Formal, Nonformal and Informal Coach Learning: A Holistic Conceptualisation

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ABSTRACT

Using Coombs and Ahmed's [1] framework of formal, non-formal, and informal learning as the analytical framework, this paper aims to review and conceptually locate literature exploring how sports coaches acquire the knowledge that underpins their professional practice. Furthermore, in an attempt to develop a robust set of accessible terms and concepts this paper identifies, explores and positions various terminologies under the broader heading of coach learning. It was hoped that this conceptual review would not only stimulate discussion and research into coach learning, but that it would also promote the construction of models of how coaches currently learn, as well as models for enhancing coach learning. The paper concludes that coaches learn from a wide range of sources, but formalised (i.e., formal and nonformal) learning episodes were found to be relatively low impact endeavours when compared to informal, self-directed modes of learning.

Key words: Coach Education, Coach Learning, Formal Learning, Informal Learning, Nonformal learning.

INTRODUCTION

According to Schempp [2], "the degree of success that professionals experience in meeting societal demands is largely dependent upon the knowledge they generate and accumulate for the tasks and obligations that they undertake" (p. 3). As such, it could be suggested that if we are to further understand coaching as a profession, it is necessary to explore and analyse its knowledge bases [3]. In this respect, Schempp [2] has suggested that from "an understanding of knowledge sources and the process of pedagogical reasoning and action can come from a firm foundation for educating" (p. 3).

Despite recognition of the importance of coach preparation and development [4], and a resulting increase in the number of coach education programmes being implemented worldwide [5], it could be argued that our understanding of coach learning and the acquisition of professional knowledge lacks a clear conceptual base. Indeed, while the limited existing research in this area has suggested that coach learning is influenced by a complex mix of formal [e.g., 6, 7], nonformal [e.g., 8], informal [e.g., 3], directed [e.g., 9]

and self-directed [e.g., 5] learning experiences, it has largely developed along serendipitous lines. In this respect, it could be argued that research in this area has been more influenced by personal and methodological interests of scholars rather than attempting to develop a conceptually orientated research agenda [10, 11].

A further issue associated with the need for a clear conceptual framework of coach learning is that the literature available in this area has arguably suffered from a lack of definitional clarity that, on occasions, has left the field speculative and imprecise. This is well illustrated by a wide range of terminology employed, at times uncritically, to describe coach preparation and development. Examples to illustrate this include, coach learning [12], coach education [13], coach training [14], coach development [15], continuing professional development [16], plus coaching and sport instructor certification programmes [17]. We believe that the interchangeable use of terminology has clearly impacted upon the development of the field, as few models of coach preparation and development exist [18]. This review therefore provides a foundation for future research by highlighting areas that require further exploration, as well as assisting the development of future formalised coach learning episodes.

To this end, the aim of this paper was to begin mapping the conceptual territory of coach learning by reviewing literature that explores how coaches acquire the knowledge that underpins their professional practice. Our intention was not to provide a definitive conceptual map of coach learning, but rather to stimulate discussion and research into coach learning in ways that are conceptually informed. In order to achieve this, the paper is structured around Coombs and Ahmed's [1] conceptual framework of formal, nonformal, and informal learning. Given its broad acceptance and utilisation in mainstream adult learning literature [e.g., 19, 20, 21] the framework was deemed appropriate to initiate discussions surrounding coach learning. Each of the following sections begins by presenting a critique of various terminologies before presenting an overview of research conducted in the given component of coach learning. It was envisaged that identifying, exploring and locating various terminologies under the broader concept of coach learning would not only help develop a more in-depth appreciation of the construction of professional knowledge by sports coaches, but would also contribute towards initiating models of (based on empirical research) coach learning and models for (idealistic representations) enhancing coach learning. This provides a foundation for future research by highlighting areas that require further exploration, as well as assisting the development of future formal coaching episodes.

COACH LEARNING

Before exploring and locating the various sources of coaching knowledge and practice under Coombs and Ahmed's [1] formal, nonformal, and informal learning framework, we would first like to present the reasons as to why coach learning should become the overarching terminology employed. This process begins by exploring the differences between learning and education.

