1   Layers of learning in coach developers' practice-theories, preparation and delivery

2   Anna Stodter[1] and Christopher J. Cushion[2]

3   [1]Anglia Ruskin University

4   [2]Loughborough University

5

6

7

8

9   Author Note

10   Anna Stodter is with the Cambridge Centre for Sport and Exercise Sciences at Anglia

11   Ruskin University, Cambridge, United Kingdom. Christopher Cushion is with the School of

12   Sport, Exercise and Health Sciences, Loughborough University, Loughborough, United

13   Kingdom.

16   Address author correspondence to Anna Stodter at Anna.Stodter@anglia.ac.uk

17

18

19   Abstract

20   Despite the centrality of coach developers to formal coach education settings, only a handful

21   of studies have begun to touch upon the role they play in mediating quality learning, while

22   links between different layers of learning and impact on coach learners remains underexplored.

23   This research explored English coach developers' understanding of learning, and the learning

24   frameworks taught to them, through unstructured interviews and participant observation of a

25   generic coach developer training course. Three coach developers were observed delivering

26   formal coach education, to elucidate how understanding was applied in practice. Supporting

27   interviews with 16 coaches attending the course gave an indication of reactions to developers'

28   practice. Combined layers of data were analysed using a three-phase integrated analytic

29   process. In the absence of pertinent evidence-informed coach developer training course design

30   and delivery, implicit 'practice-theories', based on participants' experiences as coaches and

31   coach developers, appeared to inform understanding and practices. Despite acknowledging

32   'learner centred' learning principles, coach developers experienced challenges implementing

33   these in practice and coach learners perceived confusion and contradictions. Findings are

34   discussed in relation to contemporary ideas around coaches' and coach developers' learning,

35   to highlight potential ways that coach developers could be more effectively prepared and

36   supported.

37   *Keywords:* Coach Developers; Professional Development; Coach Learning; Formal

38   Coach Education

39

40

41

42   Layers of learning in coach developers' practice-theories, preparation and delivery

43   Recent perspectives concerning the learning and professional development of sport

44   coaches have underlined a need to investigate social, relational, contextual and theoretical

45   issues in increasingly sophisticated and pragmatic empirical approaches (Lyle, 2018;

46   Townsend, Cushion & Smith, 2017). These approaches are aimed to better capture the well-

47   established multifaceted, relational nature of coaching and learning to coach (Cushion, Armour

48   & Jones, 2003), with evidence suggesting quality professional development involves

49   participatory, contextualised opportunities linked to practice and active knowledge

50   construction through social interaction (Phelan & Griffiths, 2018; Stodter & Cushion, 2017).

51   Perceptibly, if the role of impactful coach development is to accelerate learning processes

52   (Lyle, 2007), coach developers play a notable yet often overlooked part in this sociocultural

53   and relational context. Coach developers have a significant influence on the negotiation and

54   legitimisation of coaching practice (Cushion, Griffiths & Armour, 2018; Blackett, Evans &

55   Piggott, 2015), and their skills are crucial to the effectiveness of pedagogies and enabling

56   coaches to learn (Morgan, Jones, Gilbourne & Llewellyn, 2013). Nevertheless, there remains

57   little research on coach developers (Abraham, Morgan, North, et al., 2013), with the existing

58   work being largely instrumental, focusing on the various task demands, professional 'skill sets'

59   and exemplar behaviours associated with the role (Cushion et al., 2018).

60   Although the demands placed on coach developers are dependent on the overall

61   development approach taken (Morgan et al., 2013), a benchmark requirement is substantial

62   expertise in learning (Abraham et al., 2013; ICCE, 2014). Yet such qualities offered as

63   contributing to an 'effective' coach developer, often appear neatly compartmentalised and

64   disconnected from practice, context and subsequent coaches' learning (e.g. Abraham et al.,

65   2013; McQuade & Nash, 2015). Meanwhile, the origins and development of coach developer

66   qualities is not well researched or understood. In addition, Cushion at al., (2018) showed that

67   rather than being compartmentalised and existing in isolation, coach developers' practice and

68   professional learning are instead part of a broader system of power relations and interactions

69   in contextualised social practice. However, preparation of coach developers for negotiating

70   these challenges, as well as the links between their own learning and delivery, and the resulting

71   impression on coach learners remain underexplored. This paper goes some way to addressing

72   this by providing evidence for the multiple associated layers of learning in a formal coach

73   education setting involved with the development of coach developers and coach development

74   practices.

75   Reflecting what is known about how coaches learn (Cushion, Nelson, Armour, et al.,

76   2010), coach development consists of a varied collection of activities that range in formality.

77   Thus coach developers, also referred to in the literature as educators, tutors, facilitators, trainers

78   and coach development administrators (Trudel, Culver & Werthner, 2013), often perform a

79   mixture of formal coach education and non-formal workshop delivery, formal and informal

80   mentoring, evaluating and assessing coaching (McQuade & Nash, 2015). Indeed, the

81   International Coach Developer Framework put together by The International Council for

82   Coaching Excellence (ICCE) adopts the umbrella term 'coach developer' to 'include all those

83   who have undergone training to fulfil one or more of the following roles: coach educators,

84   learning facilitators, presenters, mentors and assessors' (ICCE, 2014, p.6). This definition

85   emphasises the necessity of *training* to set coach developers apart from merely experienced

86   coaches, framing them as 'experts' in learning who can optimise opportunities for coach

87   learners. What this training does or should involve, however, is not defined, and the

88   effectiveness of training for coach developers' subsequent understanding and practice is

89   unknown. There remains little research to evidence the preparation and overall development of

90   developers (ICCE, 2014), leaving sporting organisations unclear on how they can best support

91   the growth of these practitioners' skills (McQuade & Nash, 2015).

92   One reason why coach developers require expertise in learning relates to the wide-

93   ranging nature of coach development, with the developer's role influenced by the particular

94   approach taken (Trudel et al., 2013). In contrast with more traditional, standardised and

95   typically technical content-driven forms of educational delivery and certification, a

96   contemporary 'paradigm shift' towards ongoing 'learner centred' and bespoke professional

97   development approaches places greater demands on coach developers (Cassidy & Kidman,

98   2010). While didactic, instructive presentation positions the coach developer as a 'transmitter'

99   of information to be acquired, participatory and constructivist-informed programmes place

100   more emphasis on pedagogical skills, raising responsibility for subsequent learner interaction,

101   listening and reacting to group exchanges (Jones, Morgan & Harris, 2012; North, 2010;

102   Stoszkowski & Collins, 2017). The shifting role of the coach developer can be represented on

103   a continuum from educational delivery to enabling, facilitation and even developing coaches'

104   capability to learn and self-direct their own future learning (Stoszkowski & Collins, 2017). In

105   practice, it is likely that individual developers must gauge and manage a balance between

106   content delivery and facilitation to meet coach learners' varied needs. The success of

107   contemporary and innovative approaches are largely dependent on the capability and

108   willingness of coach developers to adopt the necessary roles, especially when this requires a

109   departure from long-practiced and deep-rooted reproductive pedagogies (Abraham, Collins &

