

Reconceptualising professional learning through knowing-in-practice:

Phelan, Simon; Griffiths, Mark

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1 **Reconceptualising Professional Learning through Knowing-in-Practice: A**

2 **Case study of a coaches high performance centre**

3 **Simon Phelan* and Mark Griffiths**

4 Department of Sport, Health Sciences and Social Work, Oxford

5 Brookes, UK, and School of Sport Exercise and Rehabilitation

6 Sciences, University of Birmingham, UK

7 sphelan@brookes.ac.uk

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9 **Reconceptualising Professional Learning through Knowing-in-Practice: A** 10 **Case study of a coaches high performance centre**

11 In response to existing coach development literature that is negative regarding the
12 formal education experiences coaches' encounter, there has been a conceptual and
13 practical shift towards recognising the coaching workplace as a legitimate site for the
14 development of professional knowledge. Building upon contemporary studies of
15 learning '*in situ*', this paper draws upon the theory of practice architectures to provide
16 an innovative language by which to capture the complexity of learning within this
17 context. In doing so, the cultural-discursive, material-economic, and socio-political
18 arrangements of practice are shown to either enable or constrain particular learning
19 activities via the interplay of semantic, social, and physical conditions. Drawing on
20 data from a 10-month ethnographic study of a high-performance training centre
21 (following 6 coaches and 3 support staff), findings highlighted the significant role the
22 macro-structural features of sport played in determining the learning valued within this
23 sports organisation. Through engagement with the inherent 'learning culture', coaches
24 were seen to negotiate their perceptions and engagement with learning affordances. The
25 implications of this study are to draw attention towards the challenges a transient
26 coaching workforce within a dynamic professional environment, present to those (i.e.
27 future education designers, researchers) attempting to foster effective workplace
28 learning environments.

29 **Keywords:** sports coaching; practice architecture; CPD; professional development;
30 workplace learning; knowing-in-practice

31 **Introduction**

32 The last two decades has seen an increasing focus on the social conditions and characteristics
33 of professional development (PD) that facilitate change in practitioner's practices (Stewart,
34 2014). Moving beyond passive and intermittent notions of learning, evidence suggests that
35 quality PD involves active learning (Desimone, 2009), consistent learning opportunities
36 (Little, 2012), linked to practice (Kunter, Kleickmann, Klusmann, & Richter, 2013) and
37 supported through learning communities (Cherkowski, 2012). This in turn has led to a greater
38 focus on the workplace as a legitimate site for professional learning (Cairns & Malloch,
39 2011), and specifically, the processes of knowledge construction and change as they occur in
40 the day-to-day activities of organisational work (Gherardi, 2009; Fenwick, 2008).
41 Contemporary approaches to PD therefore recognise learning-as-practice, bound in an

42 embodied and contextual process (Fenwick, Nerland and Jensen, 2012). However, what is not
43 known is the manner in which these processes are interrelated, or indeed the mechanisms that
44 underpin these interactions (Rynne, Mallett, & Tinning, 2010). It therefore remains unclear
45 how such collaborative and social learning processes can best occur (Billett and Choy, 2013),
46 and by what means such understanding can be used to inform future educational pathways.
47 This has led to a situation where there is little secure evidence about ‘what works’ in CPD to
48 change learners’ behaviours and improve practice.

49 Sport coaching is a case in point, where research has tended to focus on the agency between
50 the individual and specific CPD activities (Armour, 2014; Nelson et al., 2013), with less
51 consideration of the impact of organisational structures (e.g. funding, organisation cultures,
52 rebranding, leadership, government policy) on professional development (Jones, Edwards, &
53 Viotto Filho, 2016; Griffiths, Armour, & Cushion, 2016). The exception has been the recent
54 work of Rynne et al., (2010) and Mallett et al (2016) who have examined high performance
55 centres in identifying those features that constitute effective learning in situ. Within this
56 research, it has been identified that coach learning is best understood in terms that recognise
57 the interests and subjectivities of individuals, within a context shaped by the physical, social
58 and educational provisions of an organization. However, in the coaching literature questions
59 remain about in situ learning, including how coaches’ dispositions towards learning
60 engagement develop over time (Griffiths & Armour. 2013), how cultural context influences
61 learning (Barker-Rucht Barker, Rynne, & Lee, 2016), or how learning affordances might be
62 shaped over the lifecycle of the organisation?

