in supporting professional development; however, consideration of physical resources is paramount in supporting the development of coaches. While none of the participants in this project make explicit reference to physical resources (we assume because this was implicit in much of their responses to effective

learning environments), the booking/purchasing of physical spaces (i.e. classrooms, computers, data projectors) and the provision of virtual learning opportunities (ranging from email support to full learning platforms such as 'Blackboard' or 'Moodle') all require financial investment. None of the participants in this project relied solely on distance learning as the main delivery tool; however, there is no doubt that this will become an issue for the development of coaches in the future and will require significant investment. We would suggest that Cliff Mallet's discussion (Mallett and Dickens, 2009) of the course delivered by the University of Queensland represents a useful starting point for this issue.

Given the expense that may therefore be required to invest in 'quality' tutors, physical resources, and the time over which these resources will need to be deployed, planning for investment in the thousands rather than the hundreds is probably required.

Developing 'high performing' coaches is ultimately about constructing a learning package that is as relevant to each coach as possible, as identified in the following quote:

Individualising Programmes

"I think the value of learning and development is regarded as being important at the high performance level, but I think a formalised educational structure is less so. For them, the learning should be individualised…but when you start to develop those individualised programmes it can become so sporadic; so how do you deliver something like that?"

In discussing the issues of creating quality learning environments with the participants in this project (and probably answering the question posed in the previous quote), nine sub-themes emerged: Problem-Based Learning (PBL) and Work-Based Learning (WBL), Communities of Practice (CoP), Mentored Practice, Didactic Approaches, Evidence Based Delivery, Working with Others, Assessment Approaches, Contextual Issues, and Time. These all broadly tie in with the issues we have raised in this section, and the responses are summarised below:

PBL and Work Based Learning

"Teach through case studies using a PBL approach; and it's much better if you can bring in the person who wrote the case study to describe the case to provide the context and meaning."

"Need a pragmatic approach to using theory – issue-based learning, then promoting experimentation and playing with theory."

"Co-creation leads to PBL based specifically around the jobs of the students. Assessments then structured around creating working documents for the company."

Community of Practice

"CoP works when there is a shared goal and a level of criticality, focus and structure."

"There is a desire to develop a community of practice, however, there is a need to make sure people do not become excluded."

"Group work is difficult but the communities of the students provide a big selling point, and people like this. The university becomes a hub for CoP."

Mentored Practice

"Practice is where assumptions come to life so being there is crucial to develop a rich picture."

"Delivery and support must be embedded in coaches' practice. Must take a relentlessly unobtrusive approach to supporting coaches – I once spent 15 hours with one coach in a single day."

Didactic Approaches

"Didactic approach still happens in the form of workshops but these cannot be off the shelf, it has to be functional and targeted to the coaches' needs."

"There is a need to quality assure 'lecturers' to avoid an esoteric approach to knowledge delivery."

"We use face to face 'teaching' approaches to introduce topics and concepts."

Evidence Based Delivery

"If you're going to do professional development, do it professionally."

"Delivery must be informed by evidence from learning theories."

Working with Others

"Working with other coaches from other sports offers opportunity to exchange experiences; team sports offer a lot to individual sports who train as teams, while team sports coaches get to see a more individualised approach when they work with individual sports."

"I would see massive value in this [multi-sport collaboration] *because with a Level 4 coach you'll need to be a reflective practitioner; so even if you say something about your sport and I say 'pff, that'll never work in my sport', at least I'm reflecting on it."*

Assessment Approaches

"The assessment is geared to the person…it can't just be a written assignment…it's about practical application and moving them on in their coaching…whether that's a diary, a log, a work-based learning where they present something, where it's videos – start of the programme, end of the programme – tell me what's different, like a viva…you know, a variety of assessment is needed, based on the individual. Some will be happy writing a paper – and I think that's useful as well – but there's got to be flexibility."

"Assessment goes from traditional knowledge assessment to practical coaching evaluation placed within bigger picture framework."

"It's fine to have [UKCC] *Level 4 at MSc level, but then those standards must be applied across the board. On the other hand, do you need coaches who can write at the level of post grad students? How will that help them in their work? Perhaps different assessments (although generally equitable) need to be considered."*

"Project encountered needs to be as individualised as possible."

"We lead coaches down a path because our assessments our based upon their understanding of the [sport] *side, so they work to the assessment…'why would I want to focus on other aspects, when the assessment requires me to demonstrate this [i.e. sport specific knowledge]'…so they focus on working to the assessment, and why would they worry about learning anything else? So what we've got to do is make sure that the assessment is far more holistic."*

Contextual Issues

"We're not their boss or even an assessor, and so we're able take a neutral stance and the coaches know that."

"After each residential 'students' must meet with CEO to discuss progress and opportunities."

"We were given a budget to develop and then get the programme through our quality assurance procedures. We then charge about £8K per student which is more than the typical off the shelf cost but this is bespoke learning."