110   Muir, 2009; Savin-Baden, 2003). Coaching approaches also need to be effectively modelled

111   by educators in their delivery (ICCE, 2014; McCullick, Belcher & Schempp, 2005), creating a

112   'dual role' whereby developers can simultaneously coach and support others' learning about

113   coaching (Ben-Peretz, Kleeman, Reichenberg & Shimoni, 2010). In order to effectively

114   balance their roles and bring about learning in coach development, developers need to draw

115   upon particular expertise in, and understanding of, learning and learners (Abraham et al., 2013;

116   ICCE, 2014; Cassidy, Potrac & McKenzie, 2006). Research by Abraham et al. (2013) with 15

117   experienced coach developer professionals specified the professional skills, required

118   knowledge, typical leadership, management and coaching behaviours that demonstrate

119   understanding of adult learning for coach developers. According to their definition, 'expert'

120   coach developers have a 'broad and deep knowledge base of learning theories and their

121   application' alongside 'a rich set of critiqued experiences within the domain of operation',

122   allowing them to 'develop and monitor relevant learning environments, tasks and

123   communication strategies to meet learning goals' (Abraham et al. 2013, p. 179).

124   Despite necessary knowledge and expertise being clearly defined, little is known about

125   how coach developers achieve and then implement these (Jones, et al., 2012). In the related

126   world of teacher continuing professional development (CPD), research has identified a clear

127   need for support to enable professional educators to engage learners (Armour, 2010). This

128   literature has emphasised educators' professional learning as taking place within socially and

129   culturally situated work contexts, with inextricable bonds formed between learning and identity

130   (e.g. Brody & Hadar, 2011; Cochran-Smith, 2003, Swennen & Bates, 2010). Similarly, in sport

131   coaching, it is suggested that due to their biography as coaches, products of coach education

132   systems and later educator training, coach developers are shaped by, and simultaneously

133   shaping of learning cultures and contexts (Cushion et al., 2018; Nelson, Cushion, Potrac, &

134   Groom, 2014). Certain practices, expectations and ways of doing and being become considered

135   'normal' and reproduced in day-to-day activities (Cushion et al., 2018; Piggott, 2012).

136   Although coach developers may not articulate clear beliefs about learning, their practice

137   invariably rests upon assumptions deeply embedded in culture (Light, 2008). Implicit theories

138   or 'folk pedagogies' (Bruner, 1999), rooted in personal experience and strong beliefs about

139   how people learn best, are reflected in customs and overt behaviours. For example, normative

140   beliefs about 'good' teaching are associated with particular educator 'positionings', then

141   manifested in use of strategies like modeling to prioritise learners' needs or technical feedback

142   and correction (Vanassche & Kelchtermans, 2014). Thus, different accepted practices in

143   professional development reflect diverging assumptions about learning, pedagogy and

144   teaching.

145   Shulman (2005) takes a broader view in referring to sets of disciplinary assumptions

146   and normative forms of learning and teaching as 'signature pedagogies': pervasive types of

147   teaching that shape the fundamental ways practitioners are educated for their professions,

148   implicitly defining what counts as knowledge and how things become known. He separates

149   three dimensions of signature pedagogies: surface structure, deep structure, and implicit

150   structure. Surface structures are concrete operational acts of teaching and learning,

151   demonstrating, questioning and interacting, while deep structures reflect a set of assumptions

152   of how best to impart a certain body of knowledge and know-how. Implicit structure is a moral

153   dimension that comprises a set of beliefs about professional attitudes, values and dispositions

154   (Shulman, 2005, p. 55). These distinctions are useful because what people believe in does not

155   always duplicate what they actually do; in other words, their espoused theory may not match

156   their observed 'theory-in-use' (Argyris & Schön, 1974). Indeed, a recent study showed that

157   while teacher developers articulated strong views about the importance of practical learning

158   opportunities, these beliefs did not always materialise when delivering a formal course, with

159   variations apparent in actual time dedicated to practical vs. theoretical learning opportunities,

160   as well as quality of implementation between developers (Makopoulou, 2018). More

161   fundamentally, while such habits and implicit folk pedagogies or practice theories can act as

162   useful scaffolds for complex professional learning, they are worth reviewing critically as

163   potentially limiting or dangerous sources of rigidity and reproduction (Armour, 2010;

164   Shulman, 2005).

165   Importantly, sport coaching scholarship is yet to scrutinise and evidence these ideas or

166   link surface structure behaviours to deep structure 'practice-theories'. As in teaching, coaching

167   not only needs to articulate and interpret accepted practice theories, but also to look at the

168   nuance of how intentions connect to practices (Makopoulou, 2018), in order to find out how

169   these factors might be positively influenced (Lyle, 2018). The reproduction of assumptions

170   about learning apparent through surface, deep and implicit structures of signature pedagogies,

171   through the layers of coach developer training, to coach developer, to coach (and then to

172   athlete) are yet to be explored. The current study therefore, aimed to extend existing research

173   on coach developers by taking into account their training and linking it to perspectives,

174   intentions and practices, alongside learners' reactions to this practice. Accordingly, it adopts

175   an *in situ*, multi-layered approach within the context of formal coach education, but with the

176   coach developer, and learning, central (Cushion et al., 2018). Articulating and interpreting links

177   between coach developers' deep structure 'practice theories', the learning frameworks apparent

178   in their training, surface structure behaviours and resulting coach learning, can contribute

179   insights into an underexplored yet prominent aspect of coach development. Beginning to

180   unpack the ways coach developers are prepared to, intend to, and then actually do support

181   coaches to learn, will pave the way towards future understanding and guidance for more

182   effective coach learning opportunities (Makopoulou, 2018).

183   **Method**

184   **Context**

185   Coach developers were employed full-time within a large national Sport Governing Body

186   (SGB) that provides extensive coach education pathways, continuing professional development

187   and mentoring, as well as a licenced coach developer pathway. The latter consisted of six stages

188   whereby developers were identified, trained and assessed, familiarised with specific courses,

189   observed others, shared course delivery, then completed the process. Coach developers'

190   primary preparation therefore took place in stage two, with completion of the SGB's generic

191   coach developer training (GDT), a minimum entry requirement for UK Coaching Certificate

192   (UKCC) Level 3 and above qualified coaches to deliver coach education in the sport. The coach

193   developers were involved in the design and delivery of a formal age-appropriate youth coach

194   education course, part of a new national youth-specific coaching qualification pathway. The

195   research reported here forms part of a wider project that evaluated the impact of this course on

196   coaches' learning.

197   **Participants**

198   Following institutional ethics approval, three full-time professional male coach

199   developers and 16 coach learners (15 male, 1 female) were purposively selected to take part in

200   the study. Sampling was theoretically driven, with participants selected due to their particular

201   characteristics as either coach developers or coach 'candidates' on a formal coach education

202   course delivered by the coach developers; the aim being to create a theoretically meaningful,

203   'information rich' sample (Patton, 1990).

204   The coach developers, with a mean age of 47 years (SD = 12.0, R = 35-59), had been

205   working as coach development practitioners for a mean of 18.8 years (SD = 10.7, R = 12-31).

