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Supporting coaches to learn through and from their everyday experiences: A 1:1 coach development workflow for performance sport

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Abstract

This 'practical advances' paper overviews an intensive 1:1 coach development workflow developed and used in UK performance and high-performance sport. The workflow has been field tested with over 60 coaches in mainly Olympic and Paralympic settings in a variety of sports. The workflow proposes six main *stages*: 'beginning new relationships', 'seeking first to understand', 'preparing for reflective conversations', 'engaging in reflective conversations', 'working with difference' and 'supporting change'. The stages are tailored pragmatically to context and the workflow does not suggest a fixed sequence. The application of the workflow requires adaptive expertise based on considerable coach development experience and a breadth and depth of coaching and coach development knowledge. The workflow suggests the need for coach developers to build and support trusting, collaborative, and supportive relationships with the coach, as a foundation for the coach development task. Coach development practices and the workflow are continually being developed and refined in a UK context and future work will provide case studies, evidence of outcomes, and refinements to the work.

Keywords – coach development, workflow, experiential learning, scaffolding

Introduction

This 'practical advances' paper overviews an intensive 1:1 coach development workflow developed and used extensively by the first author, and to a degree by the second author in a research and development context, in UK performance and high-performance sport. The workflow has been developed and utilised in work with over 60 coaches in association football, boxing, cricket, cycling, golf, hockey, kayak slalom, rugby league, rugby union, sailing, swimming, taekwondo, and triathlon over a 12-year period. This includes work with 22 Olympic, 3 Paralympic, 17 'Podium Potential', and 23 England national age group coaches. The workflow has been developed through academic reflection and consultancy has been commissioned by the UK's lead agencies for high performance and performance development sport – UK Sport, the English Institute of Sport, Sport Scotland, Sport Northern Ireland, as well as UK governing bodies. The approach is well known amongst the UK coach development community but has not been formally published. The following presents information on the origin and development of the workflow; its theoretical, empirical, and practical justification through the overview of the underpinning principles, and the 1:1 coach development workflow itself.

Origin and development of the workflow

The first and second author have been professional colleagues since the mid-to-late 2000s. The first author established the sport coaching degree programme at Leeds Beckett University (then Leeds Metropolitan University). The second author was Director of Research at UK Coaching (then Sports Coach UK, and also based in Leeds). Our paths crossed through the development of the UK Coaching Framework (Sports Coach UK, 2008), and the initiation of the UK Centre for Coaching Excellence (UKCCE, now disbanded), where the first author was seconded to UK Coaching. As a result of wider stakeholder engagement that resulted from the UKCCE, the first author was asked to undertake 1:1 coach development work with England Hockey and UK Sport at the turn of decade 2010.

Beyond an extensive coaching career in basketball, and delivery on the degree programme, this was novel work at the time and was based on using audio-video feedback as a stimulus for reflection and the application of two coaching frameworks: 'A framework for coach decision making' (Abraham et al., 2010; Muir et al., 2011a) and the 'Coaching practice: Planning and reflective framework' (CPPRF) (Muir et al., 2011b; Muir, 2012; Muir et al., 2015). The original work has been developed considerably through iterative cycles of deployment and reflection across multiple sport coaching contexts (Muir, 2018).

The second author, amongst many tasks associated with his UK Coaching role, was exploring critical realism (Bhaskar, 1998 [1978], 2008 [1975], 2012) as a means of synthesising the different disciplinary positions (cognitive, behavioural, strategic/functional, complexity, social and normative) on sport coaching, as well as addressing difficulties linking research and practice, to reflect the multi-layered, multi-faceted, work of coaches. The first and second author began working together to explore the synergies between their practical and research endeavours in the early 2010s, and a joint presentation on this work was

undertaken in 2011 (North et al., 2011) with further work published in 2013 (North, 2013a, 2013b). The critical realist synthesis evolved into an *embedded, relational and emergent framework off for sport coaching practice*, which was published as a monograph in 2017 (North, 2017). This practice based approach was taken on and adapted to shape an *embedded, relational and emergent intervention strategy for coach learning and development* (Muir, 2018).

At the heart of both pieces of work is the idea that sport coaching can be understood as a *goal orientated endeavour*, where coaching stakeholders attempt to achieve goals through committing to particular *actions*, by adopting particular *strategies*, based on particular *reasons*, and underpinned by available *resources*. Goals, actions, strategies, reasoning, and resources were argued to be embedded in a sport coaching ecology of individuals, groups, institutions, and social-cultural arrangements which were both enabling and constraining. This embedded, relational, and emergent (ERE) approach provides a way of thinking about, and exploring the complexity of, coaching practice and coach development.

