Citation:

Abstract

The purpose of this paper was to systematically review the peer-reviewed literature on the role of the coach developer (CD). Three questions guided this review: (1) who is the CD, (2) what do they do, and (3) how do they do it? Using five electronic databases: SPORTDiscus, ERIC, PsycInfo, Web of Science, and Scopus, a total of 595 articles were initially found with 42 identified as appropriate for inclusion following PRISMA guidelines. A further 11 were added via the screening of reference lists and during the process of writing, to total 53 articles. Data analysis comprised of content analysis (CA) to describe and identify gaps in the research, and reflexive thematic analysis (TA) to facilitate the analysis of the findings from the included studies. CA findings show an increase in researching this role and a breadth of methodology and theoretical frameworks being employed. Utilizing reflexive TA, seven themes were generated to understand the who, what, and how of the CD. Findings suggest a diverse and contextualized appreciation of the various roles the CD undertakes as encompassed by the International Council for Coaching Excellence (ICCE) umbrella term definition. The discussion reveals the complexity of the role as CDs navigate who they are, what they do, and how they do it. Recommendations are made for future research to mediate knowledge gaps and move towards alignment and understanding of this key figure.

Keywords: coach educator, coach mentoring, coach learning, professional development, sport coaching, coach developer, coach development.
Introduction

Coach developers (CDs) are a central figure in coach development systems (Culver, Werthner, & Trudel, 2019; Edwards, Culver, Leadbetter, Kloos, & Potwarka, 2020), playing a key function in the learning of sports coaches. The CD has recently received global attention (Callary & Gearity, 2019a) and multiple frameworks have been produced by national organizations to explain and contextually organize the role of the CD (CIMSPA, 2021; International Council for Coaching Excellence [ICCE], 2014; Sport Australia, n.d.). Typically, the ‘face’ of formal coach development (McQuade & Nash, 2015; Redgate, Potrac, Boocock, & Dalkin, 2020; Watts, Cushion, & Cale, 2021), the title ‘coach developer’ has become an ‘umbrella term’, encapsulating various roles including educator, leader, facilitator, mentor, assessor, course designer, and evaluator (ICCE, 2014). These roles are designed and deployed to “develop, support and challenge coaches to go on honing and improving their knowledge and skills to provide positive and effective sport experiences for all participants” (ICCE, 2014, p. 8). Indeed, CDs have been shown to leave a long-standing impression on coach learners’ motivation for lifelong learning (Dohme, Rankin-Wright, & Lara-Bercial, 2019). Therefore, examining what is currently known about who CDs are, what they do, and how they work will add to our understanding of the CD, identify gaps where further research is needed, and provide insights for coach development practice and policy.

Researchers have documented that coach learning comprises varied experiences over many years (e.g., Lara-Bercial & Mallett, 2016) and recognize the need for a range of individualized learning sources with which coaches can engage (North, 2010; Stodter & Cushion, 2017). Indeed, coaches’ preferred learning sources may change as they gain expertise and advance in their careers (Mallett, et al., 2016). In accepting that coaches will learn from any and all of these learning opportunities, it is suggested that effective coach development should consist of a blended learning package ranging in formality (Cushion & Nelson, 2013; Hussain, Trudel, Patrick, & Rossi, 2012; ICCE, 2014). Common to each source of learning, however, is the involvement, to a greater or lesser degree, of CDs, viewed as experts in, and central to, coach development (ICCE, 2014). Thus far, attempts to identify the qualities and ‘tasks’ of an effective CD (e.g., Abraham, 2016) have been met with criticism for their disconnection from, “practice, context and subsequent
coaches’ learning” (Stodter & Cushion, 2019, p. 307). Indeed, Downham and Cushion (2020) state that, despite these attempts, “[CDs’] practice and influence have been taken for granted, assumed, or simply rendered invisible” (p. 3). Furthermore, a lack of understanding and conceptualization of the role may be the cause of superficial understandings and coach education issues that are beyond the CD’s role or control (Watts et al., 2021). Coach education research has instead focused on coaches’ perspectives on their development experiences and the features that are valued and desired by coach learners (e.g., Ciampolini, Milistetd, Rynne, Brasil, & Nascimento, 2019; Ji, Xu, Cheng, Sun, & Zhang, 2021; Lewis, Roberts, & Andrews, 2018; Nash & Sproule, 2012) including multiple reviews of coach development programmes (CDPs; Evans, McGuckin, Gainforth, Bruner, & Côté, 2015; Lefebvre, Evans, Turnnidge, Gainforth, & Côté, 2016; Silva, Evans, Lefebvre, Allan, Côté, & Palmeira, 2020). Despite research in the CD field expanding in the last few years (e.g., Callary & Gearity, 2019a), and authors identifying a paucity of empirical research exploring CDs’ practices, processes, and perspectives (Allanson, Potrac, & Nelson, 2021; Callary & Gearity, 2019a; Ciampolini, Tozetto, Milan, Camirê, & Milistetd, 2020; Watts et al., 2021), a systematic review of this key role has yet to be completed. Indeed, improving our understanding of the CD could impact practice, policy, and research in coach development. Therefore, the purposes of this review were to:

(a) offer an overview and evaluation of methodological and theoretical approaches underpinning research in this area; (b) systematically evaluate relevant empirical literature for trends and themes of research with the CD(s) as a, or the, focus of analysis; and (c) elucidate potential knowledge gaps and recommendations for future investigation. Such a review may aid in identifying current limitations, influencing research directions, as well as coach developer practice, and coach education. Indeed, it is anticipated that examining existing knowledge and ways of knowing will provide a starting point to advance researchers’ and practitioners’ critical exploration of this key role in coach development. To achieve this, the review is guided by three central questions; (1) who is the CD; (2) what do they do; and (3) how do they do it?

**Method**

This review was informed by systematic review methodology that is suited to the integration of a diverse body of work (Mays, Pope, and Popay, 2005; Bennie et. al., 2017). Thus, a systematic
search protocol in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Page et al., 2021) was utilized as a “road map to help authors best describe what was done, [and] what was found” (Sarkis-Onofre, Catalá-López, Aromataris, & Lockwood, 2021, p. 1). Following identification and screening, included studies were analyzed in a deliberate methodological ‘mash-up’ (Braun & Clarke, 2021, p. 336) of content analysis (CA; Mikkonen, & Kääriäinen, 2020) and reflexive thematic analysis (TA) protocols (Braun & Clarke, 2019). The combination of approaches enabled the quantitative description of study characteristics and drawing together an amorphous body of literature with diverse findings into a thematic description of evidence-based knowledge regarding the CD (Aromataris & Pearson, 2014).