206   All three were SGB licenced and were responsible for the design and delivery of an age-

207   appropriate youth coaching course. This course was framed as 'progressive' and packaged as

208   a 'truly athlete centred approach' to the coaching and development of young athletes. The

209   intended outcomes included enabling coaches to 'design practices specific to the needs of

210   individual athletes' and 'link the design of practices to match day and athletes' role specific

211   requirements'. Working within teams of four coach developers, they delivered the course that

212   comprised of two weekends' contact time, one month apart. Each weekend involved a mix of

213   classroom-based delivery; group work; 'showcase' coaching; and simulated coaching practice

214   with educator feedback. Through the SGB's candidate lists for the youth coaching course,

215   coach learners (M age = 34.3 years, SD = 6.9, R = 22.4 – 43.7) with an average of 6.7 years

216   coaching experience (SD = 3.3, R = 2 - 14) were invited to take part. Each was qualified to

217   UKCC Level 2 or above, and primarily working with sport participants of ages ranging from

218   three to nineteen in a mixture of settings from participation to performance. Informed consent

219   was obtained from all participants.

220   **Design and procedure**

221   This research positioned the coach developers as the central unit of analysis, each of

222   whom in combination worked across four cohorts of the same youth coaching course. To enable

223   a multi-layered and integrated investigation of the phenomenon of coach developers'

224   preparation and practice within the course context, interview and observational data were

225   collected by the first author, a UKCC Level 2 qualified coach with six years' youth coaching

226   experience, across three levels and phases: coach developer training, coach developers'

227   practice, and coach reactions.

228   **Phase one.** Participant observation was employed to gain insights into coach

229   developers' preparation on the SGB's generic coach developer training. This three day long

230   residential course was a prerequisite qualification for all SGB developers who deliver formal

231   coach education courses. It aimed to 'support and develop the teachers' of the sport, covering

232   modelling of good practice, planning using a learning cycle, learning styles, inclusive methods

233   and activation and engagement of individuals and groups. Primarily delivered through group

234   work and interactive activities, the training culminated in an assessment involving a ten minute

235   individual presentation. Following completion, developers received individual action plans that

236   allowed them to proceed to course specific familiarisation, or recommended deferral or

237   withdrawal from the programme if they were deemed not ready to proceed. Audio recordings

238   were taken on all training activities, generating 871 minutes of data alongside field notes, hand-

239   written during breaks and at the end of each day of training. Similar to previous studies in coach

240   education (e.g. Gilbert & Trudel, 1999; Stodter & Cushion, 2014), notes were taken on content,

241   the training activities that took place, developers' reactions and learning, general atmosphere,

242   physical settings and timings. Materials in the form of the training handbook were also

243   examined for corresponding content and assumptions relating to learning. Participant

244   observation thus generated a combination of notes, transcribed quotes and descriptions of

245   events such as tasks, training activities and social interactions.

246   **Phase two.** The coach developers' practice was examined using observations of the

247   youth coaching course they led, across the four different cohorts. In line with previous studies

248   in formal coach education settings (e.g. Gilbert & Trudel, 1999; Stodter & Cushion, 2014),

249   non-participant observation allowed more structured notes to be taken on coach developers'

250   practices, coaches' learning, feedback and assessment, coaching practice, atmosphere, content

251   and other comments, as well as timings. Course materials were also collected in the form of a

252   'participant pack' and audio recordings of classroom activities. A key part of this phase was

253   unstructured interviews that were conducted with each participating coach developer during

254   breaks in the youth coaching courses (cf. Makopoulou, 2018). Interviews lasted 30 minutes,

255   yielding a total of 91 minutes of audio data. Questions centred on developers' views on

256   coaches' learning, for example 'do you think that coaches learn in the same way that players

257   learn?' and 'how do you know that will assist coaches' learning?', while remaining flexible to

258   the situational and time constraints as well as the answers given.

259   **Phase three.** Finally, six months after completing the youth coaching course, coach

260   learners took part in semi-structured interviews face-to-face or by phone. Ranging from 30 to

261   85 minutes long, and generating 648 combined minutes, open-ended questions focused on

262   coaches' perspectives of the course. For example, coaches were asked 'what did you learn from

263   the course?' and 'what did you think of the teaching you received on the course?' All coach

264   learner and coach developer interviews were audio recorded and transcribed verbatim. The

265   methods in combination gave voice and perspectives to both coach developers and coach

266   learners, demonstrated practice and interactions, and enabled links to be drawn between

267   developers' preparation, their coach development practices *in situ*, and coach learners'

268   reactions to these practices.

269   **Analysis**

270   Aligning with the three levels of data collection, a three-phase integrated analytic

271   process was adopted with similar principles and procedures to both thematic analysis and

272   grounded theory (e.g. Cushion et al., 2018; Makopoulou, 2018). First, coach developer

273   interviews were examined, subjected to coding, and organised into initial themes relating to

274   views on learning, the origins of these views, and perceived practices. For example, the excerpt,

275   'I think you have got to again recognise the differences' was coded as 'individual differences',

276   while 'in terms of how do they learn best, I think one of the things is they have to have a bank

277   of experiences to call upon and then our job, for me, is to try and put it in the context of those

278   experiences' was coded as 'relate to learners' existing experience'. These codes were

279   assembled together as aspects of an initial theme named 'individual learners'. The next phase

280   involved reviewing and developing themes, and generating new dimensions that were evident

281   within the broad areas of interest. This process occurred through matching, constant

282   comparison and integration of GDT observation data. Here, excerpts from audio recordings

283   such as, 'everyone's got a different starting point' and 'it's about self, it's about the learner

284   looking after their own learning needs' were grouped with 'individual learners' to develop a

285   broader theme. The third layer of data, from structured observations of coach developers'

286   practice and coach interviews, were then deductively combined with the themes to further

287   refine them and provide depth. For instance, the following quote, 'there's such a variety of

288   coaches here even. We've all got different problems and people don't always appreciate that I

289   don't think; it's not, it can't be one-size-fits-all, and that's how it's put across to you

290   sometimes', was coded as 'one-size-fits-all' and added learners' experiences as a further,

291   contrasting, dimension to the individual learners theme. Analysis based on an integrative logic

292   allowed for interaction and linkages between the different components of the study (Mason,

293   2006), eventually creating three themes that ran through the various layers of this context of

294   coach development. These were; complexity and challenges in learning, active learning, and

295   individual learners.

296   **Results and Discussion**

297   Results are reported within three themes centring on how coach developers understood

298   learning as underpinning 'practice-theories'. Each theme will be explained in turn to

299   demonstrate links to coach developers' training and preparation, their delivery of formal coach

300   education, and coaches' perceptions of this delivery. Interview, observations and field-note

301   excerpts relating to each theme are provided to offer illustrations of the key points, and

302   identified by initials and participant number (Coach Developer = CD, Generic Developer

303   Training = GDT, Coach = C).

304   **Complexity and challenges in learning**

305   Coach developers' understanding of coaches' learning was characterised by a variety

306   of related practice theories, with a key theme the inherent complexity and challenges. For

307   example, CD3 acknowledged that coaches' learning is not a straightforward process:

308   That's the whole process of learning is that you challenge and change and you chop

309   based on the more information that you gather, and I accept that there will be peaks and

310   troughs and you're on this roller coaster and that you're not always going to go on an

311   upward plane.