"It costs €9K per coach which is part funded by the government, the sport and the coach. We then get government funded for the core staff to design and manage and support the course."

"The students pay the university cost for M level modules which for a full Masters course is about £3.5K."

Time

"We didn't even offer the opportunity to complete our course full time given the level of practice learning - trying to complete the course in one year just wouldn't allow for sufficient engagement with practice."

"Coaches can do the diploma in either 1.5 years full time or 3 years part time. We haven't had a full time coach for nearly 3 intakes now simply because our coaches don't have the time."

"We try and get a commitment from a performance director to allow us to work with coaches for a two year period but their ability to do that is normally finance-dependent. But we think to have the impact we need about two years."

As previously referred to, transferring learning to practice is often the biggest issue within professional development; it is of interest, therefore, how assessment is very much seen as an opportunity to reinforce transfer in a manner that is relevant to the learner. However, there is also recognition of how assessment can drive learning and how narrow assessment approaches can lead to a narrow approach to learning, even if other opportunities to learn exist within a course. Furthermore, there was one instance where the manager (CEO) of the learner undergoing development was explicitly involved in encouraging the link between learning and work practice, creating the environment for transfer identified by Belling et al. (2004).

The cost of professional development varies considerably with costs encountered starting at about £3K up to £17K. The costs involved probably had more to do with what the learner, organisations and/or government would pay, and this was heavily influenced by eventual outcomes. However, there was evidence that increased cost did lead to increased human, physical and time resources being allocated to support learning. Finally, there was one instance where the level of support offered to learners in their own practice was significantly higher than that offered elsewhere. There was no obvious evidence that this was having a greater impact on ultimate practice; however, there is an argument that this approach could be important in assisting in forward epistemological transitions and preventing the return to more comfortable ground.

6. How Can Coach Education Be Done Better?

We have provided a number of ideas here about what needs to be considered in the design of a coach education programme, many of which may offer ideas to improve coach education. However, just like 'high performing' coaching, the most effective coach education will come from taking an individualised approach that, through an informed decision making process - in which the pros and cons of different ideas are considered against theory, evidence and experience - understands the following:

- Nature of coaching expertise so that relevant goals are set;
- Needs and wants of the coach;
- Required knowledge and expertise; and
- Available developmental approaches

So, to conclude, we return to the questions posed earlier and offer some ideas and food for thought.

6.1 Who Could/Should Be Able To Do UKCC Level 4 Courses?

Throughout this report we have examined cognitive and meta-cognitive factors that appear to be relevant in selecting coaches for professional development toward UKCC Level 4. However, taking a more philosophical perspective may be a useful starting point. Talent development literature (e.g. Abbott and Collins, 2004) has argued for the avoidance of selecting and de-selecting of participants in sport for as long as possible, since the factors that allow people to make the most use of their talent can emerge over time. This means that as much opportunity as is possible is afforded to people to develop their talent. However, there is also the notion that we should not set people up to fail; meaning, there are probably stages of development and transitions between them that should be considered. Unfortunately, there is very little known about whether these stages exist in coaching, how stages of development could be assessed, or what support is required to facilitate the transition between stages. Entwistle and Peterson's (2004) and Perry's (1988) descriptions of development within HE seem to make sense when applied to coaching development, as does the hierarchies of development offered by Klein and Hoffman (1993) and Schempp et al. (2006). However, their application to selection criteria has, to our knowledge, never been tried.

What conclusions can we draw from this? Both the literature reviewed and the responses received from the participants in the project suggest intellectual readiness is probably crucial; however, this should not be seen as an ivory tower barrier to ex-players/athletes

who have missed higher learning opportunities due to a focus on their performing career (nor should it be assumed that people with degree or equivalent have the necessary intellectual skills!). Typical markers suggesting intellectual readiness that could be taken from the research referred to above would be a questioning approach to coaching, a dissatisfaction with easy answers, a recognition that there are often multiple options and answers in coaching, an understanding of needing to get critical insight that comes from other coaches or research, and all of these markers are commonly seen in ex-performers. However, there is also the issue that 'we only know what we know' and levels of formal knowledge will be a significant issue in being prepared for UKCC Level 4. In short, some accredited prior learning in the form of UKCC Level 3 coaching awards, degrees, foundation degrees, and significant experience are typically going to be needed to assure requisite levels of knowledge on entry. Finally, some evidence of having the requisite meta-cognitive skills referred to in section 5.6.3, and having some awareness of the assumptions that are driving their coaching, may also all be useful markers of readiness.