Search Strategy

In keeping with PRISMA guidelines the search strategy identified key search terms, search fields, and relevant databases. Search terms were derived from methodologies presented by Popay et al., (2006) and the adoption of the CD ‘umbrella term’ (ICCE, 2014). In seeking to answer the central questions of the review, the population searched for is limited to the group of roles described by the ICCE above and those known by researchers to have relevance (e.g., Personal learning coach (PLC); Rodrigue, Trudel, & Boyd, 2019). An electronic search in the following five databases: (i) SPORTDiscus; (ii) ERIC; (iii) PsycInfo; (iv) Web of Science; and (v) Scopus was conducted on 28th March, 2021. A further search was conducted on 10th August, 2021 to determine if any recently published studies should be included in the review. Boolean logic in the following combinations was used to search for articles: "Coach Developer*" OR "Coach Educator*" OR "Coach Mentor*" OR "Personal Learning Coach*" OR "Coach Facilitator*" OR "Coach Programme Designer*" OR "Coach Assessor*" OR "Coach Evaluator*". This search ensured that articles identified focused on the range of CD roles and perspectives. Electronic database searches returned a total of 595 records which were imported into EndNote (version X9, 2020). Screening reduced the included papers to 42 with a further eight studies added via reference chaining and an additional three after the second literature search. This resulted in 53 studies included in the review.

Criteria for Inclusion
Inclusion criteria were established before the sifting of records to ensure the relevance of papers to the review. For inclusion, studies had to: a) be published in English; (b) be published in a peer-reviewed journal; (c) be available in full-text; (d) have the CD actively recruited as a participant(s); and (e) be published between 2010-2021 (due to recent research interest and the term in empirical literature first appearing in North’s 2010 paper - drawing on a previous publication regarding ‘coach development officers’ (Roberts, 2004)). This allows for analysis of changing and/or corroborating understanding of the CD research landscape over time.

Sifting of Retrieved Records

Informed by PRISMA guidelines (Page et al., 2021), the process of searching, sifting, and organizing articles was completed in three steps after extracting the duplicate articles (n = 178) contained in the searches. The authors independently reviewed the studies found by title, by abstract, and finally by full-text, systematically applying inclusion criteria. Records that did not satisfy the criteria were excluded (see Figure 1). Any disagreements regarding eligibility were resolved via discussion.

Quality Assessment

Attending to PRISMA regarding methodological quality, the Mixed-Methods Appraisal Tool (MMAT; Hong et al., 2019) was used to assess the quality of the final sample of studies. This tool considers the appropriateness of research designs and the adequate interpretation of results and contains two screening questions to establish if studies are empirical, and five categorizations of study designs which are completed on a 3-point scale of (‘Yes’, ‘No’, or ‘Can’t tell’; Hong et al., 2018). The first author completed the assessments producing summary scores by a percentage of ‘Yes’ responses and excluding any ‘N/A’ responses (Table 1). To assess for the trustworthiness of these assessments, a random sample of studies (n = 5) were also assessed independently by the second author who found no discrepancies.

The majority of studies were assessed to answer ‘Yes’ to all questions with the remaining studies resulting in lower quality assessment due to a lack of specific methods of data collection and analysis (e.g., Martin, Moorcroft, & Johnson, 2019; Milistetd, Peniza, Trudel, & Paquette, 2018) and poor or no evidence of appropriate interpretation of that data via a specific means (e.g., Crisp, 2018;
It is worth noting that many of these studies are presented as descriptive, narrative, reflective, or action research publications, often from the perspective of the authors (e.g., Cronin & Lowes, 2016; Dray & Howells, 2019). Additionally, sample size affects the quality assessment with multiple studies presenting findings (and acknowledging the limitation) from the research of a single CD. Although these results may provide useful elucidation of current methodological rigor, and considering a lack of empirical evidence supporting the efficacy of scales and checklists for assessing quality and risk of bias (Moher et al., 1995), quality assessment was not utilized for the purposes of sifting or excluding studies. Instead, the relevance of the research was carefully considered and included provided that the study offered evidence that would benefit the review. This allowed for the addition of pertinent detail from the included studies despite any technical deficiencies (Pawson, 2006).

**Data Extraction and Synthesis**

To enable CA of the key characteristics of the studies the first author extracted: (1) author details; (2) year of publication; (3) country or location of study; (4) participant information; (5) sport context; (6) instruments for the collection of data; and (7) theoretical framework (Table 1). Focusing on these features follows procedures in similar reviews (e.g., Langan, Blake, & Lonsdale, 2013; Walker, Thomas, & Driska, 2018) and recommendations from Pope, Mays, and Popay (2007) in enabling researchers to describe characteristics and identify gaps in the research. Insights from this analysis can be used in the development of future research questions and to inform the methods employed to examine them. A random sample of studies was reviewed by the second author (n = 5) to confirm the extracted information was accurate and relevant. In any paper whereby authors did not report or make detail clear, this has been reported as ‘ø’.

Following this, data analysis of the findings of each paper was conducted following a reflexive TA approach (Braun & Clarke, 2019). Reflexive TA is completed via a six-phase recursive process, ‘with themes developed from codes, and conceptualized as patterns of shared meaning’ (Braun & Clarke, 2021, p. 39). Reflexive TA offers a method that employs researcher subjectivity as a tool enabling us as authors to engage with the data critically and creatively. Indeed, our analysis sought to combine deductive and inductive elements (Braun, Clarke, & Weate, 2016). Analysis began
with the first author familiarizing himself by reading and re-reading all included papers, completing a
detailed inspection. The study’s questions of Who, What, and How (Abraham, Collins, Morgan, &
Muir, 2009) were then used as overarching themes to deductively organize codes into ‘buckets’
(Braun & Clarke, 2019, p. 594). From these ‘buckets’, recurring themes were inductively constructed
around three overarching themes representing distinct features or statements across the 53 studies
(Braun et al., 2018). These themes were discussed by the authors to ensure fit with the central
questions of the review before being named and defined into seven themes and 16 sub-themes (Table
2).

Results and Discussion
53 studies were included and examined to elucidate the current position of research investigating the
role of the CD. The presentation and discussion of the findings are organized into two sections: (a)
study characteristics (i.e., methodological and sample characteristics, and philosophical, conceptual,
and theoretical frameworks), and (b) findings from studies (i.e., overarching themes regarding the
who, what, and how of the CD).

Study Characteristics
This section is informed by content analysis where we sought to describe key characteristics
of the studies included in the review and identify gaps in the literature so as to indicate how research
has been framed and conducted on this topic thus far.

Methodological Characteristics
The majority of studies took a qualitative, case study approach (n = 50, 94.34%) with three
adopting a mixed-methods design. The most commonly reported method of data collection was
interview (n = 39, 73.58%), which was most frequently analyzed using various forms of thematic
analysis (n = 27, 50.94%). Many of the studies employed multiple qualitative methods (n = 28,
52.83%). All but one of these studies combined interviews with other methods such as document
analysis (n = 10, 18.87%) and field notes (n = 11, 20.75%). Employing multiple qualitative methods,
alongside greater interest in the CD as a research topic, was evident from 2018 onwards (see Figure
2).

Sample Characteristics
Due to the varying levels of detail provided on the sampled participants, accurate figures could not be generated regarding their characteristics. The available data shows that 397 CDs (range sampled 1 to 26) participated across the 53 included studies. Age was reported in only 18 studies (33.96%). Where reported, the average age ranged from 24 to 50.5 years. Across studies that reported the gender of CDs (29, 55%), the split was 66.06% male to 33.94% female. Moreover, removing the two studies that specifically targeted female CDs shifts the percentages to 73.37% and 26.63% respectively.