312   Aligning with these assumptions, there was frequent reference to coaches learning from

313   trial and error and difficulties, conceptualised as 'the proverbial train crash' (CD2). Echoing

314   constructivist-informed approaches (Schunk, 2012), these ideas about the characteristics of

315   learning were also apparent in the generic coach developer training, which advocated that 'it's

316   about being persistent, because learning is messy, there will be blockages at times, when you're

317   like I didn't quite get that...And it's not an easy subject sometimes' (GDT).

318   At the same time however, the coach developers displayed contradictory notions of

319   learning as easily defined and systematic. Drawing upon underpinning approaches to

320   enhancing learning that can be classified as cognitive-behaviourist (Schunk, 2012), they talked

321   about 'constantly reinforcing the messages' (CD2), 'adding bits on' (CD1), and referred to

322   simplified personal models:

323   They want two things, they want curriculum and they want confirmation…cause that's

324   just learning principles. (CD3)

325   Although these underpinning models or approaches to learning were not explicit in the

326   coach developers' training, the GDT course was grounded in similarly straightforward

327   frameworks. Primarily, a Sport Governing Body-specific, four stage cyclical 'learning model'

328   that 'brings all our understanding of learning into one system' (GDT) formed the basis of GDT

329   design and delivery. The learning cycle was used to give structure to coach development

330   practice, postulating that any learning experience should be organised sequentially to 'connect',

331   'activate', 'demonstrate', then 'consolidate' learning. Rather than drawing upon specified

332   evidence *of* learning and 'what learning is' however, this constituted an idealistic model *for*

333   structuring and apparently enhancing learning (Cushion, Armour & Jones, 2006), with the

334   implication that learning happens unproblematically by following each stage of the cycle.

335   Rather than accounting for the acknowledged complexity of learning, coach developers were

336   simply encouraged to 'remember the four-stage learning cycle', as illustrated by field notes

337   describing one GDT activity:

338   Task: groups bid for a 'learning contract' to market learning across the sport. They

339   create a five-minute presentation of the marketing strategy to present to the 'chairman

340   of the board' (the GDT trainer). The trainer is deliberately 'obtrusive' when questioning

341   presenters. During the debrief, he says that the task should highlight the importance of

342   using the four-stage learning cycle and to refer back to that in difficult times.

343   When coach developers delivered formal coach education, there was very little explicit

344   reference to the cycle, although C1 remarked that 'I think the whole learning cycle and learning

345   process is really beginning to work.' Yet coach learners expressed a sense of confusion and

346   difficulty, in particular in reconciling the coach developers' messages with their previous

347   learning. One explained being 'caught between, do I do it like that, or do it like this. The old

348   and the new, yeah…I just found it confusing' (C6). This uncomfortable 'disjuncture', arising

349   from conflict between new material and an individual's existing biography, presents a critical

350   moment of potential for learning (Jarvis, 2006). However, some coaches felt unsupported by

351   developers in adapting their cognitive structures to re-establish accordance with the learning

352   experience; with one expressing that 'they just leave you to just go and get on with it' (C3).

353   Observations of coach developers' practices indicated that some did attempt to work with

354 complexity and challenges in learning, for example through an activity where coaches

355 identified the following:

356   Three areas where you've had something confirmed, something's been a challenge for

357   you, or whether you've collected something new; and then any questions that you have

358   at all, let's put them up there and let's deal with those issues. (CD3)

359 This activity was not applied across the four observed course cohorts, reflecting

360 individual developers' varied practice and understanding of learning according to their own

361 biographies. In the absence of nuanced training and preparation that enabled developers to

362 effectively deal with the complexity and challenges of coaches' learning, developers relied on

363 their own ideas based on life experiences and 'reading stuff about it' to 'support and confirm'

364 (CD2) their practices. Coach developers equated coaches' learning to their own previous

365 learning experiences as coaches, in their wider job roles, and even as players of the sport. In

366 the words of CD3, 'I can only go on my experiences as a coach and as a coach educator through

367 things that I've been exposed to'. This led to a variety of established individual 'common sense'

368 (CD1) practices drawing upon a central 'signature' sport coaching pedagogy of learning

369 through accumulated practical experience (Shulman, 2005). This reliance on individual

370 interpretations of experiences resulted in inconsistency between developers, and perceptions

371 of ambiguity from coach learners:

372   Some of it's become mixed messages because some of the staff delivering it were

373   saying: this is the way you do it, this is how it's done. Let the game – they teach you

374   to, you know, let them make mistakes. And then on the flip side you go down two weeks

375   later, and you've a different coach developer: no, no if there's a problem you just need

376   to go in and sort it out. And then that's caused a lot of confusion, its worrying. (C16)

377   As CD1 acknowledged, 'I don't work the same as [CD2], but the philosophy and the

378   ideas behind it are similar, but they are not the same.' Indeed, generic developer training

379   enabled and encouraged the reproduction of individually specific practice theories based on

380   previous learning experiences, while consolidating the persistence of the signature pedagogy

381   (Shulman, 2005), for example through the following activity:

382   Think about what helped you learn best and list specific things that helped you learn.

383   Then who helped you best, not just how, then think of strengths/qualities/what they did

384   that inspired you. The most important to you. Creating your own philosophy. (GDT)

385   **Active learning**

386   A second underpinning assumption placed great emphasis on coaches' learning being

387   active, participatory and experiential. Learning was portrayed as occurring through coaches

388   being involved in interactions, 'having a go', practicing and experimenting. As one coach

389   developer explained, 'people like to be involved, so the more we involve them and the less

390   time they spend sitting down watching loads and loads of PowerPoint's, the better' (CD1),

391   while another emphasised that 'learning means they have got to get off their backsides and do

392   stuff, get out and experience things' (CD2). These constructivist-themed 'active learning'

393   assumptions (e.g. Schunk, 2012) aligned in some ways with the 'player centred', game related

394   coaching approach advocated by the course itself, and coach developers' practice was intended

395   to model these same principles:

396   If you talk about creating the same environment [as for players' learning], we do try

397   and create an environment where they [coaches] are comfortable, we do try and create

398   an environment where we want them to join in; we do create all that sort of stuff. We

399   do give an opportunity to talk, chat, experiment, feedback their ideas and all that sort

400   of stuff. (CD1)

401   There were clear parallels between these learning assumptions and aspects of the

402 generic developer training, which was introduced as 'experiential learning, you will be

403 involved in different ways and at times you might think 'I like that', and jot it down, 'I could

404 use that there and steal it' and that's what this three days are here for' (GDT). The GDT learning

405 cycle placed emphasis on 'activating' learning through posing problems and inviting solutions,

406 and materials featured a hierarchical 'learning pyramid' (e.g. Lalley & Miller, 2007)

407 advocating the effectiveness of 'teaching it to someone else' or 'working it out for yourself'

408 rather than 'listening' or 'reading' as methods of learning in classrooms. This meant that the

409 training was delivered wholly through varied interactive individual and group tasks, a style

410 mirrored on the formal coaching course run by the coach developers. Coach learners spent over

411 half of their on-course time taking part in practical sessions, with the second-highest proportion

412 of time spent in group work or discussion tasks. The emphasis on 'active learning

413 opportunities' appeared to align well with coaching practitioners' preferences for involvement

414 and interaction with other coaches. They felt that these activities helped them understand 'what

415 worked' (C14) and made 'practices stick in the mind' (C5).