Ultimately, being able to have a measure of these factors is going to be important. We are aware that some sports are beginning to use psychometric inventories to help in this decision or, at least, provide a measure on entry that is to be reflected on later in a course. These ideas aside, the most useful approach would be to develop criteria that are agreed across significant gatekeepers (e.g. experienced coach educators, other high level coaches, academics with relevant insight, etc.) and informed by the sort of theory we have presented here. Once these criteria are agreed, develop an agreed method of assessing these (i.e. a combination of interview, submission of a portfolio of evidence, presentation, letter of recommendation from someone with an informed opinion, application form with supporting statement) and then publish them so that people know what the entrance criteria are. It will then be crucial that these criteria are not then compromised and/or marginalised by allowing people to get in through the 'back door'.

6.2 What Should Be Taught And When Should It Be Taught?

The answer to the first half of this question is that curriculum for coach education can be drawn from the six domains we have previously referred to when discussing figure 1: understanding the athlete, understanding the sport, understanding teaching and learning, understanding self, understanding process and practice and understanding the coaching context. Exactly what weighting from each of these domains is required is dependent on the needs and wants of the coach and coach educator(s). It is important to note, however, that we are not advocating that any curriculum is necessarily taught under these banners.

Knowledge does not sit easily in discrete areas and there is always curriculum that is relevant in multiple ways (e.g. talking to coaches about mental skills for athletes [understanding your athlete] may easily progress in to looking at mental skills for coaches [understanding self and understanding process and practice]); we offer these banners as a method for beginning conversations about curriculum.

The question of when knowledge should be taught is quite tricky; is it theory first, then practice, or the other way around? As we have already intimated, this is a potentially redundant argument. However, there is often a feeling that once a subject is taught it shouldn't be revisited. Kolb's (1984) learning cycle suggests that this would be a mistake, since learning one bit of knowledge may spark a reflective process that develops further knowledge. As a consequence of the developed new knowledge, the learner has a greater capacity to understand (i.e. they have more knowledge to draw on and connect to) when they access learning again. In short, a scientific paper may only make a limited impact on first reading; however, a month later, after learning has occurred it, may make much more sense and have a much greater impact on practice. Therefore, revisiting content may in fact be a crucial approach to delivering curriculum.

6.3 How Should It Be Taught?

We have already highlighted some of the pros and cons of work-based learning and more typical classroom-based learning. The key consideration for coach educators relates to which approach fits when for the coaches on their course. It would be unusual for a formal learning programme to have no classroom-based activity and so the key will be for the person delivering classroom-based activity to develop approaches that are engaging to the coach. Equally, however, educators should avoid gimmicky approaches. As with coaching athletes, smiling and active coaches does not necessarily equate to coach learning. In the main, professional coaches engaging in high level coach education programmes will already be progressing towards relativism in the way they view their decisions; delivering 'content' that is deliberately challenging of coach practice is probably a good way to go. In fact, given that we are often forced to reflect most when we are surprised, provoking debate - even argument - through directly challenging a coach's practice by introducing theory and evidence that provides a basis for informed critical debate is probably crucial.

A further issue is the value of reading. As coach educators ourselves we often despair when we hear other coach educators suggesting that scientific journals and theoretical ideas are too difficult for coaches to engage with; not only is this patronising to coaches (our

experience is that many coaches excel given this level of insight), it is also damaging to their prospects of developing. Of course, one of the judgements that coach educators need to make is what depth to go into with certain theories, and there is no doubt that some journal articles are more engaging than others. However, learning is done by the learner (coach), and our experience is that any given reading should not be an exclusive insight into an idea; rather, a stimulus for continued exploration into the subject matter by the coach.

As we have described, work-based learning is crucial to the development of professionals; however, finding coaching environments that are supportive of change and innovation is a rare thing and getting 'buy in' and active involvement from coach managers seems to be a good idea. Even if coaches fully engage with new ideas, the chances of these ideas making a lasting impact on coaching practice are relatively low. Changing attitudes and behaviour is a notoriously difficult exercise as anti-smoking campaigns, exercise promotion, and healthy eating promotions have proved. Work-based learning probably needs a sustained and integrated support mechanism that works towards the goals of the coach education programme if true change is to be achieved – the idea that one of the participants in this study spent 15 hours with one coach seems like a large but potentially crucial commitment. Indeed, the notion of embedded support may well be an example of excellent practice (whether this is 'mentoring', link tutoring, or something else, is up for debate); albeit an exit strategy to avoid becoming a crutch may well be worth planning for.

Finally, we should certainly bear the time frames offered by Anderson (1982) and Erickson et al. (2007) in mind. 100 hours of learning and practice for cognitive change and 10,000 hours deliberate practice to reach expertise both tell a story that coach development takes a long time! Care is needed; however, if learning is done by the learner, much of this development must be outside formal contact with a coach educator. It makes sense, though, for this time to be integrated within a formal course to try and keep learning on track with opportunities for quality feedback on development. It is no coincidence that it takes nine years of training to become a General Practitioner doctor, six years to become an accredited sport psychologist, and eight to twelve years to become a chartered teacher.