The workflow is also informed by principles derived from contemporary adult learning and development research and substantive learning theory (e.g. Boud et al., 1985; Brookfield, 1995; Brown, 2009; Dewey, 1916, 1938; Engeström, 2001; Eraut, 1994; Freire, 2006 [1970]; Goodson et al., 2010; Illeris, 2003; Jarvis, 2006; Klein, 2013; Knowles, 1980; Mason, 2002; Mezirow, 1997; Moon, 2004; Perry, 1970; Rogers 1969; Schön, 1983; Scott & Bhaskar, 2015; Weick, 2003; Williams, 2012). There are far too many principles to detail here, as well as the underpinning references that provide or promote them. However, to understand the workflow it is useful to give the reader a sense of some of the details:

- Learning is shaped by the interaction of the individual, social, and practical
- Learning occurs both non-consciously and consciously
- Learning is shaped by an individual's biography and motivations
- Learning occurs through direct engagement with 'lived experience', through practical tasks, through social engagement and interaction, but also with reference to abstract concepts and ideas
- Effective learning challenges non-conscious automaticities/habits, and unhelpful conscious ideas and inclinations, often through a process of experiential accommodation and conscious reflection
- The process of reflection is as much about problem framing and setting as it is problem solving – individuals learn best when 'questions come before answers' and 'problems come before solutions'
- The opportunity for learning is enhanced when the gap between individual expectation and reality is recognisable and significant i.e. where the learner experiences contradictions and disjuncture
- Building on the previous point, learning designers can play an important role in co-creating situations that support learners to notice things that might otherwise go unnoticed, generating *inter-alia*: curiosity, puzzlement, surprise, uncertainty

- In this sense, learning designers play a collaborative, dialogical, and reciprocal role, co-creating moments of potential for learning; they are facilitators not teachers; they are listeners and observers, rather than instructors
- Learning designers can draw on a range of tools, data generation approaches, social resources, narrative, and abstract concepts and ideas to explore experiences, difference etc. 'It is in the moment of interruption that theory relates most clearly to practice and practice most readily accommodates the abstract concepts of theory' (Weick, 2003, p. 470)
- Learning is effortful and can be challenging/uncomfortable for the learner – this needs to be navigated with care and sensitivity
- Learning designers should establish a positive normative ambition for the learner not only helping to facilitate the development of knowledge and skills, but also encouraging a motivation to learn, a habit (quality) of mind and critical consciousness, to take advantage of learning opportunities.

It should be noted that all or some of these principles have been reiterated or empirically explored in a sport coaching context (e.g. Abraham et al., 2006; Cushion & Nelson, 2013; Griffiths et al., 2016; Jones & Turner, 2006; Muir, 2018; Nelson et al., 2013; North, 2017; Piggott, 2015; Werthner & Trudel, 2006). The ERE approach, together with the application of contemporary learning and learning design principles, and considerable in field experience, led to the development of the 1:1 coach development workflow which we will now overview.

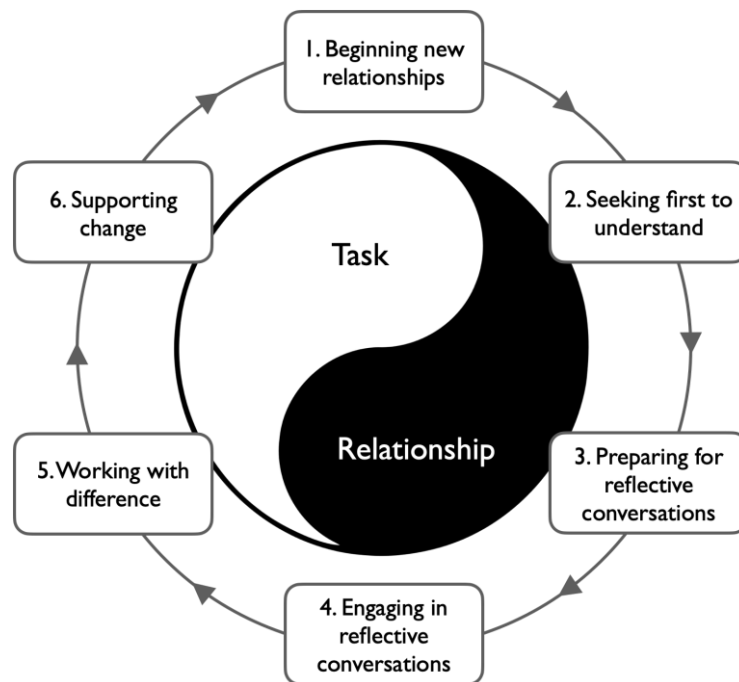
An intensive 1:1 coach development workflow

There are many different ways we could have presented the workflow including the more academically orientated approach detailed in Muir (2018). However, it was decided, as a 'practical advances' paper, that it would be prudent and helpful to present the work as a practically orientated, illustrative, 'workflow'. There are six main stages of the 1:1 coach development workflow: 'beginning new relationships', 'seeking first to understand', 'preparing for reflective conversations', 'engaging in reflective conversations', 'working with difference' and 'supporting change' (Figure 1). Some of these stages have sub-components which are introduced as part of the overview. For example, we present the 'beginning new coach development relationships' stage as 1., and its sub-stages as 1.1 and 1.2.

Workflow implies sequential process and whilst the approach offers indications of a beginning, middle, and end, it would be misleading and a considerable oversimplification of the work to understand it as having a strict sequence. The numbering in the figure and text is an elucidatory, *not* a practical applied, strategy. The actual application of the workflow is highly contextual, dependent on the coach, the coaching environment, the coach developer, the tasks focused on, and initial and ongoing interactions. The coach developer uses experience and expertise to adapt to the context. In some cases, the workflow may start at stage 2, in other instances at stages 3 or 4. However, because it is an on-going dynamic cyclical process each stage is almost always visited at some point. The stages are not mutually exclusive; there may be commonalities and overlaps between stages. Indeed, in the

text there is some duplication of process between stages to show how they overlap and interconnect.