The majority of research conducted was with National Sport Organizations (NSOs; n = 37, 69.81%) and Higher Education Institutions (HEIs; n = 12, 22.64%). The geographical location of the research, though conducted across a total of ten countries, is dominated by the United Kingdom (n = 24, 45.28%), followed by Canada (n = 10, 18.87%) and Brazil (n = 6, 11.32%). One study (Van Hoye et al., 2015) involved two countries (Norway and France) and sought to establish cross-cultural transferability of a CDP. Consistent with other areas of sport coaching research (e.g., Cope, Partington, & Harvey, 2017) the most prevalent sporting context reported was soccer (n = 9, 16.98%). Other sports examined included rugby (n = 4, 7.55%) and golf (n = 2, 3.77%) with a number of sports appearing once in the review. Several studies (n = 15, 28.30%) either sampled CDs functioning in, or commenting on CDPs that were for, a variety of sports (denoted in Table 1, as ‘mix’). Furthermore, despite ICCE (2014) suggesting CDs should have “significant and successful coaching experience in one or more contexts” (p. 27), many studies in this review provided insufficient information to determine participating CDs’ experience (n = 23, 43.40%). To better contextualize research and its findings, future research should seek to consistently provide detailed descriptions of sample characteristics and selection criteria employed.

**Philosophical, Conceptual, and Theoretical Frameworks**

Notwithstanding the conceptualization of the CD itself, extracted data suggested there is considerable diversity in the underpinnings of the included studies. Thirteen studies (24.53%) did not state a specific framework for the research. Whilst those that did, reported philosophical underpinnings such as interactionist and dramaturgical (e.g., Allanson et al., 2021), interpretative (e.g., Corsby, Lane, & Spencer, 2020), realist (e.g., Redgate et al., 2020), critical realist (e.g., Garner,
Turnnidge, Roberts, & Côté, 2020) and social constructionist (e.g., Leeder & Cushion, 2020).

Additionally, multiple conceptual and theoretical underpinnings were used to either inform the research design, analysis, or both. These related fundamentally to the aspect of the CD being researched such as their positioning in a system (e.g., Organizational culture; Schein, 2004), pedagogy (Bernstein, 2000), pedagogical practice (e.g., Learner-centered teaching framework; Blumberg, 2008; Weimer, 2002), specific practice in context (e.g., Mentoring at work; Kram, 1988), their lifelong journey and learning (e.g., Comprehensive theory of human learning; Jarvis, 2006), and use of theory in practice (Argyris & Schon, 1974). The diversity in frameworks offers a range of detail that seeks to problematize, elucidate, and illuminate the role of the CD.

Several of the studies in the review failed to identify their underpinning frameworks (e.g., Koh, Ho & Koh, 2017) or explicitly how frameworks were utilized to analyze data (e.g., Martin, Moorcroft & Johnson, 2019). Kivunja (2018) highlighted the distinction between conceptual framework, which encompasses all aspects or research and therefore is impractical to unpack, and theoretical framework which is drawn from review of literature on the topic and therefore enables researchers to connect their work with existing research and demonstrate how it advances knowledge in the area. Furthermore, Kivunja argues that adopting and articulating a theoretical framework for research is critical as it “provides a structure for what to look for in the data, for how you think of how what you see in the data fits together, and helps you to discuss your findings more clearly, in light of what existing theories say.” (p. 47). Therefore, explicit identification and discussion of philosophical, conceptual, and theoretical assumptions would support deeper analysis, interpretation of results and discussion of findings by other researchers, encourage interdisciplinarity, and increase the opportunity for generalizations and understanding.

Findings from Studies

In this review, the three domains of who, what, and how were appropriated from an adaptation of the coach development decision-making model (Abraham, Collins, Morgan, & Muir, 2009) intended “to summarise the core tasks and decisions that define a professional role” (p. 57). They provided the overarching themes focused on the CD themselves rather than just the tasks they complete and the decisions they make. This satisfied our desire to remain CD-centric and reflect
current knowledge on the CD whilst employing a reflexive TA procedure. It is worth noting that themes frequently represent aspects that overlap (Braun & Clarke, 2019) and as such the identified themes and sub-themes (Table 2), though appearing separate, may coincide and interact.

Who is the CD?

Three major themes were developed relating to who the CD is: (In)Congruences with conceptualizations and role clarity of the CD; Limited understanding of and inconsistencies in CDs’ opportunities and pathways; and Training of the CD appears inadequate.

(In)Congruences with conceptualizations and role clarity of the CD. Despite increased research interest in the CD, there is confusion and disagreement about the ‘label’ that should be given to those working to develop coaches (Culver et al., 2019, p.297). The ICCE (2014) framework, referred to by many of the studies included in this review (e.g., Brasil, Ramos, Milistetd, Culver, & Nascimento, 2018; Ciampolini et al., 2020) suggests the CD is an ‘umbrella’ term that comprises multiple functional roles, including “coach educators, assessors, learning facilitators, presenters, and mentors” (ICCE, 2014, p. 8). However, additional terms were also evident (see ‘Other’ in Figure 3) including, tutors, trainers, coach development administrators, and personal learning coach (McQuade & Nash, 2015; Milistetd et al., 2018; Trudel, Culver, & Werthner, 2013). Despite the term ‘CD’ appearing earlier in the extant literature (e.g., North, 2010), research involving the CD as a unit of analysis began in 2012 and accelerated from 2018, with 81.13% of studies conducted in the last four years.

Although Figure 3 indicates the use of singular descriptors, multiple studies utilized the term CD and coach educator somewhat interchangeably (e.g., Brasil et al., 2018; Dempsey, Cope, Richardson, Littlewood, & Cronin, 2021; Edwards, Culver, Leadbetter, Kloos, & Potwarka, 2020; Norman, 2019) indicating an understanding (though not made explicit) of the coach educator as a form of CD. Others (e.g., the included coach mentoring research) did not use the term at all. Instead, there may be alignment with conceptualizations from other organizations such as the Chartered Institute for the Management of Sport and Physical Activity (CIMPSA) who suggest that CDs are separate from but related to tutors, assessors, mentors and executive coaches (CIMPSA, 2021).
For studies that use the term CD, there are two distinct conceptualizations of the role; 1) the ICCE umbrella term (10 studies: 18.87%); and 2) PLC research (2 studies: 3.77%). Those using the PLC conceptualization understand the CD as only involved in direct teaching (formal coach education) of the earlier parts of coaches’ careers whereas the PLC is deployed later in a coach’s career, typically with coaches working in high performance (Milistetd et al., 2018; Rodrigue et al., 2019). The somewhat narrower framing of the PLC as someone who is “a learning companion, who can help coaches to take the time to reflect on their practice in a safe place whilst encouraging them to act” (Rodrigue et al., 2019, p. 293), resembles recent descriptions of CDs from Sport Australia (n.d.), emphasizing provision of ‘on the job’ support.

(In)Congruences with conceptualizations across sports and geographical locations aside, in multiple studies the participant CDs reported a lack of perceived role clarity (e.g., Callary & Gearity, 2019b; Crisp, 2018). Furthermore, having clear roles is critical to ensure fidelity and effectiveness in CD practice (Bailey et al., 2019). Our review found issues of clarity may be due to the CD being just one part of complex coach development systems (Culver et al., 2019; Edwards et al., 2020) which is exacerbated with increasing complexity and size of systems (Edwards et al., 2020; Griffiths, Armour, & Cushion, 2018) and the creation of top-down layers for communication to pass through (Stodter & Cushion, 2019). Additionally, there is confusion following dissemination of policy and its recontextualization in the delivery of CDPs (Dempsey et al., 2021; Griffiths et al., 2018). Role clarity, therefore, appears to be an issue for CDs in practice and in research (Watts et al., 2021) with role frames yet to be adequately explored.