Recent inquiry has revealed that "in contemporary society, the concept of education has been seen as inadequate and more recently the term learning has assumed a greater prominence for what might previously have been seen as educational" [22, p. 43]. Although considerable debate continues to surround this area, with a definitive definition remaining elusive, education is fundamentally considered the "process of assisted or guided learning" [23, p. 45]. Learning shifts the emphasis to the person in whom change is expected to occur or has occurred, and is therefore described as an "act or process by which behavioral change, knowledge, skills and attitudes are acquired" [24, p. 100-101]. This could be either through

experience, reflection, study or instruction [25]. It could be argued that the term education is conceptually restricting, whereas learning can embrace all forms through which coaches acquire the knowledge that informs their professional practice. Jarvis [22] offers support to this notion in stating that "many different learning processes occur during the human lifespan, but not all of them may be considered educational" (p. 43). It will be shown in this paper that coach learning occurs not only inside, but also outside of, educational settings [16]. Consequently, while the coach learner is an essential element in the learning process the coach educator is not, as learning often occurs without teaching.

Given the argument presented, we believe that the term coach learning better encapsulates the means through which coaches develop an understanding of their working knowledge. This process, as we will discuss, involves a range of learning activities and various sources. For the purpose of clarity, the following sections organise these knowledge sources into Coombs & Ahmed's [1] framework of formal, nonformal, and informal learning. Although we discuss these three categories separately, in reality they should be conceptualised as interconnected modes of learning rather than discrete entities (as they may exist simultaneously in concert or conflict) [19].

FORMAL LEARNING
According to Coombs and Ahmed [1], formal learning is defined as something that takes place in an "institutionalized, chronologically graded and hierarchically structured educational system" (p. 8). Formal learning programmes characteristically require candidates to demonstrate prerequisites outlined in admissions guidelines, before embarking on a course that enforces compulsory attendance, standardised curricula, and culminates in certification [19]. Formal learning activities conforming to this definition include large-scale coach certification programmes developed by the national governing bodies of sport and tertiary courses relating to sports science and coaching. Although research indicates that coaches frequently engage in formal learning activities, it also demonstrates that these are a relatively low impact endeavours when compared to informal learning activities [6, 7, 8, 9, 16, 26, 27, 28].

The content, delivery and context of formal learning programmes, especially national governing body (NGB) coaching awards, have been criticised on a number of accounts. Specifically, these courses have tended to occur in short blocks of time, usually several months and often years apart, with minimum follow-up, and few opportunities to facilitate the integration of new knowledge into coaching practice [29]. The curricular content of such courses has tended to favour the bio-scientific disciplines, frequently neglecting the social sciences [30]. Hence, it has been argued that coaches often leave with an understanding of the sport sciences (i.e., physiology, psychology, biomechanics), plus a tactical and technical awareness of their sport, but have little appreciation of pedagogical and socio-cultural aspects relating to the coach's role in the coaching process [18].

Although one can rightly argue that an understanding of sport science is essential, its delivery is often compartmentalised with each discipline being dealt with separately – when in reality coaching practice entails the intricate integrations of various sources of knowledge at any one period of time [30]. Moreover, delivery has often taken a "methods-and-materials orientation" [31, p. 155] presenting coaching as a mechanistic process that can be delivered, acquired and implemented in a standardised manner. Indeed, awards have frequently attempted to present candidates with the distilled "wisdom of expert practitioners" [12, p. 279] by offering predetermined strategies to overcome a catalogue of perceived coaching dilemmas [32]. Such programmes have subsequently been criticised for offering a 'tool box' of professional knowledge that privileges a technocratic rationality [16, 33].

This approach assumes that knowledge, in the form of 'tricks of the trade,' can be passed down from one generation to the next – when in reality the development of knowledge is perhaps a more complex process [34]. Although it is possible that such knowledge could potentially be transferred from coach educator to learner, this approach does little to provide the leaner with a theoretically informed understanding. Learners may be left confused and unsure as to when, how, and why this knowledge should be applied.

A further criticism has been that of presenting coaches with largely de-contextualised learning by having practitioners coach one another. Although providing opportunities to undertake practical coaching experience must be applauded, it has been suggested that the coaching of peers – or sometimes 'guinea pig' athletes – is unlikely to truly reflect the coaches' typical coaching context and will therefore induce a vastly different set of coaching issues and responses [32]. As an aside, tutors have been found to deviate from the awarding bodies' intended course content, delivery and assessment methods [35, 36]. At any given level of certification, this lack of consistency is hugely problematic. The outcome of such practice is an inevitable lack of harmonisation within, and potentially between, sports.