Figure 1: An intensive 1:1 coach development workflow



We suggest that practitioners capable of undertaking effective coach development can appreciate a systematic approach to concept/idea *presentation*, without it being in anyway a sequential *straight jacket in practice*. In other words, although the application of the process is complex and difficult, we have confidence in adaptive expert practitioners to understand the distinction between concept presentation and their nuanced application. Any reportage on, or application of, the workflow as strictly sequential, we suggest would be highly inappropriate, and in bad faith. Indeed, this would undermine a central principle of our work, ‘to meet the learner (coach) where they are’ as opposed to ‘where we (the coach developers) are’. We make this point in strident terms to avoid inappropriate scholarly critique and practitioner application.

Task and relationship: A central principle underpinning the workflow is attention both to (1) the coach development *tasks* and (2) the *relationships* that underpin and sustain them (North, 2017). The process is neither solely instrumental, nor solely about relationship development and maintenance. Rather it is about their complementarity, interconnection, and interdependence. There is the active (task) principle (yang, white) and the receptive (relationship) principle (yin, black). The *tasks* cannot be achieved appropriately and ethically without developing and maintaining the relationships. *Relationships* are meaningless in a coach development context without the tasks. In the sub-sections that follow, both the task and relationship dimensions are considered. They are woven together within the presentation of the stages and sub-stages. The details of course are not exhaustive but provide a flavour of the kind of issues encountered during application of the coach developer workflow.

The Workflow

1. Beginning new relationships

Beginning new coach development relationships can be thought about in two sub-stages: (1) exploring expectations, initial contracting, and relationship building, and (2) understanding what coaching issues the coach wishes to focus on.

1.1 Exploring expectations, initial contracting, and relationship building: Coaches may, understandably, feel apprehensive/nervous about engagement with a coach developer and the coach development experience. The early stages of the process involve getting to know the coach (and the coach gets to know the coach developer), their expectations, hopes and fears, and importantly, how they have been formed (e.g., previous experience/s of coach development/mentoring). This, of course, may also be influenced by how the relationship came to be. For example, did the coach seek out the support of the coach developer; were the coach and coach developer paired as part of a broader programme of continuous learning and professional development (or qualification); or was the coach developer employed by the coach's employer (i.e., sport governing body or club) and assigned to work with the coach. Exploring expectations together can be reassuring, help to clarify what might be involved, what the process is, and what it is not. Working through this together forms part of the *initial* contracting, as contracting is considered to be an ongoing, ever-present, feature of the coach and coach developer relationship within this workflow.

An important feature of these initial conversations is to model one of the central principles of the coach development process grounded in experiential and collaborative learning. We call this working with the coach 'in-to-out' rather than 'out-to-in'. The coaches' experiences, intentions, reasons, strategies, and actions provide *the* focal point for the coach development experience. Learning and development is not something 'done' to coaches by the coach developer with the latter, for example, sharing his/her ideas and 'wisdom'; rather it is about working alongside coaches, supporting them to identify and resolve questions meaningful to their practice that generate opportunities for personal and professional growth (Muir, 2018). By focusing on the coach's expectations, questions and concerns the coach developer seeks to build trust in the process and relationship by demonstrating a low self-orientation (Maister, Green, Galford, 2021).

1.2 Understanding what coaching issues the coach wishes to focus on: An important early discussion focuses on finding out what the coach is interested in exploring through the coach development experience. Modelling the principle of 'working in-to-out' - the agenda emerges overtime through shared experiences and interaction, dialogue, and collaboration. Thus, the coach is at heart of the coach development process. Important early questions for the coach developer include: what motivates the coach? What projects, cares, and concerns does s/he have? What might be a productive issue to focus on early to build confidence in the relationship and the process?

2. Seeking first to understand

This familiarisation stage can be considered in three sub-stages: (1) exploring the coach's day-to-day coaching and her/his lived coaching experience, (2) learning about the coach, and (3) finding out about what the coach is trying to achieve with her/his coaching.

2.1 Exploring the coach's day-to-day coaching and her/his lived coaching experience: The coach's practice is importantly understood through exploring their positioning and activities in context. The coach developer learns about the coach's ideas and practices through building an understanding of the coach in their day-to-day coaching. Important areas for exploration include: What is coaching in this context? Where does coaching happen? How do coaches frame their role and how is their role framed by others? Who are the stakeholders involved – athletes, parents, other coaches, sport science support practitioners, managers? What influence do they have on the coaching context? What other important enablers and constraints exist with the coaching context, for example, linked to resourcing? How do the above influence the coaches' reasoning, strategy, and actions? The latter is just an initial embryonic sketch at this stage to be gradually built upon.

2.2 Learning about the coach: A central part of the workflow is getting to know the coach to the extent that the coach developer can (in the longer term) share information, data, and observations that the coach themselves were unaware of. This means spending time exploring the coaches' background and biography/history. It involves asking questions such as: How did the coach develop and grow into the practitioner they are today? How does what they have experienced and learned shape their current practice (for better and worse)? Creating time and space for a coach to share stories of past experiences, events, actions, and outcomes forms an important part of meaning making and begins to reveal something about the underlying resources that anchor their reasoning, reflecting, strategizing and actions (Muir, 2018). As a coach replays a past experience, details sometimes emerge that were previously not recognised, things that were previously unseen, unresolved, or untouched (Gillott, 2016). By creating opportunities for dialogue, the coach and coach developer begin to make sense of coaching experiences, and, importantly, that the narrative descriptions themselves are a source of reflection, an empirical construction borne out of interpretations, *not* the actual event itself (Bolton, 2014; Moon, 2004; North, 2017).