Limited understanding of and inconsistencies in CDs’ opportunities and pathways.

Similar to recognition of the need for a long-term development pathway for coaches (Van Mullem & Gano-Overway, 2021), the ICCE (2014) proposed a long-term CD pathway. However, the studies included in the review offer little detail that would indicate this idealized pathway. Instead, CDs appear to be drawn from those individuals with experiences as athletes and coaches, and/or in higher education (e.g., Cushion, Griffiths, & Armour, 2019; Galatti, dos Santos, & Korsakas, 2019). Athletic and coaching experience and qualifications were reported inconsistently and only in 26 studies (49.06%). The detail of any requisite (perceived or actual) professional qualifications and experience
(as an athlete and/or coach) is sparse and often linked to the requirements of being a coach in that sport (e.g., Brasil et al., 2018; Galatti et al., 2019). Indeed, though qualifications may increase the external and internal credibility of some CDs (e.g., Redgate et al., 2020), their skills and competencies do not derive solely from educational experiences (for example promoting meaningful development via reflective practice; Galatti et al., 2019). Although varying efforts are made to explain the backgrounds of the participants, the lack of specific details effects the possible interpretation and understanding of exactly how the CDs reached this point in their careers.

Researchers may be constrained in their reporting due to anonymity and ethical considerations, however, as Callary and Garity (2019a) note there appears a lack of understanding of the lifespan of the CD. Two exceptions (Brasil et al., 2018; Ciampolini et al., 2020), sought to examine the experiences that shaped CDs’ learning pathway. Their findings suggest that meaningful episodic experiences from formative stages of engagement in sport (a ‘first fascination’; Langseth, 2012) and positive experiences as coaches (including in coach development), result in a form of social responsibility to support the development of coach learners in their sporting context. Furthermore, Koh, Ho, and Koh’s (2017) examination of mentoring found that the inclusion of leadership opportunities (e.g., as team captain) was a contributing factor to later becoming a mentor, and that CDs may have a progressive assumption of roles in a generational effect (i.e., coaches who have experienced mentoring may be more likely to want to become a mentor themselves in future).

Our review also suggests that opportunities to become a CD are dependent upon the professionalization of specific sports and cultural contexts (Brasil et al., 2018; Callary & Garity, 2019b) as well as contextual understanding of the role of the CD and access to appropriate resources such as funding, time availability (of the CD(s) themselves and opportunities to deliver), and standardized programming (e.g., Callary & Garity, 2019b; Koh et al., 2017; Leeder, Russell, & Beaumont, 2019). Gender also appears to be a barrier to opportunity, with research indicating that female CDs are underrepresented due, in part, to inadequate options for coaching license accreditation (Norman, Rankin-Wright, & Allison, 2018) and training (Kraft, Culver, & Din, 2020). As mentioned in the sample characteristics section, there have been few studies that have included female CDs (e.g., Norman, 2019), thus our knowledge of their journey and challenges in becoming a CD is limited.
Although providing some insights, there is currently limited understanding of the motivation, credentials, and opportunity, for entering the career pathway to become a CD. Further research is needed to advance our understanding of why and how CDs enter the pathway and to ascertain (in)consistencies in CDs’ opportunities and pathways. Moreover, analysis of recruitment strategies by organizations employing and deploying CDs would reveal where the opportunities and challenges for prospective CDs are.

**Training of the CD appears inadequate.** The ICCE framework states that CDs should portray a growth mindset to support the skill progression intended on their training pathway. In the reviewed studies, CDs report learning opportunities that include drawing on experiences as an athlete, coach, and ongoing practice by other CDs and themselves (Brasil et al., 2018; Ciampolini et al., 2020; Cushion et al., 2019). However, CDs also describe feeling underprepared when delivering programs to develop coaches (e.g., Banwell, Stirling, & Kerr, 2019; Crisp, 2018; Stodter & Cushion, 2019), evaluating others (e.g., Kloos & Edwards, 2021) and often appear unaware of the pedagogical underpinnings and prior experiences that shape their practice (Culver et al., 2019; Cushion et al., 2019; Hussain et al., 2012; Leeder et al., 2019; Paquette, Trudel, Duarte, & Cundari, 2019). Despite these findings, there is currently little understanding of the training of CDs (McQuade & Nash, 2015) or ‘learning programme designers’ (Horgan & Daly, 2015) such as the content and intended outcomes of a training program for CDs and understanding of effective training (Stodter & Cushion, 2019).

Formal training is a relatively new phenomenon, rarely included in the learning pathway of the CD (Campbell, Fallaize, & Schempp, 2020). For those training programs that do exist, researchers have found that the primary focus is often on the CDs’ role in the recontextualization of a predetermined curriculum (Campbell et al., 2020; Dempsey, Richardson, Cope, & Cronin, 2020; Watts et al., 2021) rather than their own learning and development. Additionally, and similar to research into CDPs (e.g., Allan, Vierimaa, Gainforth, & Côté, 2018), CD training programs have received criticism for content overload in the time available, failure to provide after-care in the form of consistent and ongoing support, and contextual relevance (Culver et al., 2019; Leeder et al., 2019; Stodter & Cushion, 2019; Watts et al., 2021). These criticisms could contribute to the uncritical
reproduction of organizational beliefs and assumptions of best practice in coach development

(Downham & Cushion, 2020; Leeder & Cushion, 2020; Stodter & Cushion, 2019).

Despite a significant push towards learner-centered teaching (LCT) approaches within CDPs
(Chapman, Richardson, Cope, & Cronin, 2020; Rodrigues, Brasil, Milistedt, & Trudel, 2021;
Mesquita, Coutinho, de Martin-Silva, Parente, Faria, & Afonso, 2015; Paquette & Trudel, 2018),
research has found CDs’ perceptions of their training and subsequent ‘implementation’ in this regard
often relies on their prior acquaintance and orientation to the teaching approach (Culver et al., 2019;
Paquette et al., 2019; Reid & Harvey, 2014). While training may assist CDs in recognizing LCT
methodologies and/or competency-based approaches, research suggests that CDs experience
difficulties putting these into practice (Culver et al., 2019; Dempsey et al., 2021; Leeder et al., 2019;
Stodter & Cushion, 2019). Additionally, and ironically given the movement towards LCT practices,
studies report instructor-centered teaching (ICT) methods on CD training programs (e.g., Culver et al.,
2019), and instructor perceptions that CDs are already competent to perform in their role(s) (e.g.,
Stodter & Cushion, 2019).

Unsurprisingly, recommendations made in the literature for improving CD training programs
include learner-centered practices. These involve; incorporating structured and unstructured learning
for interaction with, and influence by, peers (Campbell et al., 2020; Crisp, 2018; Galatti et al., 2019;
Kloos & Edwards, 2021; Koh et al., 2017; Leeder et al., 2019; Redgate et al., 2020); connecting
theory to practice via practical components (Campbell et al., 2020; Redgate et al., 2020; Van Hoye et
al., 2015); tailoring (additional) CD training programs to the level of CDP being delivered and
specific roles of the CD (Campbell et al., 2020; Culver et al., 2019; Koh et al., 2017); considerations
for particular demographics such as women-only training programmes (Kraft, Culver, & Din, 2020);
and situating training in the reality of their professional roles (ICCE, 2014; Redgate et al., 2020).