Despite being assessed against a set of minimum competencies, coach learners arrive with varying experiences and abilities. Through their previous experience, some coach learners may already have met some (if not all) of the awarding bodies' minimum requirements. Hence, there will inevitably be variance in the quality of the coaching practice and knowledge demonstrated by 'graduates' at each level of formalised coaching programmes. Although degrees of variance are inevitable, a second (and perhaps more serious) consequence of inconsistency within courses, is an increasing likelihood of a workforce that demonstrates a large variance in the levels of coaching knowledge and the quality of professional practice. It is reasonable, therefore, to expect that coach educators should strive to ensure that there is a high level of consistency in the way that these formal learning episodes are delivered to the coach learners and the manner in which their competency is assessed. It is largely through minimising 'intra' course variation that coach educators can contribute to harmonising coaching standards at each level of the given certification programme.

Although research into this area has tended to constructively criticise formal learning programmes, there have also been a number of positive findings that are often overlooked. For instance, Malete & Feltz [37] discovered that a programme for athletic coaches significantly enhanced their perceived efficacy towards influencing the learning and performance of their athletes. Participants of soccer [35], golf [17, 38] and rugby [39] programmes have also indicated positive perceptions of the content and delivery methods employed. Although it is beyond the scope of this paper to discuss the findings of this research in any great detail, participants from these studies highlighted the importance of the following:

1. Knowledgeable and professional coach educators [17, 35].
2. Well organised and structured programmes that progress from a basic introduction through to a complex exploration of concepts [17, 35].
3. Appropriate content that is pitched at the correct level and endeavours to integrate theory [17, 35].
4. Coach educators modelling the behaviours and practices that they wish to see from the coach learners [38].
5. The opportunity to apply knowledge in a practical coaching scenario under the guidance of a coach educator who provides constructive feedback [17, 35, 38].

6.   Exploration of individual learning styles and how learning preferences impact upon coaching practice [17, 39].
7.   The ability to discuss issues, plus share experiences, with other coaching practitioners [39].
8.   The opportunity to explore issues relating to the coaching process and coaching pedagogy [17, 39].

Perhaps the most noted is the work of Smith et al. [40, 41, 42, 43]. Their Coach Effectiveness Training programme was shown to elicit desirable coaching behaviours (e.g., increased reinforcemement, encouragement and technical instruction, while reducing punitive responses); enhance athlete perceptions of the coach; create a more socially supportive environment; increase athlete self-esteem and enjoyment; while reducing performance anxiety and incidents of drop-out. These are obviously welcomed outcomes and as such valuable lessons could potentially be drawn from their approach. According to Smoll and Smith [44], a key element of their course was to emphasise that,

> …many options are available for dealing with particular coaching situations, and although all of these tactics may work in some cases, certain procedures have a greater likelihood than others of being successful. By counteracting the notion of 'right versus wrong,' we stress the importance of flexibility and thus attempt to make coaches receptive to alternative ways of responding to specific circumstances (p. 464).

Thus it would appear that coach educators should restrain from prescribing a right way of coaching. Instead, they should promote the importance of being able to adapt to the diversity inherent in the coaching process, while highlighting the potential outcomes of various approaches.

An interesting avenue for future inquiry would be to recognise the ever-increasing number of universities offering both undergraduate and postgraduate coaching-related programmes worldwide [12, 15]. To date, the nature and impact of these programmes has received scant attention [e.g., 29]. We therefore urge further investigation into this domain so answers to the following questions can be elicited: At what stage in their development are coaches typically attending these programmes? What motivations are driving coaches to enrol on these courses? What content, delivery and assessment methods are being employed? Does attending these courses enhance employability? Are these programmes impacting upon knowledge, practice and the athlete's experience of the coaching process? Does the attendance of these courses accelerate development towards expert status?