416   Despite the espoused constructivist-themed practice theory evident through interview

417 and GDT observational data, some challenges were encountered by coach developers in

418 implementing this, particularly in relation to the context of learning. Tensions were apparent

419 between traditional classroom-based course delivery, seen as 'giving information and tools'

420 (CD3) to coach learners, combined with practical 'showcase' and simulated coaching sessions,

421 and connections to coaches' subsequent practice outside of the course setting. The prominence

422 afforded to 'gold standard' coach developer demonstrations followed by practice sessions

423   meant that coaches were expected to learn by modelling the required coaching behaviours and

424   receiving reinforcing negative and positive feedback. Although many coaches felt that the 'best

425   thing was you get to do a session and they feed back on it' (C3), and developers verbally

426   emphasised their demonstrations as just one way of doing things, this form of delivery left

427   some individuals feeling the need to outwardly mimic the developers' style (Chesterfield,

428   Potrac & Jones, 2010), stating 'you have to do it their way, that's the difficult thing, your

429   freedom has to go out of the window' (C7). Conceptualised as reinforcement, feedback is a

430   central concern of behaviourist learning theories (Tusting & Barton, 2003), and in 'training'

431   learners to respond in a certain, correct, way. As one coach learner explained, developers'

432   practice therefore contrasted with their espoused theory:

433   The philosophy there, they're sort of saying is that children learn through doing stuff

434   and that seems to be what they've been saying throughout the course, but I just felt that,

435   from all of the courses I've been on, it's kind of like they don't really follow that

436   philosophy in the way they're teaching the adult coaches on the course, it's much more

437   of a kind of, this is how we want you to do it, here's a demonstration, you go and do it,

438   if you don't do it quite how they've done it, then it's like, no we don't want you to do

439   it like that, we want you to do it like this. (C1)

440   While aspiring to relate learning to coaches' previous experiences and current practice

441   contexts, this de-contextualised, behaviourist interpretation of constructivist-informed delivery

442   left coach developers merely able to 'raise awareness' (CD1) around certain coaching issues

443   or topics. Responsibility was shifted onto coach learners to try things out and learn instead,

444   without support, in their own authentic day-to-day practice settings. In the words of CD1,

445   Because it is not real, it is not the real world, it is showcasing and just putting on bits,

446   so I don't function particularly well in this environment.

447   I don't think you learn it on the course, I think you learn it when you go out and do it,

448   that is the thing. Then you learn to become the coach you want to become and you learn

449   the stuff that works well for you.

450 **Individual learners**

451   A final theme of coach developers' understanding of learning concerned individual

452 learners, their differences and needs. Each of the developers talked about having 'a variety of

453 people in the room' (CD1), 'all at individual stages' (CD3) and 'recognising the difference'

454 (CD2). This was briefly acknowledged in coach developers' training through discussions that

455 'every course is going to be different due to the needs of your students' and 'everyone's got a

456 different starting point, everyone will have a different journey when they leave the course'

457 (GDT). Individual learners' differing motivations or willingness to learn was a further aspect

458 of this theme. Coach developers perceived that some coaches are open to trying new ideas and

459 learning, while others attend formal education simply to gain the qualification. As CD1

460 commented, 'the ones that want to change will change'. These perspectives mirrored the GDT

461 statement that adult learning is 'about self, it's about learners looking after their own learning

462 needs'. Despite verbal recognition however, general frameworks that failed to address

463 individual learning were used to support coach developers' preparation. For example, training

464 materials and delivery explained what 'adults need in their learning' (GDT) based on Maslow's

465 hierarchy of needs, which has been criticised for a lack of empirical support, rigour and overall

466 relevance to learning (Coulter, Gilchrist, Mallett & Carey, 2016). Meanwhile, the idea of

467 individualised learning was explained only in relation to the first, 'connect' stage of the GDT

468 learning cycle, through surface-level activities that promoted getting to know names and each

469 other, presented as 'little connectors' or ways to relate content to individuals. Detail of how to

470 work with individuals' differing starting points and needs was therefore overlooked.

471   In practice, then, although coach developers tried 'to meet the [coaches'] needs, I try to

472   feed information that's relevant to them' (CD3), course delivery followed the same format for

473   each learner and developers encountered challenges with limited knowledge of individuals. As

474   one coach developer put it, 'half the problem is I have no idea about these people' (CD1),

475   resulting in reliance on a flawed 'idea of where they are at' (CD2) based on universal course

476   pre-requisites. In practice, this engendered somewhat 'one-size-fits-all' delivery that was noted

477   by coach learners: 'it's really generic…you need to spend more time coaching and they need

478   to know what your capabilities are to be able to help you' (C10). In an extension of this issue,

479   coach developers recognised, yet were unable to work with, the additional subtlety of

480   unevenness of coaches' learning across the course cohort. Received learning was different from

481   the intended learning 'set up' by coach developers, and also varied between individuals:

482   It is hard, people get different things from courses, they walk away with different stuff

483   and they walk away with bits and pieces that they have got and they fit into stuff that

484   they already do and people will always say 'you always pick up something', well yes

485   but do you use it. (CD1)

486   This issue was 'almost impossible' (CD1) to overcome within the confines of a short,

487   de-contextualised formal coach education course with no continuity or follow-up, resonating

488   with familiar criticisms of such learning situations (Cushion et al., 2010). Nevertheless, there

489   were opportunities to utilise the significant set of skills involved in tailoring individual

490   provision through supporting, nurturing and challenging learning (Makopoulou, 2018).

491   Developers noted that SGB staff working regionally were better able to build knowledge and

492   relationships with individuals, following and supporting learners' development over a longer

493   period of time, although this occurred on a serendipitous basis: 'two or three months down the

494   line hopefully I will bump into them and we'll have a debate about stuff they have tried, but

495   only if we have that support out and about for them' (CD2).

496   **General Discussion**

497   Taken together, the three themes of coach developers' deep structure (Shulman, 2005)

498   practice theories constitute an alignment to implicit 'learner centred' interpretations of

499   constructivist assumptions of learning (Schunk 2012) that is complex, active and

500   individualised. Coach developers' training, in contrast, was largely driven by simplified,

501   generic frameworks for learning that recognised but did not adequately tackle these essential

502   elements of the process (Cushion et al., 2006). The GDT suffered from the promotion of

503   popular learning myths such as learning pyramids, deemed 'the Loch Ness Monster of

504   educational theory' (De Bruyckere, Kirschner & Hulshof, 2015. p.33) due to their persistence

505   and false claims about learning. This worrying propagation of flawed pseudoscientific theories

506   jeopardises the quality of coach development and the wider credibility of coaching as a

507   legitimate profession (De Bruyckere et al., 2015). In addition, a divergence or 'epistemological

508   gap' (Light, 2008) became apparent between coach developers' espoused learning theories and

509   the observed theories-in-use of both their training and delivery of formal coach education.