Furthermore, research points to allowing CDs further time in training to cover content (e.g., Van Hoye
et al., 2015) and positive perceptions of longer-term CD training programs featuring greater time for
unstructured learning in the curriculum and valuing time in-situ to, “‘anchor their experiences’ while
staying ‘connected with the whole process’” (Campbell et al., 2020, p. 133). Three recent papers
indicate that implementation of these recommendations was viewed positively from both CDs as
learners (Partington, O’Gorman, Greenough, & Cope, 2021; Vinson, Simpson, & Cale, 2022) and from ‘Master Coach Developers’ training, evaluating, and supporting CDs (Kloos & Edwards, 2021).

The findings in this review suggest training of the CD to be a crucial and desired component in role success, clarity, and fidelity that is currently largely ineffectively supported by CD training programs (Bailey et al., 2019; Callary & Gearity, 2019b; Campbell et al., 2020). Encouragingly, more recent research into CD training programs report greater understanding of espoused and theories-in-use and increased confidence in professional identity and role (Partington et al., 2021; Vinson et al., 2022).

**What does the CD do?**

As described above, the CD term can be conceptualized to include various roles and responsibilities (McQuade & Nash, 2015), thus affecting what the CD does. Our analysis resulted in two themes: Multiple functions of the CD contribute to a lack of role clarity; and Top-down approaches to CDPs hinder the fidelity of CDs’ implementation.

**Multiple functions of the CD contribute to a lack of role clarity.** CDs are considered an expert workforce essential to coach development systems that impact coaches through the provision and facilitation of formal and non-formal learning opportunities (ICCE, 2014). The CDs in the studies in this review operated in multiple roles in the design, implementation, and delivery of coach development. Figure 3 shows a range of role descriptors given to the CDs, the most prevalent being ‘Developer’ (22 studies: 41.51%), ‘Educator’ (11 studies: 20.75%), and ‘Mentor’ (11 studies: 20.75%). However, this paints just part of the picture, as individual CDs may specialize in one role or have multiple roles, with multiple responsibilities or ‘tasks’ (Abraham et al., 2013; ICCE, 2014).

Indeed, in the reviewed studies there are instances of CDs operating as both Educator and Assessor (Allanson et al., 2021; Garner et al., 2020; Reid & Harvey, 2014), Designer and Educator (Callary, Gearity, & Kuklick, 2021; Cronin & Lowes, 2016; Rodrigues et al., 2021; Martin et al., 2019) and Educator and Mentor (Cushion et al., 2019; Downham & Cushion, 2020). This indicates that for many CDs the role can be multidisciplinary, combining several fields of expertise in concurrent roles. There are, however, few studies that specifically explore the different behaviors and interpersonal knowledge required to balance multiple functions (see Garner et al., 2020 discussed further below).
This furthers a previous point as to the importance of role clarity and an influence of culture and context on the typology and vocabulary used to differentiate and describe the CDs. Subsequently, the role descriptor(s) and associated role frame(s) used and detailed by researchers inconsistently denote the function(s) that CDs undertake.

**Top-down approaches to CDPs hinder the fidelity of CDs’ implementation.** Our review found CDs in formal learning situations are tasked with implementing the whole, or part of, a CDP that is either disseminated to them with little or no prior input (e.g., Dempsey et al., 2021) or that they have, to varying degrees, designed themselves (e.g., Callary et al., 2021). Dissemination of coach education policy occurs via restricted layers of communication that can cause confusion and misinterpretation in implementation (Cassidy, Kidman, & Dudfield, 2015; Dempsey et al., 2021; Edwards et al., 2020; Griffiths et al., 2018; Stodter & Cushion, 2019). Indeed, a CD interviewed in Paquette et al., (2019) stated, “I can’t help but think the people who create programs like this make it more complicated than it likely needs to be. Perhaps it’s because these people are usually far removed from what’s actually happening on the ground” (p. 278). These issues in dissemination and training have produced varied practice and approaches (e.g., Culver et al., 2019; Watts et al., 2021) and reports from coach learners of confusion and contradiction of content (Stodter and Cushion, 2019) effecting fidelity, especially for large-scale CDPs (Culver et al., 2019; Edwards et al., 2020; Griffiths et al., 2018).

The findings of several studies suggest that the process of implementation is somewhat problematic, happening via recontextualization, the, “decoding and recoding of policy” (Dempsey et al., 2021, p. 4) which, “is a complex, fluid, and inherently contested process” (p. 2). For example, there are CD delivery intention-action gaps due to inconsistencies in espoused and in-use theories (e.g., Stodter & Cushion, 2019), anti-intellectualism, and the misappropriation or misuse of pedagogical theory (Cushion et al., 2019) which challenge CDs’ ability to facilitate coach learning (Cushion, Stodter, & Clarke, 2021; Dempsey et al., 2020). Furthermore, consistent with concerns raised by coach learners in formal education settings (e.g., Ciampolini et al., 2019; Piggott, 2012), the balance of content to time available and assessment-orientated processes seem to impair CDs’ ability to address coach learners’ needs (Culver et al., 2019; Dempsey et al., 2021). However, some research
has shown that this issue can be positively affected by longer-term and personalized engagement with coach learners (Ciampolini, Camiré, Salles, Nascimento, & Milistetd, 2021; Rodrigue et al., 2019) and the deliberate design for the adaption of content to learner’s needs (Cronin & Lowes, 2016; Dray & Howells, 2019; Hussain et al., 2012; Martin et al., 2019). This requires the appropriate availability of time and resources in delivery, and CD agency and pedagogical knowledge (Ciampolini et al., 2021).

To date, our understanding regarding what the CD does is mostly drawn from document analysis and observation (e.g., Dempsey et al., 2020; Edwards et al., 2020; Griffiths et al., 2018; Stodter & Cushion, 2019). There is little explanation from the CDs themselves as to what they do, other than intimating a philosophy of (e.g., Ciampolini et al., 2021), or problems with, implementation (e.g., Dempsey et al., 2021). Further research is therefore needed regarding what CDs understand and perceive as their process and practice.

**How does the CD Operate?**

There is limited research exploring the in-situ role of the CD (e.g., Abraham et al., 2013; Watts et al., 2021). Of the empirical research reviewed here, three themes were developed regarding How the CD operates: Shifts to learner-centered design presents challenges for CDs; Understanding of social dynamics and broader relational systems involved in CD practice is limited; and Intention-Action mismatches and evidence of knowledge reproduction.

**Shifts to learner-centered design presents challenges for CDs.** The designer in a coach development system can be split into two categories: the qualification designer and the learning program designer (McQuade & Nash, 2015). The former is responsible for mapping learning outcomes to national standards and appropriate guidance for assessment. The latter is responsible for the construction of a framework to support the coach’s learning journey from start to completion of the qualification. Of the reviewed studies, 11 (20.75%) report on the qualification and learning program design, and four (7.55%) report on the learning program design only.