These early interactions provide valuable opportunities to establish the beginnings of a meaningful relationship. For some, these early interactions create a spark of insight, a moment of potential for learning. For others, the process surfaces critical consideration of their coaching role, goals, and how they are formed (Muir, 2018).

2.3 Finding out about what the coach is trying to achieve: Coaching goals, whether written or unwritten, explicit or implied, frame and provide an evaluatory vantage point, or 'point of entry', to explore coaching practice. The coach developer attempts to identify: (1) what the coach is trying to achieve with her/his athletes (2) what strategies the coach is using to achieve these goals, and for what reasons (3) how the coach's goals and strategies are embedded in existing relationships and the wider coaching context e.g. the club, academy,

centre etc. This sub-stage involves discussions with coaches, assistant coaches, sport science support staff, programme leads, and parents (if appropriate in the context) before and after coaching sessions. It might involve sitting in planning discussions, pre-training or competition briefings, and performance review meetings, capturing the coaches and wider stakeholders' intentions and strategies. Many discussions will be focused on specific developments or moments, but also with a sense that these are nested or layered within the wider ever evolving spatio-temporal 'coaching ecology'. The coach developer uses careful questioning. Some of these questions might be difficult or challenging for the coach, and it might be appropriate to use minimal encouragements and deliberate pauses to hold space for the coach to reflect and respond. It is important for the coach developer to listen with the 'intent to understand' rather than 'the intent to reply' before attempting to influence practice (Covey, 2004). It is also important to notice language use and somatic information e.g. intonation, emotion, excitement, hesitations, and body language.

These first two stages play an important role in laying the foundation for a close, collaborative, and trusting, relationship. Replacing judgement with curiosity, the coach developer seeks to explore the coach's sense of why things happen the way that they do and how they came to be. Being empathetic, attentive, demonstrating positive regard and showing genuine interest for the coach and the stories they share, the coach is encouraged to play a more central role in determining which aspects of their practice are of interest and concern (Rogers, 1969).

3. Preparing for reflective conversations

Preparing for a reflective conversation can be loosely considered as comprising four overlapping sub-phases: (1) gathering information (sometimes referred to as 'data') to create a stimulus for generating feedback. There are many ways to gather information, but video/audio capture combined with detailed field notes have historically been used within the process, (2) inviting the coach to review the raw video/audio capture, (3) coding video/audio footage, and (4) identifying theories, concepts, and framework to scaffold thinking.

3.1 Gathering information to create a stimulus for generating feedback: Coaches are sometimes unaware of, or have fallible ideas about how, in specific goal contexts, their resources and reasoning influence their coaching strategies, as well as the efficacy of those strategies, in influencing actions and generating specific outcomes. In other words, because of their background experiences and ideas, coaches might not be choosing the most effective strategy, and/or they might not be executing those strategies in a way that generates the outcomes they want. In such circumstances, understanding self is a powerful lever for change. Thus, supporting coaches to explore the relationship between their intentions and actions (what is sometimes called 'espoused theories' versus 'theories in use') and to consider more broadly why they do, what they do, the way that they do it, and what benefit that brings them and others (e.g., athletes) are important stages in raising self-awareness. It is also helpful for coaches to be supported to consider and explore unintended outcomes that emerge through their practice.

There is a tension, however, between developing a trusting, close, exploratory relationship (step 1 above), and noticing things that support coaches to recognise inconsistencies between their thinking and practice. Creating experiences that lead to coaches questioning their self-understanding can elicit strong cognitive and affective responses that may damage the relationship. Difference can feel challenging and be interpreted as personal attack. An important strategy to address these issues is to create the conditions that enable coaches to see inconsistencies and problems for themselves (captured through the aphorism 'seeing is believing') by gathering information that is not the coach developer's opinion, but is as clear, evident, and unambiguous as possible. There are many ways to do this, for example, more 'low tech' methods such as observation, listening, noticing, and capturing detailed descriptions using paper and pencil. However, video-audio capture has been found to be a very helpful tool in this regard. The coach developer uses a video camera and radio mic attached to the coach, to record the coach's actions and behaviours across various coaching events (e.g., training, competition, team/athlete meetings etc.). A number of lessons have been learned for more effective video-audio capture:

- Some coaches are very nervous about being videoed therefore different information gathering methods might be used earlier in the process to build trust and confidence
- Depending on the nature of the coaching event move the camera around to create angles that maintain the coach in the frame whilst panning out to capture the wider coaching context, for example, athlete interactions, and behaviours
- Whilst recording, listen to the coach and athletes through the camera headphone to generate fieldnotes about specific behaviours, interactions, and events and the time they occur in the video timeline
- In training/briefing/de-briefing and review meetings, pay attention to the way learning activities are structured and behavioural strategies employed, and whether they appear to be consistent with the stated intentions
- Attention is also paid to the nature of the coach-athlete interactions and relationships, and how the coach acts/interacts within the broader coaching environment
- Sensitivity to the coaches' and athletes' cognitive and emotional states during the observation, responding appropriately if there are moments of difficulty i.e. turn the camera off
- Awareness that the video-audio can produce 'Hawthorne effects' – although this may disappear over time as the relationship builds and the coach and athlete become accustomed to being videoed.