COACH EDUCATION, TRAINING OR INDOCTRINATION?
When analysing the coach learning literature, it soon becomes apparent that 'coach education' is the terminology most frequently employed to describe formalised provision. As we have argued, however, some of the shortcomings of coach education owes as much to a lack of conceptual clarity as to other factors. As the previous section demonstrates, formal coach-learning programmes have been widely criticised. Importantly, this evidence is largely based on the key assumption that formal provision of coach learning has been an educational endeavour. Formal coach learning programmes could be more appropriately labelled coach training or even indoctrination in certain cases.

According to Buckley and Caple [25], education and training have a number of significant conceptual differences, exploration of which calls into question the 'education' in coach

education. They consider training to be more job-orientated, because it focuses on the acquisition of knowledge, behaviours and skills specific to a profession. Training, therefore, "tends to be a more mechanistic process which emphasises uniform and predictable responses to standard guidance and instruction reinforced by practice and repetition" (p. 2). Education, on the other hand, is viewed as being more person-orientated, focusing on providing "more theoretical and conceptual frameworks designed to stimulate an individual's analytical and critical abilities" (p. 2). While training promotes uniformity of knowledge and practices, education attempts to increase variability (emphasising and explicating individual differences).

While exploring the criticisms of coach 'education,' it would seem that current coaching awards are often more akin to training than education. For example, as we have discussed, the literature suggests that coaches are often subjected to a standardised curriculum that privileges a technocratic rationality by offering a 'tool box' of professional knowledge and a 'gold standard' of coaching [33]. In so doing, it is hoped that the candidates will leave having the requisite standardised knowledge and a battery of strategies to overcome what the awarding body perceives as typical coaching dilemmas in the coaching process. This would suggest that much of formal coach education provision, in its current form, could in fact be labelled as coach training. When viewed in this light, coach training is arguably effective in achieving its desired learning objectives. The gaining of certification offers support to this notion as it demonstrates that many practitioners have satisfied the governing bodies' criteria by acquiring and displaying desired minimum levels of coaching competency.

Some formal learning provision could be described as indoctrination, which can be defined as "activities that set out to convince us that there is a 'right' way of thinking and feeling and behaving" [23, p. 53]. In this respect, indoctrination denies the learner choice and instead exposes the learner to a single set of values and attitudes that they are expected to acquire and abide by. Examples of this might include indoctrinating a prescribed method of delivery, feedback sequence, coaching philosophy, tactical and technical approach [3, 45].

Currently, it could be suggested that the content of formal coach learning programmes defines what knowledge is necessary for coaches to practice and how that knowledge can 'best' be transmitted [e.g., 45]. An example of this is cited in Jones et al. [9], with a coach suggesting that "over the past fifteen years we've had robotic coaches being churned out….after a two week course, all the coaches came out knowing and doing the same things because that is what you needed to pass" (p. 16). Along with the work of Potrac [45], this study highlighted the dissatisfaction evident among a selection of top-level soccer coaches with their experiences of coach education provision. However, in order to obtain the certification required to work at the highest level of football, the coaches felt that they had little option but to coach in the manner prescribed by the coach educators delivering and assessing these courses.

Tinning [46] contends that this implies a choice between different views of what knowledge is essential for practice and what form that practice should take. This is a form of social editing, where some themes are eliminated and others are promoted [31]. The process becomes a political act, intimately linked with power and control, regarding what constitutes legitimate knowledge and who holds that knowledge in the culture and profession [16].

NONFORMAL LEARNING

In the context of this paper, nonformal learning is conceptualised as "any organized, systematic, educational activity carried on outside the framework of the formal system to provide select types of learning to particular subgroups in the population" [1, p. 8]. Examples

of nonformal learning include coaching conferences, seminars, workshops and clinics. Although formal and nonformal learning share many similar characteristics, nonformal learning differs as it presents a particular subgroup of a population (e.g., high performances coaches) with alternative sources to those of the formalised structured learning pathway (typically, short courses delivering on a specific area of interest).

Research indicates that coaches are engaging in nonformal learning activities [e.g., 8, 27, 47], but there has been a tendency in the literature to consolidate all forms of external provision under headings such as 'coaching courses' [e.g., 6, 7]. This makes it extremely difficult to decipher what specific formal and nonformal activities coaches are taking. Researchers should therefore refrain from placing sources of knowledge under broad headings, but instead detail the various formal, nonformal and informal endeavours that coaches engaged in. There is also a need to assess the impact of these nonformal learning activities on coaching activities.