6.4 Who Should Do The Teaching?

A commonly cited issue from the participants in this project is the need to employ tutors or guest speakers who can meaningfully communicate complex ideas to coaches. There is the chance that this can go to unreasonable levels and neglects the capacity of coaches to interpret ideas when they are presented outside their context; however, the stereotypical

academic (and according to the participants in this project they do exist!) who just talks in research terms and language is probably someone to be avoided. Taking Collins et al's (1991) approach, employing tutors (and these may be 'academics', other coaches, practising sport/social scientists, media specialists, etc.) who have expertise that can be modelled 'simplistically' to the context of coaching, before taking a deep approach, are very desirable. This becomes all the more true if these people are able to critically consider the development of meaningful learning and assessment environments through reference to appropriate learning theory and practice.

6.5 How Should Learning Be Assessed?

As we have identified, assessment should provide the opportunity for meaningful feedback on progression towards becoming a better coach. The first thing that needs to be considered by coach education, therefore, is what being a 'better coach' means in their sport, within the specific coaching context. This is not a question to which there is an easy answer, but it is crucial that an answer is arrived at. Our assertion would be that the 'high performing' coach is someone who can consistently make and implement good decisions that they can rationalise and defend. As such, we would argue that assessing a coach's ability to do this would certainly offer opportunities for meaningful feedback, whether this is from other coaches, academics or the coach themselves. However, as we have mentioned, getting to this point requires many building blocks to be put in place, each of which could be assessed in meaningful ways. One thing we would suggest, however, is that we should look beyond the obvious forms of assessments. The great favourites of coach education are the diary or log book, while higher education likes essays or presentations; however, we would argue that all of these approaches are designed by, and possibly for, educators (including ourselves!) - since it provides us with evidence to check - but are these approaches in the best interests of the coach?

6.6 What Resources Are Required?

The physical and human resources required are difficult to define without the context being clear, although one 'essential' physical resource is probably a coaching job (voluntary or paid) into, and against which, development can be integrated. The two remaining resources of time and finance are perhaps a little easier to recommend. The professional learning investigated here, and supplemented by the development methods of developed professions identified in appendix 1, suggests that significant time is required to achieve sufficient learning and development. Typically, this seems to be 2-3 years, on top of

previously accredited learning; albeit, this may be shortened if a ‘full time’ option is available or accredited prior learning is offered. Such a length of time, therefore, will require substantial financial investment. The sums included in this project ranged from £3K through to over £15K for not dissimilar lengths of development. Whatever the cost, in all but one of the programmes visited, some level of profit was required by those responsible for running programmes of development. As such, market economics of supply and demand start to take some precedence, as does the added value of the award to the ‘consumer’. We are not in a position, therefore, to make a suggestion on minimum or maximum costs. However, given the level of expertise that we would suggest is required to deliver this level of learning, staff time is not going to be cheap. Equally, though, given the financial rewards for coaching outside of the elite televised sports, financial return for investing in self-development is unlikely to be significant. Eventually, therefore, the best measure of cost is probably going to be ‘value for money’ as perceived by those who will pay for it; whether that is the coach or a third party such as government funding or NGB subsidies. What is clear, though, is the need to discuss this issue frankly and to avoid trying to do professional development on the cheap.

7. Conclusion

To conclude, coach education must explicitly consider and challenge the prevailing attitudes towards coach education by administrators, parents, coaches, mentors, and government. No matter how often we refer to coaches as being professional, it is not a recognised profession in most developed countries. A major reason for this is the ad hoc and informal development of coaches; if coaching is to be a profession, it will have to behave like one, with formally accredited, rigorous, long-term development programmes backed up by an ongoing professional development programme that allows coaches to keep up to date. This doesn't mean that informal coach-directed learning will become a thing of the past - it will still be crucial – however, it should be a little better directed.

In order to facilitate this developmental journey we close by summarising our main points from this document and offer some recommendations to inform coach development practice and, in so doing, answer the third question posed at the beginning of this document:

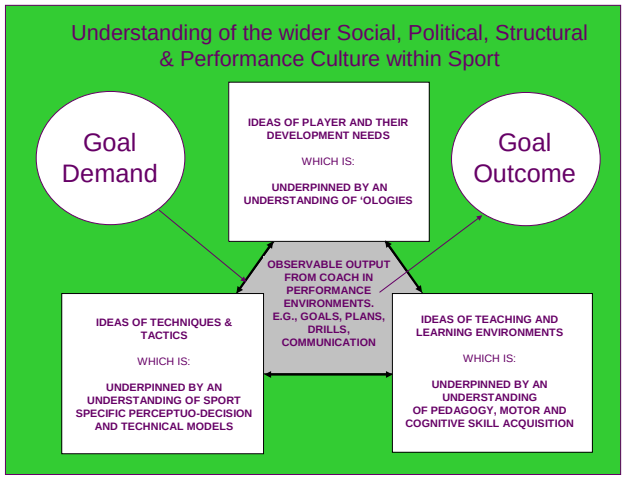
- How do we develop UKCC Level 4 coaches (What can we learn from existing national and international best practice in professional development and education)?
    - Establish key principles and guidelines that should be considered in the design of a UKCC Level 4 qualification.