3.2 Inviting the coach to review the raw video/audio capture: The process of sharing information with the coach will vary depending on how it was gathered/generated. In terms of video-audio capture, two further sub-stages are recommended: (1) Share the raw video/audio footage with the coach and invite them to review it in their own time (2) Later, explore footage that the coach developer has coded or clipped to facilitate a reflective conversation. In terms of sharing raw video footage, at the end of the session share a copy of the video/audio capture with the coach and invite them to highlight moments that they thought went well, and to highlight the coaching they would like to explore further in the next

meeting. As with the first video capture, the first viewing is likely to be an anxious experience for the coach. Being sensitive towards the coach is an important principle throughout the working relationship, and particularly important during the first video-audio capture event given its practical and emotional significance. For example, a quick follow up phone call, text, or email, thanking the coach for the opportunity to watch her/him might be valued and useful to the development of the relationship. In these still relatively early interactions, it is important to identify and appreciate strengths. The coach is encouraged to recognise and understand what s/he 'already has', to acknowledge and build on their existing resources. This 'strengths based', rather than 'deficit focused', approach seeks to amplify the coach's sense of competence, nurture motivation and continue to build trust in the process and relationship. Providing a platform for later conversations that may seek to explore differences, inconsistencies, and uncertainties. However, to be clear, even in the later stages the coach developer is never seen as 'fixing problems', rather the coach and coach developer work together to 'grow in the direction of the enquiry', exploring the possibilities of 'what could be'. Finally, the coach may have some early ideas of issues and areas that s/he would like to address in more detail and this should be encouraged.

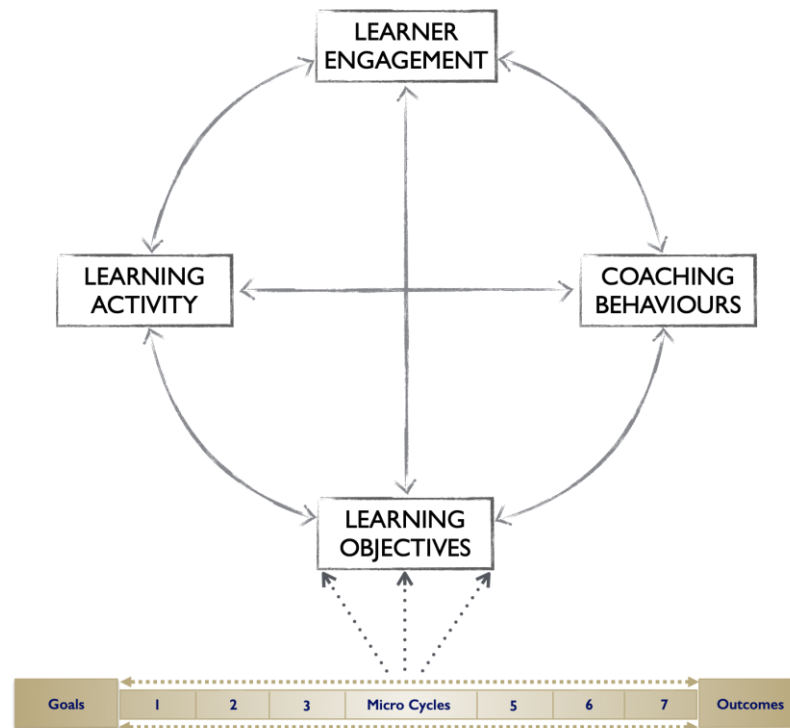
3.3 Coding video/audio footage: If the video-audio data capture is used as a stimulus for generating feedback, there are a range of coding protocols available for coding coaching behaviours (e.g. Côté et al., 1999; Cushion et al., 2012). These might be useful, but a different approach is offered here because the former underplay the goal context for the coach's actions, and how they are embedded in a broader context of practical, social, and historical activities and interactions. Instead, coding is generally framed through the application of The Coaching Practice: Planning and Reflective Framework (CPPRF) (Muir, 2012, 2018) (figure 2). The CPPRF was developed to support coaches to explore the relationship between their goals (intentions), the way they structure learning activities, and the behavioural strategies they employ (actions) to support athlete engagement and learning. As such, the CPPRF is structured around these four interdependent areas. At the heart of the CPPRF is the premise that coaches are essentially equipped with two pedagogical strategies to support athlete learning and development on and off 'the pitch'¹: (1) the way they structure the learning experience for their athletes (e.g. the structure and type of learning activities²), and (2) the behavioural strategies they employ to support athletes

¹ The expression 'on the pitch' is used to represent the various locations within which athletes train and compete (e.g. pool, court, sea, mat, ring and track etc.), whilst 'off the pitch' is intended to represent all other locations and spaces within which coaches and athletes interact (e.g. meeting rooms, via the telephone, e-mail or other forms of text messaging, travelling to and from venues, in and around the institutional facilities or other public spaces – cafe's etc.).