INFORMAL LEARNING
Informal learning is identified as "the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment" [1, p. 8]. Learning occurs in a wide variety of contexts [48], the majority of which occur in an informal setting [20] beyond dedicated formal learning institutions [50]. Coaching research indicates that practitioners learn through various avenues, including previous experience as an athlete, informal mentoring, practical coaching experience, plus interaction with peer coaches and athletes [e.g., 6, 7, 8, 9, 16, 26, 27, 28, 49, 51].

At this point, we would like to introduce the term self-directed learning as it is often used interchangeably with informal learning [20]. In addition to the avenues already identified, the literature highlights that coaches engage in other forms of informal self-directed learning such as utilising and exploring the internet [28], plus reading coaching manuals [6], books [8, 26, 28], journal articles and magazines [8]. Furthermore, coaches have been shown to watch educational sports science videos [28], footages of coaching sessions [6], plus recordings of the performance of their and others' athletes [6, 8].

As shown above, coach learning frequently occurs outside formal and nonformal learning settings. Indeed, the fact that experience and other coaches are still highlighted as the most important facet in the development of coaches [50, 52, 53] bears testimony to the power of informal learning. Much of this informal self-directed learning attempts to overcome coaching issues by reflecting-in, reflection-on, and retrospectively reflection-on [5] technical, practical and critical issues [18, 54, 55]. Research demonstrates that, during this process, coaches often attempt to develop strategies to overcome practical coaching dilemmas by drawing on the various sources previously identified [5, 56, 57]. Although much of this self-directed learning occurs outside of formal and nonformal learning institutions, it would be difficult to claim that a proportion of these endeavours were not in fact educational [22]. For example, when utilising materials such as coaching and sports science manuals, books, journal articles, videos and Internet sources, the coach is engaging with materials created by a third party who had intended leaning outcomes from the resource and may therefore be considered indirectly to be 'teaching' [23].

It has also been proposed [58] that informal learning occurs through engagement in "informal learning networks" [59, p. 53] or "communities of practice" [60, p. 29]. Groups of likeminded individuals unite to exchange information, ideas, skills and resources, utilising each other as an accumulated pool of knowledge and experience that can provide solutions to practical dilemmas [48, 59]. Learners often enter communities of practice at the periphery

and over time move closer to full legitimate participation as they gain knowledge, learn the norms, and see themselves as members of the community [58, 60]. Learning is viewed as distributed among many participants within the community in which people with diverse expertise are transformed through their own actions and those of other participants. In the context of coaching, Cushion et al. [16] suggest that it is largely through such experiences that collective understandings begin to develop and the shared meanings about the occupational culture of coaching start to take shape. Therefore, much of what a new coach learns is through ongoing interactions in the practical coaching context. Such formative experiences carry far into a coach's career and provide a continuing influence over perspectives, beliefs, and behaviours [9].

It is primarily through informal learning experiences such as reflection, mentoring and communities of practice that coaches begin to get a feel for what coaching is, how coaches behave and how day-to-day roles and responsibilities are fulfilled [61]. These avenues allow the coach to engage in advice seeking, joint construction and reflective transformations with their peers to develop strategies to overcome their practical coaching dilemmas [5]. It would thus appear that the contribution of informal self-directed learning should not be underestimated. Time spent on formal and nonformal learning programmes is dwarfed by the hours spent as an athlete and coach. Gilbert et al.'s [15] recent research offers support to this notion indicating that successful coaches typically accumulate thousands of hours experience over at least 13 years participation as an athlete in a range of sports. Moreover, their research indicates that coaches devote relatively little time to formalised coach learning episodes when compared to other activities typically engaged in (such as administration). Given the effectiveness of these informal learning ventures, it is perhaps unsurprising that coach educators have been advised to make reflection, mentoring and communities of practice central to formalised provision [29, 58, 62, 63]. Further research is required, however, before an in-depth appreciation of processes of mentoring and communities of practice are truly understood.