A consistent feature of the reviewed records is the moves towards learner-centered perspectives both in NSOs (e.g., Chapman et al., 2020; Culver et al., 2019; Dempsey et al., 2020; Paquette & Trudel, 2018) and HEIs (e.g., Cronin & Lowes, 2016; Galatti et al., 2019; Milistetd et al.,
This shift implies learner-centered teaching (LCT) strategies such as active learning experiences that give coach learners, “the opportunity to think and act like coaches for as much of the learning time as possible” (McQuade & Nash, 2015, p. 344) and, “provide a flexible structure based on the coaches’ self-determined needs” (Hussain et al., 2012, p. 237). These are further underpinned by the promotion of a lifelong learning perspective (Culver et al., 2019; Rodrigues et al., 2021). Researchers do however contend that designing constructivist approaches should not be viewed as a ‘panacea’ (Rodrigue et al., 2019; Rodrigues et al., 2021). Indeed, any change in pedagogical or andragogical approach will experience tensions, power imbalances, and challenges (see Luguetti, Kirk, & Oliver, 2019; Milistetd et al., 2019; Stoszkowski & Collins, 2017) that could result in a ‘flop’ if the application of learner-centered teaching strategies are not met with appropriate implementation (Callary, Gearity, & Kuklick, 2021).

Understanding of social dynamics and broader relational systems involved in CD practice is limited. The effectiveness of CDs (and by extension CDPs) relies heavily on the social interaction with other actors in a coach development system (Ciampolini et al., 2019; Nash & Sproule, 2012). Yet, our knowledge about the social dynamics involved in CDs’ practice is limited (Cushion et al., 2019; Allanson et al., 2021). A small number of studies drew on sociological paradigms such as symbolic interactionism to elucidate an otherwise ‘invisible’ practice (Cushion et al., 2019, p. 534). In this research, CDs visibly seek to establish functional and meaningful relationships with coach learners. This appears as a need to develop rapport and a reciprocity in the initial stages whether in a mentoring (e.g., Bailey et al., 2019; Corsby et al., 2020) or coach educator position (e.g., Ciampolini et al., 2021; Garner et al., 2020). Ostensibly this is due to the need to work collaboratively, enacting learner-centered principles and sharing autonomy in the learning process (e.g., Ciampolini et al., 2021; Griffiths et al., 2018; Milistetd et al., 2019). However, particularly in formal settings, this requirement is underwritten by a need for symbolic capital (e.g., credibility, reputation, respect), whether with coach learners (e.g., Garner et al., 2020) or within the coach development system for employment opportunities (Allanson et al., 2021).

These studies found that some CDs were acutely aware of their interactions and reflexively read and write themselves into the social landscape of their work, engaging in micropolitical literacy,
impression management, and demonstrating situationally appropriate emotions and actions in their everyday work (e.g., Cushion et al., 2019; Allanson et al., 2021). This research casts the CD in a formal setting as a performer, requiring expertise in interpersonal knowledge and situational awareness and the ability to work flexibly with their ‘occupational identity’ (Cushion et al., 2019). In a more positive example of the reflexive and intentional ability to adjust behavior, Garner et al., (2020) reported CDs purposefully adopting leadership traits such as humility. Furthermore, this study noted CDs’ balancing of several tasks (i.e., delivering education and assessment) that involved different behaviors and interactions with coach learners. They found that CDs intentionally moved from mostly transformational leadership to mostly transactional leadership behaviors as the CDP shifted towards assessment.

**Intention-Action mismatches and evidence of knowledge reproduction.** To capture part of how CDs work, the concept of reproduction is used in several of the reviewed studies (n = 8, 15.09%). Drawing primarily on the work of Bourdieu, Bernstein and Foucault, reproduction has been employed to problematize teaching processes that focus on coach learners reproducing knowledge rather than encouraging problem solving and (re)examination of their beliefs and assumptions (e.g., Cushion et al., 2019; Galatti et al., 2019). In these environments created, “for coaches to become conforming and docile” the coach learner is deemed and developed to be ‘effective’ via the, “production of institutionalized and discursive bodies” (Cushion et al., 2021, p. 9). This is achieved by the CDs through use of symbolic capital in “the setting of the parameters for knowledge production to which everyone is required to tacitly respond” (Cushion et al., 2019, p. 534). In some cases, this is directly opposed to the intention of the CDPs and the CDs, occurring uncritically on their part and of the coach learner (e.g., Cushion et al., 2019; Cushion et al., 2021; Downham & Cushion, 2020; Leeder & Cushion, 2020). For example, Watts et al., (2021) found CDs’ practice appropriated legitimate, if questionable, methods and despite recognizing that knowledge of learning is important, their understanding of learning theory was “limited or confused” (p. 9).

Several studies suggest that micropolitical issues in interaction and assessment or competency driven design of policy lead to the inculcation of coach learners (and CDs) and intention-action mismatches (Cushion et al., 2019; Downham & Cushion, 2020; Leeder & Cushion, 2020). For
example, Downham and Cushion (2020) found CDs used dominant discourses to articulate views about and the use of reflection. In their setting, the symbolic power held by the CD(s) and the orchestration of practice resulted in ‘confessional’ reflection that was inauthentic, uncritical, or subject to criticism that further cemented capital and power away from the coach learner(s). However, this is not to say that CDs are necessarily to blame for this repeated issue of reproduction or that CDs should be viewed as a homogenous group. Concerns over job security were also found to lead to reliance upon policy and superficial artefacts of coaching practice, such as session plans (Bailey et al., 2019; Corsby et al., 2020) and privileging, “knowledge acquired from practice” (i.e., coaching experience; Cushion et al., 2019 p. 542) to maximize and maintain their capital. Furthermore, a lack of agency (perhaps perceived) in CDs’ delivery in formal education and experiencing pressures to deliver content in a ‘strongly framed approach’ (i.e., the educator maintains control over the delivery) limited ability to produce coach development with learner-centered principles (Dempsey et al., 2021). Indeed, where CDs offer coach learners greater agency over their own development, they reported positive perceptions of value creation via the co-construction of knowledge and development in a safe and challenging learning environment (Mesquita et al., 2015; Milistetd et al., 2018; Milistetd et al., 2019; Rodrigue et al., 2019).

As such, reproduction appears to occur as a consequence of social and organizational structures (e.g., Cushion et al., 2019), assessment driven frameworks, “only satisfying institutional agendas” (Sawiuk, Taylor, & Groom, 2018, p. 629), misappropriation of pedagogical action(s) (e.g., Downham & Cushion, 2020), and restrictions to CD agency (e.g., Dempsey et al., 2021; Sawiuk et al., 2018). These findings in relation to reproduction are confined to a particular group of authors and notably all of the research was in UK CDP settings. Further understanding of whether these issues are also true of formalized CDPs in other countries and sports is therefore needed.
cultures as well as within a variety of research designs to reflect and connect research appropriate to
the ICCE ‘umbrella’ term. Secondly, there is commentary about the role beyond empirical academic
research (e.g., Abraham, 2016; McQuade & Nash, 2015) and in policy development (CIMPSA, 2021;
Sport Australia, n.d.). By excluding these sources, further insights may have been missed. However,
given the scope of the review and systematic efforts taken to synthesize detail it is reasonable to
submit that the studies included provide support for the claims herein. The included studies with
varied ontological positions, employing a range of theoretical concepts, and disciplinary techniques
and terminology, made analysis complex. Additionally, there are only a limited number of papers for
each context, or that are informed by a particular research philosophy and/or theoretical framework.
Therefore, although claims have been made about CDs which we have attempted to capture in this
review, these are to a large extent still tentative and will require future research to verify, refute or add
further depth to our understanding of the face of coach development.