² The term 'learning activity' has been used to assume every type of 'training', 'practice', 'educational', 'development' activity that coaches organise 'on and off the pitch' across every spatiotemporal context (i.e. in training, competition, planning meetings, performance review sessions etc.). In some sports we change the language to reflect the terms of reference in the sport, i.e. 'practice activities' is a commonly used expression in invasion sports, whereas 'training exercises' is more common in combat sports etc. However, we prefer to use the term 'learning activity' as we find that provides a helpful stimulus to consider the coach's role in facilitating learning – how coaches structure particular activities to support athletes (learners) learning relative to the desired objective(s).

before, during and after each learning activity. How coaches' use these two strategies will shape and influence learners' engagement and their opportunities for technical, tactical, physical, psychological, personal and social development (Muir et al., 2011b).

Figure 2: The coaching practice: planning and reflective framework



This framework has been principally used to explore training and competition but has also been adapted for other coaching moments e.g., coach-athlete meetings, video review sessions etc. The coach developer uses coding software to clip and code specific interactions and events. Throughout the coding process 'live' notes and memos recorded during the session are revisited. Particular attention is focused upon:

- The nature of coaching interactions between coach and athlete(s): who is doing the doing, is the coach talking and athlete(s) listening, or the other way around? Is there a distinctive pattern of 'turn-taking'? Attention is focused on the content of what is said and the nature of the interaction e.g. pace, tone, facial expressions, and body language
- Problem setting or problem solving: the coach's behaviours and interactions are generally coded as problem setting/posing or solving. Problem setting involves challenging athletes to identify, articulate, and find potential solutions to their learning problems. In other instances, coaches may be more direct in helping athletes to identify and solve problems, for example, proximal to and during competition
- Time on task: Although the codes are not used to detail or validate the type and frequency of discrete behaviours, a certain level of analysis of time on task is useful. This is used to generate the coach's curiosity and stimulate reflection about typical

behavioural patterns and priorities. Coaches are often mistaken, for example, about how frequently they talk or providing instruction in sessions compared to athlete engagement and practice.

- How learning activities are structured to maximize athletes' opportunities to learn by 'doing': A descriptive breakdown of the structure/form/type of learning activities used, their duration and the number of opportunities athletes are afforded (e.g., skill attempts, or phases of play etc.). This often generates a powerful stimulus for reflection when considered against intended goals.

3.4 Preparing theories, concepts, and frameworks to scaffold thinking: Research informed theories, concepts, and frameworks can be used as *thinking tools* to scaffold and stimulate reflective dialogue providing a reference point against which the coach and coach developer can consider the coaching experiences and episodes with a view to: exploring connections and contradictions, examining the adequacy and robustness of the reasoning, reflecting, and strategizing processes, and shining a light on the coach (and coach developers) underpinning resources. This sub-stage reflects a reminder to the coach developer to consider what thinking tools might be useful and to have them prepared. The use of theories, concepts and frameworks is returned to in sub-stage 5.2.

4. Engaging in reflective conversations

Engaging in reflective conversations can be considered through two sub-stages: (1) creating space for a reflective conversation (2) sharing information (e.g. coded video footage/fieldnotes) as a stimulus for reflection.

4.1 Creating space for a reflective conversation: This stage manages the basic logistics, diaries, and time, tempered against the psycho-emotional and practical readiness of the coach, to engage in reflective conversations that have the potential to be challenging. Reflective conversations are usually scheduled a week or two after the coaching event to provide sufficient 'soak time' for coaches to explore and consolidate their experiences, watch the audio/video footage, and generate some reflections to share. Reflective conversations can take many hours depending on the nature of the events captured i.e. single training session, or series of events at a training camp, or competition. At this point in the process, the audio/video footage not only provides a valuable source of feedback for coaches, but also stimulates recall and provides a catalyst for reflective conversations. The nature of the coaching event and the impact that it has on the coach influences both the timing and nature of the reflective conversations that are undertaken.

4.2 Sharing information as a stimulus for reflection: As noted above, the coach developer can share a range of information, evidence, and personal reflections at this stage in the workflow. However, for the most, the focus will be on the video/audio capture to provide a stimulus for retrospective reflective conversations. Time-lined coded video provides efficient access to specific notable coaching episodes/moments as they emerge in conversation. The sharing is often an organic process, with the 'data' providing a common vantage point (Weick, 2003); a 'meeting place' where coach and coach developer can explore the meanings they attach to the footage, and the possibilities for future planning and

practice. Descriptive data (such as how time was allocated to particular activities) provides a powerful catalyst for reflective dialogue. This is likely to surface contradictions between intentions and actions, generating a level of disjuncture and uncertainty. Disrupting the coach's thinking in this way raises questions about the strategies they employ (e.g. the balance and blend of learning activities and accompanying behavioural strategies) and their underpinning reasoning, relative to the goals of a particular coaching context. Such conversations begin to expose the coach's beliefs about learners and learning, frequently generating curiosity, providing a vehicle to explore alternative strategies and develop new resources. There is a sense that we (coach and coach developer) can only begin to learn when we know we have something to discover.