510   Although coach developers were comfortable with traditional delivery of content such as

511   showcase sessions and passing on technical coaching knowledge, they experienced challenges

512   relating to coaches' day-to-day learning contexts as well as knowledge of individuals across

513   cohorts. This meant that they ultimately settled for raising coaches' awareness around certain

514   topics rather than impacting upon meaningful learning. Although coach developers were aware

515   of the characteristics of coaches' learning through their several years of varied experiences, a

516   broad and deep expertise in learning (e.g. Abraham et al., 2013) and practice was limited to

517   some extent by the simplified nature of frameworks employed in their generic developer

518   training. This situation left developers feeling underprepared and restricted in developing

519   others, using predominantly self-taught knowledge:

520   The only training we have is two days generic developer training, that is all we have,

521   then we are expected to go and do a job like this. And we just do our best, we just do

522   what we can do and we just try and make it a good experience for people and we give

523   them some information that they might be able to use, that is as far as we can go really.

524   (CD1)

525   The multiple layers of evidence in this study highlights drawbacks to coach developers'

526   reliance on their own personal practice theories, derived largely from several years of

527   experience of 'what works' for them as developers, coaches and even sport participants

528   (Cassidy & Kidman, 2010). With a lack of critical scrutiny of the quality and meaning of such

529   experiences, not addressed by their training, the learning process was assumed to be equivalent

530   across these different domains. Moreover, as coach developers progress through the 'system'

531   they learn to value certain types of knowledge over others and, in turn, perpetuate these

532   perspectives (Cushion, et al., 2003). Not unlike coaches (e.g. Cushion et al., 2003; Piggott,

533   2012), developers evolved an accepted 'common sense' approach with a strong cultural element

534   and these discourses helped produce and reproduce coaching, in turn giving current practices

535   legitimacy.

536   This approach limited the provision of adaptable, individualised pedagogical strategies

537   with heightened relevance to coach learners' realities and practical needs (Cushion et al., 2003;

538   Piggott, 2012). While positioned as active learners with different needs, learner subjectivity

539   was, in fact, suppressed. Instead, learners were recipients of coach developers' universalised

540   learning frameworks that often advocated a singular or 'one-size-fits-all' approach seeming to

541   contradict athlete centeredness, and deny, or minimize, individual difference (Cushion, 2013).

542   In this sense, coach developers engaged with naïve constructivism (Cushion, 2013) and, as a

543   result of their differing biographies, constrained knowledge of individuals, and understanding

544   of how to cater for individual differences, an inconsistency of practice and learner confusion

545   was evident.

546   Similar to findings on short CPD courses with physical education teacher educators,

547   there were variations in the ways different developers structured and supported learning,

548   accompanied by mismatches between overall intentions and practice (Makopoulou, 2018).

549   Across all three themes, it was apparent that developers' well-intentioned practice theories did

550   not straightforwardly materialise in practice, characterised by struggles to help learners

551   overcome potentially powerful 'disequilibrium', inadvertent limiting of experimentation with

552   new ideas, and failure to individualise provision. Although the context of a short formal course

553   limited what was feasible, activities that foster the debate, experimentation and rationalisation

554   of pedagogical strategies and draw upon and challenge individual coaches' existing practices

555   in non-threatening ways would better align with developers' constructivist interpretations of

556   professional learning (Makopoulou, 2018). It is important to consider how developers can be

557   made aware of potential intention-practice mismatches, and be better prepared to implement

558   such activities with the skills necessary to effectively maximise participants' learning from

559   them in short-course settings. Indeed, there was some indication of assumptions that if one is a

560   'good' coach, this expertise can and will automatically carry over to working with coach

561   learners, without extensive additional preparation (Zeichner, 2005). Although the International

562   Council for Coaching Excellence's Coach Developer Framework (ICCE, 2017) emphasises

563   *training* in defining coach developers, this evidence suggests *quality* of training and wider

564   preparation is crucial in maximising developers' effectiveness in practice.

565   Considering the findings alongside research with teacher educators, quality

566   professional training and preparation should strike a balance between honouring the autonomy

567   of coach developers to utilise and critically reflect on their various experiences, and utilising

568   evidence-informed frameworks based on strong empirical data (Ben-Peretz et al., 2010; De

569   Bruyckere et al., 2015). Integrating the two can lead to improved practice alongside conceptual

570   insights, at the same time emphasising interpersonal, social and contextual aspects of learning

571   (Ben-Peretz et al., 2010). Scholars in sport coaching have for a number of years advocated that

572   to better inform practice, there is a need for more realistic, empirically grounded

573   representations of coaching processes (e.g. Cushion et al., 2006). In coach learning specifically,

574   recent research has used practice-linked data to build a more sophisticated, evidence-based

575   framework of the learning process, which elaborates the role of individual biography and

576   context in 'filtering' concepts to construct knowledge and practice (Stodter & Cushion, 2017).

577   While coach developers noted some aspects of coaches' learning relevant to this process, such

578   as picking up 'bits and pieces' from a course, the two key areas of challenge experienced by

579   coach developers also relate directly to the central 'double-loop' filter process. Such evidence-

580   based frameworks could be used to enhance the impact of coach developers in overcoming

581   these and other challenges, by making connections with practice and integration into coach

582   developer training (Lyle, 2018; Cushion et al., 2006). Alongside this, if personal experiences

583   and thus implicit learning theories or folk pedagogies remain unseen and unchallenged, it is

584   likely that coach developers may never realise their influence and the ways in which powerful

585   assumptions about what is best for learners guides what they do (Armour, 2010). Although

586   educators might prefer a more instrumental approach through the provision of practical tools

587   to implement with learners, the current evidence supports suggestions that a deeper

588   understanding of personal implicit theories, and how to apply theoretical frameworks, based

589   on critiqued experiences is most effective (Abraham et al., 2013). Coach developers, akin to

590   teacher educators, ultimately develop within a community of others in an 'extended journey'

591   along a career path (Cushion et al., 2018; Brody & Hadar, 2011). There also may be merit then

592   to the continual recruitment of more diverse educators to create a longer-term ability to focus

593   on pedagogical strategies while challenging culturally ingrained beliefs and assumptions

594   (Jacobs, Assaf & Lee, 2011). Sporting Governing Bodies may also wish to plan for the staffing

595   of formal coach education courses to balance different coach developer biographies and

596   practice theories, perhaps even with consideration of a potential 'best fit' for learners. These

597   ideas will remain speculative however until further research elucidates the specific needs and

598   learning processes of coach developers themselves, in order to plan more useful professional

599   preparation and ultimately improve impacts on coach learners. Indeed, a pertinent question that

600   remains to be evidenced is whether 'better' coach developer preparation would have any

601   greater impact on coaches and coaching (Lyle, 2018).

602   **Limitations**

603   The data presented here is limited by a sample size of three coach developers, which

604   despite the added layers of data from developer training, coach education and coach learners,

605   provides only a 'snapshot' of practice around one particular formal coach education course.