Firstly, we reintroduce the models of the coach decision making process and coach development process and display the links between them. These are then followed by a series of tables that identify key points, implications of those key points, and suggestions for consideration when planning for the development of UKCC Level 4 coach education courses (for consistency, these are the same figures and tables offered in the UKCC Level 4 Guidance Document).

A Model For Coach Decision Making

Attributes

Competence Framework



A Model For Coach Development

GOAL DEMAND

WITHIN & BETWEEN DOMAIN DECISION MAKING PROCESS @ MACRO, MESO & MICRO LEVELS

GOAL OUTCOME

Understanding the sport:
Understand the athlete
Understand the sport
Understand teaching and learning
Understand the context
Understand the process and practice of coaching
Understand self

Understand the coach:
Their development needs and wants
Their role, function and context
Their assumptions, beliefs and knowledge

Understand the coach development environment:
Who should do the teaching?
What should be taught?
When should it be taught?
How should learning be developed?
How should learning be assessed?

7.1 Coaches' Wants & Needs: Principles for designing programmes

	Key Points	Implications	Suggestions
1	Coach education awards may be designed in isolation from the coaches to whom they are targeted (their developmental pathways, the athletes they work with, educational background, motives, and so on).	**Individual preferences** can be accommodated in the delivery of the award programme. The competence framework and the postgraduate nature of the programme ensure that a common framework or 'employment standard' is being maintained. These become **crucial 'building blocks'** for the programme.	Conducting an **initial needs and situational assessment** of each coach's circumstances should be built into the **Personal Development Plan**. The admissions/selection process will ensure that there are minimum expectations in coaches' experiences/knowledge to date. Having a clear picture of the intended deployment of Level 4 coaches is very helpful. This **'role frame'** should be incorporated into the programme delivery.
	It may be helpful to distinguish between design and delivery. A programme may not incorporate significant levels of choice or flexibility in design, but the delivery of the programme can account for individual circumstances via work-based units, assessment, study tasks, directed reading, and so on.		
2	Coaches attempting to 'get better' will enter education programmes with **wants** (i.e. what they wish to get out of the course) and **needs** (i.e. what the educator thinks the coach should get out of the course).	There is some potential for a mismatch here. The competence framework and programme design identifies the parameters of the coaches' 'needs', and these are not individually negotiated. The **coaches' preferences** (perhaps related to role) can be accommodated in programme delivery.	The delivery of the programme should be able to facilitate an element of '**personalisation'** of progress through the award. Coach educators should ensure that the relevance of the full range of professional competences is appreciated by coaches.
3	A high level of **facilitation expertise** is required by coach educators, in addition to their specialist knowledge. This expertise can be expressed as: ▪ Breadth and depth of knowledge relevant to their role and function ▪ Awareness of their personal assumptions, beliefs, and knowledge ▪ Capacity to use their knowledge to enhance the practice of others.	In the absence of such expertise, coach educators may not have the capacity to **Enrich** the programme, Make links between the programme areas, Offer an '**integrated'** approach to delivery.	An important element in the management of the Level 4 programme will be the **selection and development of coach educators**. Details should be provided in the endorsement submission.
4	A common practice is to identify the intended content within a Unit of Learning rather than the	It would be rare for the content not to be relevant, but it is important to ensure that the **learning**	Learning activities need to be **specified in advance**, in order that coaches' can express a view, and

	activities that will be undertaken. This is particularly important when learning outcomes are expressed as '**usable knowledge**'.	**activities** are relevant and meaningful to the coaches. Monitoring and evaluating programmes is difficult if the only record of the programme intentions is a list of content.	subsequent evaluation can take place. The Development Team should develop a **learning environment checklist** to assist Unit of Learning tutors.