As we have suggested several times above, coaches' practice is strongly influenced by their personal resources that are the product of both conscious, explicit cognitive deliberations and activities, and unconscious, implicit, tacit, hidden assumptions, and unarticulated activities. A significant focus within the strategy, therefore, is to create learning experiences that provoke a critical deliberative consideration of how those personal resources have formed over time and the assumptions that underpin them. Questions have been raised about coaches' resources/capacity for critical reflection and reasoning (e.g. Cushion, 2016; Grecic & Collins, 2013). Coaches can be knowledgeable about the reasons for their conduct but in a way that never suggests total awareness of the entire set of conditions and constraints that prompt an action, or an appreciation of the full set of potential consequences of that action (North, 2017). Consequently, the workflow should acknowledge the partial and fallible nature of the narrative accounts that are constructed of a coaching event from individual experiences. To confront this problem, the development strategy looks to draw on a variety of resources. It is recognised that this is the start of a more difficult series of interactions between coach and coach developer and due care and sensitivity with the coach needs to be employed.

5. Working with difference

At the heart of the workflow is supporting coaches to learn through and from their everyday experiences by noticing things that otherwise might go unnoticed – that there is something *different* about their everyday practices and what they experience through working with a coach developer. This difference provides a basis for change. Information/data gathered can reveal a great deal about the coaches' actions, reasoning, and the resources that underpin them, providing a basis for reflection and learning. This process can be considered by (1) exploring coaching practice ERE components and their relationships (2) utilising reflective tools (3) stimulating and scaffolding reflection with care and concern, and (4) working through iterative cycles of reflective dialogue.

5.1 Exploring coaching practice ERE components and their relationships: The key focus of this stage is to stimulate reflection by exploring (1) the relationship between actions/behaviours, through data captured, and intentions/goals (2) why particular action/behaviours were used to achieve the goals. In other words, what strategies did the coach chose to achieve the coaching goals, and what were the reasons for this (3) how the action, choice of strategy,

and underpinning reasoning, are shaped by their existing individual and social resources. The tensions and differences between these components provide a great deal of material to stimulate reflection. The importance of this sub-stage and potential reader curiosity about it are recognised and future published work will provide examples and case studies to illustrate further.

5.2 Utilising reflective tools: The coach developer has access to a range of tools to support the reflective process. The coded video/audio capture and the descriptive data generated from it, field notes, theoretical memos, stories/narratives previously captured from conversations with the coach and/or their athletes/other key stakeholders, provide valuable material to work with. ‘Grey materials’, for example, institutional sport level documents and resources such as athlete development frameworks, curriculum documents, coaching policy and strategy documents, strategic plans etc. are very useful. During the reflective conversation research informed theories, concepts, frameworks, and principles of good practice, are used to explore the origins and robustness of the coach’s reasoning, reflections, and underpinning resources. Which data, notes, theories, conversations are most helpful cannot be determined *a priori* but emerge through interactions over time. As Weick (2003) points out, “practitioners (coaches) are best able to spot those theories that matter most when their world is interrupted. And theorists (coach developers) are best able to spot the situated action that they should be puzzling over in their world of theory in the presence of interruptions” (p. 469). The responsibility for electing to use any theory or concept in practice becomes a negotiation between coach and coach developer to reflect: ‘what works, for whom, in what circumstances and why’ (North, 2016). Through iterative cycles of work, it becomes evident that some thinking tools are more practically relevant than others in supporting coaches to make sense of their actions, and to generate new strategies and the reasons for them.

5.3 Stimulating and scaffolding reflection but with care and concern: The above interactions and interventions provide new ‘frames of reference’ to scaffold reflective dialogue, making sense of the coach’s experiences, and generating new strategies for future action. In doing so, coaches are supported and encouraged to revisit their practice within a broader frame of reference, to think and act using different perspectives and to see older ideas and practices in a new light. Working through the contradictions that emerge between what is known and what is new, provides the potential to accommodate new resources and in some cases generate transformational shifts in perspective and practice. Instead of downplaying or critiquing coaches’ experiential knowledge and theories of practice there is an opportunity to elevate them by exploring connections with existing theories, concepts, and frameworks. Theories, concepts, and frameworks are not offered as prescriptions for practice, but to stimulate reflection, imagination, and creativity, by asking coaches questions such as ‘how might this concept help us to make sense of the situation?’ or, ‘using this concept as a thinking tool, how might we re-construct the interaction to generate a different outcome?’ etc. Working through such questions helps to scaffold coaches’ engagement with new concepts and to build confidence in the potential to use them in making sense of their experiences and/or generating new strategies for action. As such, theories and frameworks

are useful to help coaches to make connections, ‘to grasp hold’ of the concept and explore its potential as a resource to inform their reflections, reasoning, and strategizing. This model of research application provides an additional tool within the wider research-practice debate.

Reflective conversations generally emerge through exploring the coaches’ sense of how things are progressing relative to their goals, expectations, concerns, or questions. However, the coach developer also has an active role. Important processual issues include how the coach developer selects and utilises information gathered/data and other resources to provide a set of experiences that enable the coach to reflect. More specifically, how the coach developer, listens, asks questions, and offers observations, to amplify the potential for learning. There is a need to be sensitive to the challenges that emerges: using too much, or the wrong type of data, or poorly formed questions and judgemental observations may/is likely to generate adverse responses. Coaches may need considerable time to process the experiences they are encountering. The potential to learn through these experiences is often a reflection of the interpersonal resource that emerges/grows between coach and coach developer (North, 2017; Muir, 2018). Consequently, the depth and breadth of experience, knowledge, and expertise that a coach developer brings, inevitably influences a coach’s experiences and their potential for learning. We should not be shy of this issue – effective coach development is not easy, it’s pragmatic, profound, and artful, and certainly *not* a result of the *mechanical* application of the workflow overviewed here.