606   Therefore caution is encouraged in generalising findings to contexts dissimilar to the one

607   described here. The preceding discussion has highlighted the commonality of aspects of this

608   case to other work in coach and teacher development, suggesting that practitioners in

609   comparable learning environments may recognise similarities and differences to their own

610   experiences, ideally stimulating debate around key issues in coach development (Smith, 2018).

611   In collecting and analysing the data, the researchers brought a set of assumptions linked to their

612   backgrounds in the sport and previous experiences of having been educated by the SGB. Being

613   a visible 'outsider' as a young female researcher in a context dominated by older males, within

614   a culture of suspicion and anti-intellectualism, there may have been a lack of willingness from

615   participants to share their experiences. However, following rapport building across four course

616   cohorts, the data suggests participants were honest and open despite the added constraints of

617   time and location in conducting interviews during opportune breaks in course delivery. This

618   situation did inhibit in-depth investigation of coach developers' wider biographies.

619   Fundamentally, in the absence of operationalised and easily measurable learning outcomes, it

620   is extremely challenging to identify the impact of coach developer training and preparation,

621   and likewise formal coach education courses. Indeed, investigating intended and observed

622   outcomes may facilitate necessary pragmatism as to what can realistically be expected of short,

623   initial training episodes (Lyle, 2018). Tracking coach developers longitudinally through such

624   training as one likely small part of their wider development would provide more robust

625   evidence upon which to draw more functional conclusions.

626   **Conclusion**

627   This study aimed to provide insights into the underlying learning practice theories of

628   coach developers, drawing connections between these and their training, observed practices,

629   and coach learners' reactions to this practice. Themes relating to the complexity and challenges

630   of learning, active learning, and individual learners made up coach developers' understanding

631   of coaches' learning. Aspects of these practice theory themes were apparent within a generic

632   developer training course, however in the absence of detailed, evidence-based guiding

633   theoretical frameworks, developers relied on their experiences and encountered problems in

634   generating impactful practice on a formal coach education course. Coach learners were subject

635   to the resulting epistemological gap between developers' espoused theories and observed

636   theories-in-use, experiencing inconsistencies in pedagogical practice and confusion. The

637   results add nuance to existing recent research suggesting that coach developers' practice and

638   preparation is multifaceted, challenging, and worthy of further investigation on a larger and

639   more in-depth basis (e.g. Cushion et al., 2018). Articulating and interpreting deep structure

640   learning assumptions (Shulman, 2005), which in this study appeared to be derived from the

641   experiences of individuals over various levels of coach developer to coach and sport

642   participant, is crucial in order to investigate how these might be positively influenced (Lyle,

643   2018). Challenging 'common sense' implicit learning theories through critical reflection on

644   experiences and assumptions and raising awareness of observed practice, combined with the

645   integration of evidence-based theories *of* learning, may be a fruitful approach in the preparation

646   of coach developers. However, research that takes a multi-layered, longitudinal *in situ* view is

647   necessary to more appropriately understand how best to go about supporting and enhancing the

648   impact of coach developers on coaches and coaching.

649   References

650   Abraham, A., Collins, D., & Muir, B. (2009). Developing expert coaches requires expert coach

651   development: Replacing serendipity with orchestration. In A. Lorenzo, S. J. Ibanez &

652   E. Ortega (Eds.), *Aportaciones Teoricas Y Practicas Para El Baloncesto Del Futuro*.

653   Sevilla: Wanceulen Editorial Deportiva.

654   Abraham, A., Morgan, G., North, J., Muir, B., Duffy, P., Allison, W., Cale, A., & Hodgson, R.

655   (2013). Task analysis of coach developers: applications to the FA Youth coach educator

656   role. In H. Chaudet, L. Pellegrin, & N. Bonnardel (Eds.), *Proceedings of the 11th*

657   *international conference on naturalistic decision making (NDN 2013), Marseille,*

658   *France, 21-24 May 2013* (pp.21-24). Paris: Arpege Science Publishing.

659   Agyris, C., & Schön, D.A. (1974). *Organisational learning: A theory in action perspective*.

660   Reading, MA: Addison-Wesley.

661   Armour, K. (2010). The learning coach…the learning approach. In J. Lyle & C.J. Cushion

662   (Eds.), *Sports Coaching: Professionalisation and Practice* (pp. 153-164). China:

663   Elsevier.

664   Ben-Peretz, M., Kleeman, S., Reichenberg, R., & Shimoni, S. (2010). Educators of educators:

665   their goals, perceptions and practices. *Professional Development in Education, 36*(1-2),

666   111-129.

667   Blackett, D., Evans, A., & Piggott, D. (2015). Why the best way of learning to coach the game

668   is playing the game; conceptualizing 'fast-tracked' high-performance coaching

669   pathways. *Sport, Education and Society,* 22(6), 744-758.

670   Brody, D., & Hadar, L., (2011). "I speak prose and I now know it." Personal development

671   trajectories among teacher educators in a professional development community.

672   *Teaching and Teacher Education, 27*, 1223-1234.

673   Bruner, J., (1999). Folk pedagogies. In B. Leach & B. Moon (Eds.), *Learners and Pedagogy*

674   (pp. 4-20). London: The Open University.

675   Cassidy, T., & Kidman, L. (2010). Initiating a national coaching curriculum: a paradigmatic

676   shift? *Physical Education and Sport Pedagogy, 15*(3), 307-322.

677   Cassidy, T., Potrac, P., & McKenzie, A. (2006). Evaluating and reflecting on a coach education

678   initiative: The CoDe of rugby. *The Sport Psychologist, 20*(2), 145-161.

679   Chesterfield, G., Potrac, P., & Jones, R. (2010). 'Studentship' and 'impression management'

680   in an advanced soccer coach education award. *Sport, Education and Society, 15(3),*

681   299-314.

682 Cochran-Smith, M. (2003). Learning and unlearning: the education of teacher educators.

683 *Teaching and Teacher Education, 19*(1), 5-28.

684 Coulter, T., Gilchrist, M., Mallett, C., & Carey, A. (2016). Abraham Maslow: hierarchy of

685 coach and athlete needs. In L. Nelson, R. Groom and P. Potrac (Eds.), *Learning in*

686 *sports coaching: theory and application* (pp.63-74). Abingdon: Routledge

687 Cushion, C.J. (2013). Applying game centred approaches in coaching: a critical analysis of the

688 'dilemmas of practice' impacting change. *Sports Coaching Review, 2*(1), 61-76.

689 Cushion, C.J., & Jones, R.L. (2014). A Bourdieusian analysis of cultural reproduction:

690 socialisation and the 'hidden curriculum' in professional football. *Sport, Education and*

691 *Society, 19*(3), 276-298.

692 Cushion, C.J., Armour, K., & Jones, R.L. (2003). Coach education and continuing professional

693 development: Experience and learning to coach. *Quest,* 55(3), 215-230.

694 Cushion, C.J., Armour, K., & Jones, R.L. (2006). Locating the coaching process in practice:

695 models 'for' and 'of' coaching. *Physical Education and Sport Pedagogy, 11*(1), 83-99.