Future Directions

Having examined the current state of research in this area, it is valuable to note possible gaps
and recommendations for future research and practicalities regarding the CD. While not exhaustive,
these reflect some of the most relevant and pressing knowledge and practice gaps. Providing more
detailed descriptions and explanations of participant CDs’ backgrounds and contexts is critical to
enable others to understand, evaluate, and ultimately utilize the findings from research. From a
methodological perspective, researchers should seek to explicitly display and discuss the
philosophical, conceptual, and theoretical frameworks they are employing. This would not only help
to increase the quality and robustness of research on this topic (Adom et al., 2018; Kivunja, 2018), but
it would also aid in the formation of judgements, applications and transferability of research findings
(Anney, 2014; Kivunja, 2018). Indeed, research that adopts multiple qualitative methods and a greater
range of CD contexts by sport and geographical locations could support the identification of
generalizations and divergencies specific to this role. Moreover, continuing to employ methods such
as action research and collaborative research would likely improve this, with researchers forming
research and working relationships with key coach development stakeholders.
Concerning specific areas in need of further enquiry, issues of role clarity and professional identity, the form CDs take, are matters raised in both research and in-situ. Whether or not agreement on conceptualization regarding the role of the CD is achieved, researchers should examine and articulate how CDs and their roles are construed, both within research by researchers, and by the CDs themselves and other stakeholders in the coach development system. Additionally, researchers should seek to better understand how CDs become CDs. Moving beyond broad categories such as qualifications and experience, researchers might explore various stakeholders’ perspectives on the behaviors and knowledge CDs ‘need’ and key stakeholders ‘look for’ when recruiting or training CDs.

As highlighted by our discussion, the practice of the CD requires not only professional knowledge of coach learning, but also the ability to read and write themselves into the social landscape of coach development. Indeed, CDs demonstrate awareness of the various functions they fulfil, and the creation and maintenance of their professional reputation. It appears that these dynamic issues present barriers, or at least complications, to effective CD practice. Therefore, research that examines how CDs navigate and negotiate the coach development landscape would be useful. Additionally, research suggests current misalignment of system paradigm and pedagogical approaches with the lived realities of the CD. Given their central position in a coach development system, it is essential therefore that future research aims to further knowledge of what the CD does that acknowledges and illuminates the influence of the embedded and relational aspect of their specific context. Moreover, contextualizing the CD role to organizational expectations and curricula demands, for example by means of document analysis, would provide an indication of the relative fidelity to, and success of, disseminated curricula designed for the (re)production of coaching practice.

Therefore, continued inter- or trans-disciplinary methods will aid this body of literature to understand its complexities, diversity of perceptions, connect abstract and context-specific information, and build professional and practical knowledge (Ison, 2008). Collaborative processes of co-production (Norström et al., 2020), could help to move away from the current, ‘face-value’ understanding of the CD to a deeper interrelated knowledge and appreciation of the person and the role. For example, the work of North (2017) produced an ontological map for researching sport
coaching which was utilized by Muir (2018) to construct a conceptual framework to explore coaches’ resources, reasoning, strategies, actions and behaviors (Allen & Muir, 2021). Frameworks such as these can then be used as thinking tools to inform coach development and coaching practitioners.

**Conclusion**

The findings of this systematic review highlight how research into the CD has expanded over the past decade. There has been a clear rise in interest and the beginnings of an increasingly diverse range of research designs seeking to observe and give voice to this important role. Our synthesis across studies found various interpretations of the CD’s role and a lack of role clarity from researchers but also in the reports from the CDs themselves. We found that CDs adopt multiple roles both independently of each other and at the same time. Furthermore, although there is little research in this regard, CDs report a process of becoming and maintaining their position(s) that requires a fusion of credentials and opportunity. There is inference of an over-reliance on athletic and coaching experience in the recruitment and retention of CDs that appears to contribute to misappropriated or misaligned actions by CDs in their coach development roles. However, suggesting this issue is the ‘fault’ of the CD alone presents only part of the problem. Research has found that the training of the CD is frequently insufficient in preparing them for the role and the continued push towards learner-centered practice(s). Additionally, there are significant challenges implementing coach development policy. Dissemination via various layers prior to reaching the CD causes recontextualization issues as CDs experience misalignment to the reality of their practice and insufficient agency to genuinely facilitate individualized and contextually relevant learning. Indeed, several researchers commented on the disconnection between seeking fidelity of practice across a CDP and the possibility of adapting practice to meet the needs of the learner. Comparatively, in a few cases where the CD is afforded greater time and resources to co-construct the coach development journey, this appeared fruitful.

Moreover, studies showed that there are various causal mechanisms that effect CDs engagement in micropolitical practices and performance. Cast as the ‘face’ of coach development it is reasonable to suggest this partly comes with the performance of being a CD, however, there are reports of CDs being acutely aware of the importance of gaining and maintaining reputation with all actors in a coach development system. Indeed, this may influence the adoption of contextually and
traditionally legitimate practice(s), anti-intellectualism, and misunderstood pedagogical theory, which
intentionally or unintentionally reproduced coaching practice. Whilst some researchers have begun to
address this, further study of the real-life environment of the CD is needed to further our
understanding of their process and practice. This research will need to acknowledge the influence of
the biography and identity of the CD, the embedded contextual requirements and nuances and the
relational nature of the role(s). Thus, CD-related research would benefit from clearer understanding
and description of the role frame and positioning of the CD(s) involved.

As called for by Callary and Gearity (2019a), progress is being made by bold theorizing and
the use of many lenses to provide a breadth of detail. As this review shows, there is growing, if still
insufficient, understanding of who the CD is, what the CD does, and how they do coach development.
Whilst it is essential that research aims to further elucidate these, it is also important to employ
methods that will consider the where and when; the circumstances of CD process and practice. In
doing so, CDs and researchers may then employ disciplinary-based concepts to advance our
understanding of this key role and their effectiveness in developing coaches.
References


Figure 1. PRISMA flow diagram documenting the study selection criteria.

**Identification**

- ERIC (n = 18)
- PsycInfo (n = 45)
- Scopus (n = 339)
- Sport Discus (n = 75)
- Web of Science (n = 118)

**Articles obtained from search (n = 595)**

**Duplicates (n = 178)**

**Screening**

- Title and abstract screened for relevance (n = 417)
- Excluded based on title and abstract (n = 357)
- Unable to access full text (n = 3)

**Eligibility**

- Full-text screened for eligibility according to selection criteria (n = 57)
- Full-text articles excluded (n = 15)
- Full-text reference list screened for eligibility according to selection criteria (n = 8)

**Included**

- Studies included for review (n = 53)
- Added during writing process (n = 3)
Figure 2. Publication timeline showing number of included studies by year and methodology (Note: 1 paper from 2022 included and not shown; ‘Multiple Qualitative’).