5.4 Working through iterative cycles of reflective dialogue: By paying particular attention to the sequencing and form of the interactions and interventions, the coach and coach developer can begin to explore what happened (actions/behaviours), why things happened that way (underpinning strategies and reasons) and how they came to be (resources). Making thinking visible in this manner forms a fundamental part of meaning making. The cycles of reflective dialogue provide the opportunity to consolidate, modify, and refine existing resources in a way that makes them more accessible and retrievable in the future. Such experiences, challenge both coach and coach developer to confront the partial and fallible nature of their existing resources – with the Aristotelian principle ‘the more we know, the more we know we don’t know’ at the forefront of thinking. Paradoxically, this has the potential to liberate the relationship. Recognising the problematic and ‘slippery’ nature of experience and knowledge provides a level of re-assurance and confidence to embrace dilemmas, uncertainty, and shades of grey as a vehicle for learning. Replacing fear of the unknown with curiosity enables both coach and coach developer to say ‘I don’t know, but together let’s find out’.

Working through iterative cycles of reflective dialogue has the potential to spiral outward, speaking less about the specific configuration of actions/behaviours at a given point in time to reveal more about the broader configuration of individual, interpersonal and sociocultural relationships, reasons, and causal resources. It is important to recognise that conditions for change and actual change will take time (Muir, 2018). The coach developer works with the coach over a considerable time-period, investing in observation, questioning,

and iteration and refinement, such that experiences gain greater meaning and relevance to the coach and that change becomes a greater possibility.

6. Supporting change

The final stage is less an intervention and more a statement and/or summary of the desirable learning conditions and processes involved in the coach development workflow. We position it as a 'stage' because learning should be recognised as something integral to, as well as an outcome, of the process. There are many ways of framing learning, but we have chosen in this instance to conceptualise coaches as assemblers, bricoleurs, and applicers of 'theories', not necessarily in an academic sense, but also in practice, and that these theories are subject to change (North, 2017). Following Thompson (2000), we suggest there is no such thing as 'theory less practice'; rather coach's strategies and actions are based on ideas, reasons, 'theories', whether explicit or tacit, informed or experience based. These might also be called cognitive maps or schemas. Existing ideas, beliefs, theories, are the product of experience, assimilated and compiled through practice and reflection. The coach developer workflow provokes a reflective process that can facilitate change to these underpinning ideas, reasons, and 'theories'.

By starting with a coaching event, the questions, dilemmas, and uncertainties that emerge through reflective dialogue can be used as a catalyst to introduce, link, and frame new concepts, theories, and frameworks in a more meaningful way, supporting the coach to adapt existing practices in response to real and role-related demands. Recognising moments of disjuncture/uncertainty allow coach and coach developer to explore the relationship between the practice and theory, where practice most readily accommodates theory, and theory might help navigate the 'swampy lowlands' of practice (Schön, 1983; Weick, 2003). Thus, uncertainty (if embraced), supports coaches to consider their reasoning and underpinning resources, at which point, data, concepts, and ideas can be used to consolidate, modify, refine, or discard and replace existing strategies to accommodate new knowledge. However, it must be underscored that this is a potentially sensitive and difficult process for the coach and coach developer and therefore the process must be undertaken with care, sensitivity, and mutual trust. As Brookfield points out (2017, p. 5), 'who wants to clarify and question assumptions they've lived by for a substantial period of time, only to find out that they don't make sense?' Cultivating experiences that surface questions about coaches' actions and the adequacy of their underpinning reasoning and resources has the potential to generate a broad range of emotions and feelings of, *inter alia*, anger, anxiety, conflict, discomfort, embarrassment, frustration, helplessness, insecurity, tension, threat, and resistance. These symptoms have the potential to be compounded by the emotion-laden, contested win/lose nature of sport and thereby raising important implications for 'when and where' reflective dialogue can most successfully be undertaken.

It should be clear to the reader by now that effective coach development is slow, resource intensive, and emergent. The coach developer and the coach require patience and a good understanding of the process, which takes us back to early stages – clarity and care in setting up an appropriate development environment, and fostering a trusting relationship.

Concluding remarks

The paper has overviewed the principles and practices that have been used to support coaches to learn through and from their everyday experiences. This is an intensive 1:1 coach development workflow used extensively in UK based performance and high-performance coach development system. The details provided are the bare bones and there is much more to say. Yet we feel there is sufficient here for other interested coach development practitioners to gain insight into the principles, workflow, and practices driving the UK work, as basis for their own reflections and potentially use. The view offered here is that, despite a majority of coach education and development work being piecemeal and short-term, effective process is expertise and resource expensive, including, notably, the length of time involved. There is a 'slow build' with a great deal of supporting and circling of the relationship and the task. As such, we recognise it might not be an option for all within the sporting landscape. Indeed, in the UK the kind of resources involved only appear to be available in the performance and high-performance domains. However, we suggest that the principles underpinning this work are transferable across domains.

Space is limited in published articles, and we understand that examples and case studies are useful, and we will endeavour to produce them in future work. We also understand a desire to evidence coaching outcomes resulting from the process and this will also be addressed later. Finally, the workflow presented here represents one time- and context-based iteration of our coach development work. The work is being continually developed and refined with reference to both new research (or newly discovered research), and experience with the field. These refinements will be subject to future published work.

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