696 Cushion, C.J., Griffiths, M.G., & Armour, K. (2018). Professional coach educators in-situ: a

697 social analysis of practice. *Sport, Education and Society,*

698 DOI:10.1080/13573322.2017.1411795

699 Cushion, C.J., Nelson, L., Armour, K., Lyle, J., Jones, R., Sandford, R. and O'Callaghan, C.,

700 2010. Coach learning and development: A review of literature. *Leeds: Sports Coach*

701 *UK*.

702   De Bruyckere, P., Kirschner, P.A., & Hulshof, C.D. (2015). *Urban myths about learning and*

703   *education*. Amsterdam, Academic Press.

704   Gilbert, W., & Trudel, P. (1999). An evaluation strategy for coach education programs. *Journal*

705   *of Sport Behavior, 22*(2), 234-250.

706   International Council for Coaching Excellence, Association of Summer Olympic International

707   Federations, & Leeds Metropolitan University, (2014). *International coach developer*

708   *framework v1.1.* Leeds, UK: International Council for Coaching Excellence. Online

709   version   accessed   23   July   2018   at

710   [https://www.icce.ws/_assets/files/documents/PC_ICDF_Booklet_Amended%20Sept

711   %2014.pdf]

712   Jacobs, J., Assaf, L., & Lee, K.S. (2011). Professional development for teacher educators:

713   conflicts between critical reflection and instructional-based strategies. *Professional*

714   *Development in Education, 37*(4), 499-512.

715   Jones, R., Morgan, K., & Harris, K. (2012). Developing coaching pedagogy: seeking a better

716   integration of theory and practice. *Sport, Education and Society, 17*(3), 313-329.

717   Lalley, J. and Miller, R. (2007) The Learning Pyramid: Does It Point Teachers in the Right

718   Direction? *Education*, 128(1), 64-79

719   Light, R., (2008). Complex learning theory – its epistemology and its assumptions about

720   learning: implications for physical education. *Journal of Teaching in Physical*

721   *Education, 27,* 21-37.

722   Lyle, J. (2007). A review of the research evidence for the impact of coach education.

723   *International Journal of Coaching Science, 1*(1), 17-34.

724   Lyle, J. (2018). The transferability of sport coaching research: A critical commentary. *Quest,*

725   DOI: 10.1080/00336297.2018.1453846.

726   Makoploulou, K. (2018). An investigation into the complex process of facilitating effective

727   professional learning: CPD tutors' practices under the microscope. *Physical Education*

728   *and Sport Pedagogy, 23*(3), 250-266.

729   Mason, J., (2006). *Six strategies for mixing methods and linking data in social science*

730   *research*. ESRC National Centre for Research Methods, NCRM Working Paper Series

731   4/06.   Online   accessed   26th   July   2017   at

732   [http://eprints.ncrm.ac.uk/482/1/0406_six%2520strategies%2520for%2520mixing%2

733   520methods.pdf].

734   McCullick, B.A., Belcher, D., & Schempp, P.G. (2005). What works in coaching and sport

735   instructor certification programs? The participants' view. *Physical Education and Sport*

736   *Pedagogy, 10*(2), 121-137.

737   McQuade, S. and Nash, C., (2015). The role of the coach developer in supporting and guiding

738   coach learning. *International Sport Coaching Journal*, *2*(3), pp.339-346.

739   Morgan, K., Jones, R.L., Gilbourne, D., & Llewellyn, D. (2013). Innovative approaches in

740   coach education pedagogy. In P. Potrac, W. Gilbert & J. Denison (Eds.) *Routledge*

741   *Handbook of Sports Coaching* (pp. 486-496), London: Routledge.

742   Nelson, L., Cushion, C.J., Potrac, P., & Groom, R. (2014). Carl Rogers, learning and

743   educational practice: critical considerations and applications in sports coaching. *Sport,*

744   *Education and Society, 19*(5), 513-531.

745 North, J., (2010). Using 'coach developers' to facilitate coach learning and development:

746 Qualitative evidence from the UK. *International Journal of Sports Science &*

747 *Coaching*, *5*(2), pp.239-256.

748 Patton, (1990). *Qualitative evaluation and research methods (2ⁿᵈ edition)*. Newbury Park, CA:

749 Sage.

750 Piggott, D. (2012). Coaches' experiences of formal coach education: a critical sociological

751 investigation. *Sport, Education and Society, 17*(4), 535-554.

752 Phelan, S., & Griffiths, M. (2018). Reconceptualising professional learning through knowing-

753 in-practice: a case study of a coaches high performance centre. *Sports Coaching*

754 *Review,* DOI: 10.1080/21640629.2018.1424405.

755 Savin-Baden, M. (2003). *Facilitating Problem-Based Learning*. Maidenhead: SRHE and Open

756 University Press.

757 Schunk, D.H. (2012). *Learning theories: an educational perspective (6ᵗʰ Edition)*. Boston, MA:

758 Pearson.

759 Shulman, L.S. (2005). Signature pedagogies in the professions. *Daedalus, 134*(3), 52-59.

760 Smith, B. (2018). Generalisability in qualitative research: misunderstandings, opportunities

761 and recommendations for the sport and exercise sciences. *Qualitative Research in*

762 *Sport, Exercise and Health, 10*(1), 137-149.

763 Stodter, A., & Cushion, C.J. (2014). Coaches' learning and education: a case study of cultures

764 in conflict. *Sports coaching review, 3*(1), 63-79.

765   Stodter, A., & Cushion, C.J. (2017). What works in coach learning, how, and for whom? A

766   grounded process of soccer coaches' professional learning. *Qualitative Research in*

767   *Sport, Exercise and Health, 9*(3), 321-338.

768   Stoszkowski, J., & Collins, D. (2017). Nirvana or never-never land: does heutagogy have a

769   place in coach development? *International Sport Coaching Journal, 4*, 353-358.

770   Swennen, A., & Bates, T., (2010). The professional development of teacher educators.

771   *Professional Development in Education, 36*(1-2), 1-7.

772   Trudel, P., Culver, D. and Werthner, P., (2013). Looking at coach development from the coach-

773   learner's perspective: considerations for coach development administrators. In P.

774   Potrac, W. Gilbert & J. Denison (Eds.) *Routledge Handbook of Sports Coaching* (pp.

775   375-387), London: Routledge.

776   Townsend, R.C., Cushion, C.J., & Smith, B. (2017). A social relational analysis of an

777   impairment-specific mode of disability coach education. *Qualitative Research in Sport,*

778   *Exercise and Health, 10*(3), 346-361.

779   Tusting, K., & Barton, D. (2003). *Models of Adult Learning: A Literature Review.* London:

780   NRDC.

781   Vanassche, E., & Kelchtermans, G. (2014). Teacher educators' professionalism in practice:

782   positioning theory and personal interpretative framework. *Teaching and Teacher*

783   *Education, 44,* 17-127.

784   Zeichner, K.M. (2005). Becoming a teacher educator: a personal perspective. *Teaching and*

785   *Teacher Education, 21*(2), 117-124.