7.2 Coach Expertise, Skills and Knowledge: Principles for designing programmes

	Key Points	Implications	Suggestions
1	The goals of coaching can be so diverse that making a truly informed decision about how to achieve them requires coaches to draw on knowledge from a **broad range of disciplines**	We only know what we know, and so any Development Team will be limited by the expertise from which it can draw, and the perspectives it takes about the coaching role.	Ensure the Programme Development Team (PDT) has expertise across a breadth of areas The DT should call upon insights that are both practical (coaches) and academic. A 'model' (even if informal) is a must
2	In developing a coach's knowledge there is not enough time to learn everything about everything	Key decisions will have to be made about where to take a **deep approach** to knowledge learning and where to take a conceptual approach to knowledge [remember postgraduate equivalence]	The PDT should develop a **strong rationale** for why some knowledge areas are focused on and why others receive a lighter touch It is entirely appropriate to be **selective** providing a rationale is offered and defended
3	Coaching models have suggested that the coach development context can be best understood as six general perspectives: **Understand the athlete** **Understand the sport** **Understand teaching and learning** **Understand the context** **Understand the process and practice of coaching** **Understand self**	Drawing on the first two key points, it would be unusual for there to be a complete avoidance of any of these general areas.	Programme delivery should be driven by the needs of the coaches on entry and the goals they are expected to achieve as a coach (competence framework). However, clearer thinking about what programme is needed is often helped by having a **coherent structure** to work from in order to drive discussion and to check and challenge outcomes. **Coaching models** can offer this structure.
4	Knowledge does not sit easily in single domains; e.g. learning about the effectiveness of athletes (understand the athlete) can also	The 6 general areas offered in point 3 are not intended to constitute a programme structure, although they could if this was thought to be	Design a programme that makes best use of the learning time available to progress coaches towards

	lead to learning about personal effectiveness as a coach (understand self)	relevant.	the goals of the award. This will be achieved best by **integrating knowledge domains**, and choosing a **meaningful** programme structure related to the coaching process
5	Athlete centred coaching is an often-stated goal of coaching (although there are strong arguments why this can be challenging in performance environments). The **sport sciences** and **social sciences** hold a wealth of information to help coaches better understand their athletes	Coaches' learning is not always presented in this context. These sciences are often seen as providing answers to athlete development rather than **insight to athlete development**. If coaches are to gain an insight into their athletes' needs in order to develop appropriate goals and training programmes, sport and social sciences should be targeted at helping develop this insight.	Consider what **aspects of sport and social sciences** are required to help coaches develop a better understanding of and insight to their athletes learning and performance Level 4 coaching is about making **sound professional judgements**. This underpinning knowledge and insight is necessary for these judgements.
6	Understanding their own sport is obviously crucial to coaches' practice. However, evidence suggests that much of this understanding has developed almost entirely through experience	While **critical reflection** on experience can develop in-depth understanding of sport (and is to be encouraged), there is a body of research available that can influence practice in the technical areas of sport (e.g. biomechanical modelling, performance analysis, and perceptual-decision making), although the amount of research in some sports is yet limited.	Level 4 coaches should be aware of this '**advanced technical knowledge'** in their sports. While there remains a limited amount of research into sport specific knowledge, drawing on research from a broader range of sources can help coaches critique their own sport specific knowledge and is required for **innovative thinking** in coaching practice.
7	Research has shown that coaches generally lack knowledge in **designing and critiquing the learning environments** they develop. There is some evidence that more attention is being paid to skill acquisition in coach education but that it is not yet making an impact on practice.	Athlete learning and performance is being limited by the learning environments that coaches develop. Being able to think critically and being able to draw upon sound principles in this area is crucial to the design of effective learning environments and athlete development.	There are a broad range of **learning theories** that can impact on coaching practice and athlete learning in the domains of **motor skill acquisition and cognitive learning**. These should have a level of precedence in the Level 4 programme, unless there is a strong argument why this is not appropriate. This key subject area may have a significant impact on coaching practice.
8	The **culture and context** of a sport has a bearing on the behaviour of coaches. Influencing and accounting for culture and context are seen as being important skills for professionals.	Being aware of the impact of **'taken-for-granted' assumptions** about coaching in their sport is part of coaches' critical understanding of their practices. Coaches need to be aware of micro and macro political influences from all key stakeholders and the impact they have on their coaching practice.	**Sport policy** and some aspects of sociological research should be considered important elements of a professional's development programme.
9	Understanding self, and **coaching process and practice** are often ignored as distinct programme areas (they can be described as	Processes such as reflective practice have little impact unless coaches are aware of their core beliefs. Decision making is crucial to coaching but	Epistemology (understanding how knowledge is created and validated), **problem solving** and decision making are critical areas for inclusion within

	being the hidden curriculum). However, beliefs/philosophies and problem-solving skills have a significant impact on the coaches' practice in functions such as planning, crisis management, athlete analysis, practice design, and so on.	the **process of decision making** is as important as the decision policies themselves.	programme design. Their **integration** into the other coach development areas identified in key point 3 will have a major bearing on the success of the programme in promoting advanced learning.