Figure 3. Publication timeline showing number of included studies by year and role descriptor of the sampled CD (Note: 1 paper from 2022 included and not shown; ‘Developer’).
Table 2. Higher order themes and themes organized by overarching themes, detailing the clustering of findings from the reviewed studies

<table>
<thead>
<tr>
<th>Overarching theme</th>
<th>Themes</th>
<th>Sub-Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are they?</td>
<td>(In)Congruences with conceptualisations and role clarity of the CD</td>
<td>Multiple Role(s) and role frames</td>
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<td></td>
<td>Limited understanding of and inconsistencies in CDs’ opportunities and pathways</td>
<td>Varying requisite credentials for CD roles</td>
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<td></td>
<td>Training of the CD appears inadequate</td>
<td>Inconsistent opportunities for professional roles</td>
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<tr>
<td></td>
<td></td>
<td>Experience of, and development of leadership qualities</td>
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<tr>
<td>What do they do?</td>
<td>Multiple functions of the CD contribute to a lack of role clarity</td>
<td>CD role is multidisciplinary</td>
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<td></td>
<td>Top-down approaches to CDPs hinder the fidelity of CDs’ implementation</td>
<td>Responsibilities of the CD overlap</td>
</tr>
<tr>
<td>How do they operate?</td>
<td>Shifts to learner-centered design presents challenges for CDs</td>
<td>Recontextualization of disseminated policy</td>
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<td></td>
<td></td>
<td>Need for fidelity in delivery</td>
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<td></td>
<td></td>
<td>Framing of curriculum for delivery</td>
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<tr>
<td>Lack of CD agency in delivery</td>
<td>Need for appropriate resources</td>
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<tr>
<td>Understanding of social dynamics and broader relational systems involved in CD practice is limited</td>
<td>Development and maintenance of relationships</td>
<td></td>
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<tr>
<td>Development and maintenance of reputation</td>
<td>Legitimacy of CD practices</td>
<td></td>
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<tr>
<td>Intention-Action mismatches and evidence of knowledge reproduction.</td>
<td>(Mis)Alignment with theoretical ‘best’ practice</td>
<td></td>
</tr>
<tr>
<td>The (By)Product of coach development programs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 1. Articles Regarding the Role of the Coach Developer Published in English Peer-Reviewed Journals

<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Country</th>
<th>Organisation</th>
<th>Sport</th>
<th>n.</th>
<th>Age (M, R)</th>
<th>Gender</th>
<th>Data Collection</th>
<th>Data Analysis</th>
<th>MMAT</th>
<th>Framework</th>
<th>Theorists</th>
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<tbody>
<tr>
<td>Allanson, et al.</td>
<td>2021</td>
<td>England, UK</td>
<td>NSO</td>
<td>Soccer</td>
<td>4</td>
<td>48.75, 27-59</td>
<td>3M, 1F</td>
<td>Interview</td>
<td>Phronetic Iterative</td>
<td>100%</td>
<td>Interactionist-Dramaturgical</td>
<td>Kelchtermans, Goffman, Hochschild</td>
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<tr>
<td>Bailey, et al.</td>
<td>2019</td>
<td>United Kingdom</td>
<td>NSO</td>
<td>Ø</td>
<td>8</td>
<td>Ø</td>
<td>Ø</td>
<td>Focus Group, Interview</td>
<td>Thematic</td>
<td>86%</td>
<td>Ø</td>
<td>Ø</td>
</tr>
<tr>
<td>Banwell, et al.</td>
<td>2019</td>
<td>Canada</td>
<td>NSO</td>
<td>Mix</td>
<td>7</td>
<td>Ø</td>
<td>3M, 4F</td>
<td>Survey, Interview</td>
<td>Descriptive Thematic</td>
<td>100%</td>
<td>Theoretical Mentorship Model</td>
<td>Zachary</td>
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<tr>
<td>Brasil, et al.</td>
<td>2018</td>
<td>Brazil</td>
<td>NSO</td>
<td>Surfing</td>
<td>5</td>
<td>41.4, Ø</td>
<td>3M, 2F</td>
<td>Interview</td>
<td>Thematic</td>
<td>86%</td>
<td>Ø</td>
<td>Ø</td>
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<td></td>
<td>Callary, et al.</td>
<td>2019</td>
<td>Mix</td>
<td>NSO</td>
<td>HEI</td>
<td>Mix</td>
<td>8</td>
<td>ø</td>
<td>ø</td>
<td>Survey</td>
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<td>5</td>
<td>Callary, et al.</td>
<td>2021</td>
<td>Canada</td>
<td>HEI</td>
<td>S&amp;C</td>
<td>3</td>
<td>ø</td>
<td>ø</td>
<td>Email, Document Analysis, Interview, Journals</td>
<td>Ethnography</td>
<td>100%</td>
<td>Confessional Tales</td>
</tr>
<tr>
<td>6</td>
<td>Campbell, et al.</td>
<td>2020</td>
<td>Japan</td>
<td>NSO</td>
<td>NCDA</td>
<td>Mix</td>
<td>20</td>
<td>ø</td>
<td>15M, 5F</td>
<td>Survey</td>
<td>ø</td>
<td>57%</td>
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<td>7</td>
<td>Cassidy, et al.</td>
<td>2015</td>
<td>New Zealand</td>
<td>NSO</td>
<td>Ø</td>
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<td>ø</td>
<td>ø</td>
<td>Interview</td>
<td>Creative non-fiction</td>
<td>100%</td>
<td>ø</td>
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<tr>
<td>8</td>
<td>Chapman, et al.</td>
<td>2020</td>
<td>England, UK</td>
<td>NSO</td>
<td>Soccer</td>
<td>16</td>
<td>ø</td>
<td>Mix (ø)</td>
<td>Document Analysis, Interview</td>
<td>Thematic</td>
<td>100%</td>
<td>Pedagogy</td>
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<td>Ciampolini, et al.</td>
<td>2020</td>
<td>Brazil</td>
<td>NSO</td>
<td>Rugby</td>
<td>1</td>
<td>40, ø</td>
<td>M</td>
<td>Rappaport Time Line, Interview</td>
<td>Interpretative Phenomenological</td>
<td>100%</td>
<td>Experiential Learning</td>
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<td></td>
<td>Authors</td>
<td>Year</td>
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<td>Percentage</td>
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<td>46</td>
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<td>Sawiuk, et al.</td>
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<td>45.4, 24-64</td>
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<td>41.5, ø</td>
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<td>Reflective materials, Focus Groups, Field Notes, Interviews, Conversations</td>
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<td>Participatory and Appreciative Action and Reflection Landscapes of Practice</td>
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<td>Watts, et al.</td>
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Note: M = male; F = female; MMAT = Mixed Methods Appraisal Tool; BAS = Basketball Association of Singapore; BRF = Brazil Rugby Federation; CAC = Coaching Association of Canada; HEI = Higher Education Institution; IBRASURF = Instituto Brasileiro de Surf; LSO = Local Sports Organisation; NCDA = The NSSU Coach Developer Academy; NCCP = National Coaching Certification Program; NSO = National Sports Organization; PE = Physical Education; RE-AIM = Reach, Effectiveness, Adoption, Implementation, and Maintenance; RFU = Rugby Football Union; The FA = The Football Association.