INITIAL CERTIFICATION AND CONTINUING PROFESSIONAL DEVELOPMENT

As another part of a broader concept of coach learning, continuing professional development (CPD) has recently "marched into the discourse of education" [64, p. 96] and has filtered its way through to the literature discussing the development of physical education teachers [e.g., 65] and sports coaches [e.g., 9, 16, 66]. Craft [67] has defined CPD as "all types of professional learning undertaken by teachers [coaches] beyond the initial point of training" (p.6). The phrase "beyond the initial point of training" [67, p. 9] is more easily identifiable in physical education than coaching. Physical education teachers in the UK, for example, are required to undertake a higher education qualification before being permitted to work autonomously within an educational institution [68]. This would therefore constitute the physical education teachers' initial education and any professional learning thereafter clearly identifiable as CPD. Coaching, however, is considerably different in that it is possible to practice without any formal qualifications and this is well illustrated by the fact that only 38% of the UK's 1.2 million coaches hold a formal qualification in the sport they coach [66]. Coaches can undertake undergraduate and postgraduate studies in coaching or sports science disciplines, but these qualifications do not certify the graduate as a coaching practitioner as they are currently not formally recognised by the UK sport's NGBs. As such, an individual intending to become an accredited coaching practitioner can only do so by undertaking their sport's national governing body (NGB) coaching award(s). So we are left with the

paradoxical position of a NGB qualified coach seeing a university qualification as CPD, while a coach undertaking their degree before an NGB award sees that qualification as part of their initial step in formal coach learning.

Within a broader umbrella of sport coach learning, it is possible to adapt Craft's [67] definition of CPD to read "all types of professional learning undertaken by coaches beyond initial certification." If this definition were to be adopted, the term initial certification could arguably replace and encompass 'initial training' (depending upon the focus of the certification process) plus any other nonformal and informal learning undertaken prior to becoming certified. With respect to the term 'professional,' however, it should be noted that coaching remains an 'emerging profession' in many western nations (e.g. UK, Australia, New Zealand) [66, 69, 70]. In the UK, for example, only 5% of the 1.2 million coaches work full-time; but 81% of the 1.2 million coaches are unpaid volunteers [66].

FUTURE DIRECTIONS

A global collaborative effort has recently been initiated to empirically investigate the developmental pathways and activities of expert coaches [15]. The exploration of this area is a welcomed addition that will undoubtedly supplement existing literature by presenting additional information about the formal, nonformal, and informal learning pathways that coaches engage in; plus how and where these 'fit in' to the overall developmental process.

Adult learning literature suggests that learning and teaching preferences are largely dependant upon previous learning experiences and understandings [71, 72]. In reality, a large proportion of the literature on coach learning has tended to focus on expert coaching practitioners. As has already been discussed, these have been shown to favour self-directed learning and therefore engage in activities to match. To date, we have little appreciation of the teaching and learning preferences of coaches across the developmental spectrum – information that is vital to the construction of informed, formalised learning programmes. Research utilising a similar design to McCullick et al. [17], which qualitatively analysed the coach learner's perceptions of the course, is therefore required at all levels of formal certification programmes. This would contribute to a comprehensive picture of optimal structures, content, delivery and methods of assessment for coaches at each phase of this process. It will also help to ensure that those coaches certified are knowledgeable and effective practitioners [17].

CONCLUSIONS

Our understanding of the acquisition of professional knowledge and practice has lacked a clear conceptual foundation. As shown by the uncritical employment of various terminologies, this paper therefore began mapping conceptual territory by offering the concept of coach learning. Relevant literature was reviewed using Coombs & Ahmed's [1] framework of formal, nonformal, and informal learning. It was highlighted that coaches learn from a wide variety of formal, nonformal and informal sources. Although formal and nonformal learning is frequently identified, it is often a relatively low-impact endeavour when compared to informal learning [9]. When reviewing the criticisms of formal learning programmes, it was argued that they have perhaps been incorrectly labelled 'education' when in reality they are more akin to 'training' or even 'indoctrination.' If reconceptualised, with expectations to match, formal learning programmes could in fact effectively achieve desired learning outcomes. The concept of CPD was explored and a modified version of Craft's [67] definition was presented to suit the context of sport coach learning.

Finally, it is hoped that this review will stimulate further discussion and research that will,

in time, lead to the construction of models of coach learning, as well as models for enhancing coach learning provision.

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