7.3 The Coach Development Environment: Principles for designing programmes

	Key Points	Implications	Suggestions
1	Experienced coaches come with extensive **assumptions**, beliefs and knowledge.	Learning is more efficient and effective when new ideas are presented in a way that is **meaningful and contextual** to the learner. The relevance of many aspects of the learning may be lost if not presented in an **applied** and **'role frame'-related** way.	Connecting to the assumptions, beliefs and knowledge of coaches is crucial to create meaning; coach educators must seek to make these links explicit – even (**particularly**!) if this means the coach's knowledge and beliefs are challenged. **Reflective practice alone is insufficient; challenging environments that expose real practice to 'standards' is essential.**
2	It is important that the '**theory then practice**' approach is avoided. Traditional education often fails to accomplish the second part by leaving this to the learner.	Key elements of learning principles are in danger of being compromised if learning activities do not focus on 'usable knowledge'.	**This does not mean that theories and concepts should be avoided – but the implication for practice should be emphasised.**
3	Coach education must lead to improved coaching practice – this has implications for **transfer of learning**. Coach educators need to be mindful of the three broad influences on the successfulness of transfer of learning: ▪ Characteristics of the learner ▪ Work environment ▪ Quality of learning experience.	The advantages and disadvantages of structuring the **learning environment** in different ways need to be considered. For example, **work-based learning** can provide a meaningful context, and transfer is immediate. However it is easy to slip into old habits, and abstract ideas are hard to work with. Conversely **workshop-based learning** provides a platform to develop abstract ideas in more controlled settings, and provides immediate support from coach developer. However, transfer distance is increased, and it is easy to lose impetus.	Use learning and teaching methods that are theory, evidence and experience based. Take ideas from **classroom to job**: ▪ Employ mentors who are able to prompt considered application of abstract ideas from classroom into the field Take ideas from **job into the classroom**: ▪ Problem-based learning encourages this. There is no optimum blend/mix; methods selected should be congruent with the coaches' role and aligned with the programme objectives.

	It becomes obvious that considerable responsibility falls to the tutors on the programme. Although the Development Team and Programme Leader can provide guidance and can monitor provision, the design and delivery of the learning activities are crucial. This is no different from any other form of education, but it highlights the need to select wisely and to orientate to the learning principles adopted in the programme.		
3	Coach education must lead to improved coaching practice – this has implications for **assessment**. Assessment (in its many forms) should provide the opportunity for **meaningful feedback** for the coach on how they are progressing to 'being better'. Therefore, coach educators need to be very clear about what they think a good coach is and how that coach develops over time.	A **clear concept** of what 'better' means needs to permeate the programme – and be couched in terms of the sport, the coach, the domain, and the context. What is better? Better at decision making? Increased knowledge to support decision making? Better personal effectiveness skills? Consider the different forms of assessment. How relevant are essays, presentations, practical delivery sessions, critical reflections, portfolios, exams, and are these approaches in the best interest of coach and their learning?	Develop **assessment methods** that meet the needs of the learner not the educator. Ensure that the method of assessment is aligned with the learning objectives and make sure that what is being measured is **relevant to improved practice**. If a 'high performing' coach is someone who can **consistently make and implement good decisions that they can rationalise and defend**, assessment should be based on exposing and enhancing the reasoning process to make decisions better – in this manner it becomes 'assessment to learn', rather than 'assessment of learning'.

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Appendix 1: Accreditation Schemes/Professional Qualifications

	BASES Sport/Exercise Psychologist Accreditation	BPS Clinical Psychologist Chartered Status	Scottish Chartered Teacher Status	GP Qualification	Practising Lawyer/Solicitor Pathway
Prerequisites	-BASES member -First degree at honours level in Sport and Exercise Science or a related discipline. -Higher degree in Sport and Exercise Science or a related discipline, or equivalent and appropriate postgraduate experience. -Previously presented on Sport and Exercise Science to BASES or other appropriate conferences and workshops. -Have followed an appropriate programme of CPD normally including workshops approved by BASES. -Have undertaken further appropriate peer group review appropriate dependent upon route chosen (i.e. research accreditation or scientific support accreditation).	-A psychology degree -Gain 'Graduate Basis for Registration' (GBR) -Completion of a BPS accredited MSc course	-Fully qualified as a teacher -Registered with GTC Scotland -Currently at the top of the main grade salary scale -Have maintained a CPD portfolio	-Medical degree	-Undergraduate degree
Duration	-3 years -2 years 'fast-track'	BPS accreditation literature, after achieving GBR status, it is stated that the next step is to undertake 3 years full-time post-	-No clearly defined timeframe within which an individual must complete/meet the 'standards' required to achieve Chartered Teacher	-Medical degree (4-6 years) -2 years – foundation programme/general medical training -3 years - GP specific training (CCT	-Academic stage: -Degree in law (3 yrs) -Other degree (4 yrs) -CPE/GDL course (1 yr FT/2 years PT) -Enroll as a student

	BASES Sport/Exercise Psychologist Accreditation	BPS Clinical Psychologist Chartered Status	Scottish Chartered Teacher Status	GP Qualification	Practising Lawyer/Solicitor Pathway
		graduate training in psychology. There is then an 'additional period of directly supervised practice as may be required'. No reference is made to time-frame of this supervision.	status. Typically 3-6 years.	programme) -placements -hospital(s) (2yrs) -GP practice(s) (1yr)	member of the Solicitor's Regulation Authority (SRA). -Vocational stage: -Legal Practice Course (LPC) (1 yr FT/2 yrs PT) -Training contract (within a firm) (2 years) -Professional Skills Course (PSC) – which an individual completes during the Training Contract period. A firm will choose to send the individual on these courses as and when they feel it will be of most benefit.
Learning Outcomes	-Core Psychology -Sport and Exercise Psychology Pathways: -Counselling Skills for Sport and Exercise Psychologists -Communication and Presentation Skills for Sport and Exercise Psychologists -Assessment and Evaluation for Sport and Exercise Psychologists -Practical Experiences as a Sport/Exercise Psychologist -Practical Experiences of Sport, Exercise and Physical Activity	'Learning outcomes' as such are not available for this accreditation. However, if an individual has not completed a BPS accredited honors in order to achieve GBR then they are able to sit the 'Society's qualifying Examination' (or take a conversion course). Details of the content/competencie	The 'standard' has 4 key components: 1. Professional values and personal commitments 2. Professional knowledge and understanding 3. Professional and personal attributes 4. Professional action	-Hospital training posts may include: -Paediatrics -Obstetrics and Gynaecology -A&E -General Medicine -Orthopaedics -Surgery	The SRA has set out7 foundations of legal knowledge that courses must cover in order to ensure that students have completed the academic stage of training. 1. Criminal Law 2. Equity and Trust 3. Law of the European Union 4. Obligations 1 (Contract) 5. Obligations 2 (TORT) 6. Property/Land Law 7. Public Law (Constitutional,

	BASES Sport/Exercise Psychologist Accreditation	BPS Clinical Psychologist Chartered Status	Scottish Chartered Teacher Status	GP Qualification	Practising Lawyer/Solicitor Pathway
		s of the Qualifying			Administrative and Human Rights Law) Plus training in legal research
Practice Time	-Minimum 150 contact hours expected over 3 years. -Variety of sports/exercise contexts – no more than 75% of hours required can be spent in 1 sport/context -6 sports -2 team -2 individual -2 either of the Above -6 exercise contexts -5-15 hours observing an accredited Sports Psychologist. -15-20 hours delivering workshops/presentations of sport or exercise related topic to an internal or external team.	-Unclear	-Unclear -Most universities refer to a 'notional' 150 hours study per module. Much of the work of each module will relate closely to the teacher's practice in the classroom and school. -Like all teachers, qualified Chartered Teachers will be required to undertake 35 hours of CPD each year.	-Unclear -It is assumed that both the 2 year hospital placement and 1 year GP practice placement are spent executing full time hands-on experience. -No further details regarding practice time during the education or training process are given.	-Unable to specify as this will vary between individuals and organisations. However, it can be assumed that the duration of the Training Contract (2 years) will be spent working full time (37 hours + per week) hands-on in a professional environment. -N.B. a **minimum** of 100 hours study spread over 10 weeks should be devoted to the study of the Elective Areas.

	BASES Sport/Exercise Psychologist Accreditation	BPS Clinical Psychologist Chartered Status	Scottish Chartered Teacher Status	GP Qualification	Practising Lawyer/Solicitor Pathway
Assessment	-Must display evidence of the competencies/sub-competencies. -Prior to applying for entry to supervised experience the applicant and prospective supervisor complete an initial assessment to identify current strengths/weaknesses using the list of competencies /sub-competencies. -If accepted onto the supervised experience, individuals must gather evidence that demonstrates that they meet the competencies during the supervised experience process, which is then attached to their final application for accreditation that is submitted after the 3 years have passed.	-Other than the Society qualifying Exam – it is unclear how an individual is formally assessed to ensure that they are of a suitable standard to gain accreditation. An enquiry to the BPS has been raised, but as yet we have had no response.	-To attain the 'Standard for Chartered Teacher', individuals must complete several compulsory (core) and optional modules. Core Modules: -Self-evaluation -Learning and teaching -Education for all -Working together Optional modules: -A variety of modules are available (no details specified) -Work-based projects -1 project equivalent to 4 modules OR -2 projects – each equivalent to 2 modules. -Complete a module log	**-Requires further investigation** -Summative assessment originally provided the nationally accepted 'benchmark' for completion of training and for entry into general practice. This has now been changed to the MRCGP exam, consisting of: **-** a comprehensive trainers report - EMQ paper - OSCE type examination. -Other Info: -GP ST Entry Stages 1-4. -2 exams – to check competencies -Clinical Problem Solving -Professional Dilemmas	-Unclear. -In an example LPC Handbook retrieved from Sheffield University, it is stated that the LPC is assessed through a combination of skills exercise, accounts assessments and subject assessments set and marked by the University staff delivering the LPC. The SRA externally examines and assess the course to ensure that their standards are being met by the University's own assessments procedures.