63 In this paper, we argue that there is a need for a greater understanding of the wider structural
64 factors that mediate sustained learning impact, and it is here that the paper contributes to
65 existing knowledge on coaching CPD. Drawing on the concept of Practice Architecture
66 (Kemmis, Wilkinson, Edwards-Groves, Hardy, Grootenboer, & Bristol, 2014) as an
67 exploratory framework, this research reveals how the situated actions, dialogues, structures
68 and relationships in a high performance training centre collectively constituted a ‘Practice
69 Architecture’ through which workplace inquiry/learning was mediated. The value in utilising
70 PA is that it addresses criticisms of existing situated learning theories (i.e. Communities of
71 Practice, Activity Theory, Relational Interdependence), by not simply assuming the social
72 world writes itself onto individual persons (Kemmis & Grootenboer, 2008) or that people are
73 active agents writing themselves into practices (Goodyear et al., 2016). It is hoped that the
74 insights suggested here will inform the understandings of coaches’ professional development

75 within the workplace, and offer learning providers a language by which to capture the
76 complexity of workplace learning environments.

77 **Theoretical Background**

78 The theory of ‘practice architectures’ (Kemmis & Grootenboer, 2008; Kemmis and
79 Heikkinen, 2012, Kemmis et al., 2014) suggests that human behaviour, or practice, unfolds
80 amid the arrangements of time and space within a given ‘*situated*’ context (Hemmings
81 Kemmis, & Reupert., 2013). Practice is not merely located within a particular setting, but
82 continually shaped by the historical and cultural conditions of that locality at any given
83 moment (Kemmis, 2012). Specifically, the theory suggests that practice is the result of three
84 interdependent arrangements: cultural-discursive, material-economic, and social-political.
85 Examining the interplay of these features has the propensity to highlight how existing
86 practices are both enabled and constrained, and presents the opportunity to generate new
87 ‘knowing-in practice’ questions, such as what kinds of social and material arrangements
88 facilitate knowing, learning, workplace and innovation (Brown & Duguid, 1991).

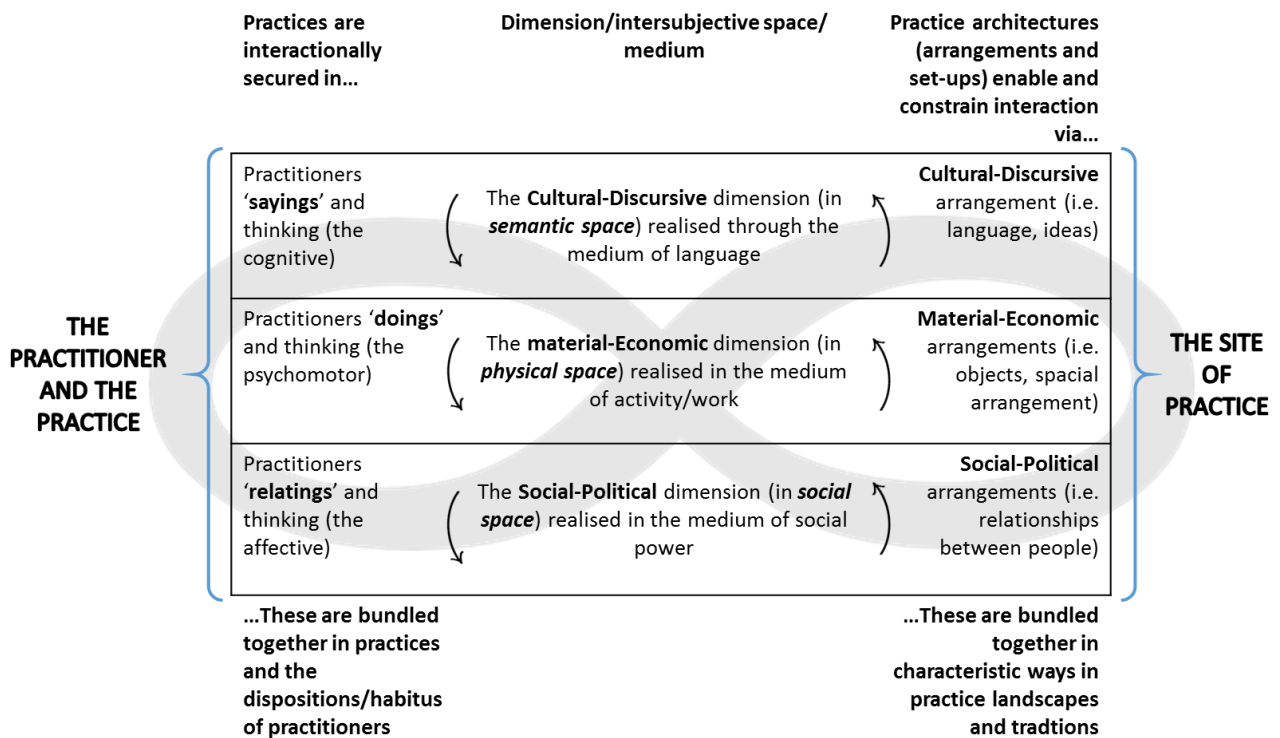
89 The cultural–discursive arrangements are the resources that constitute the language and
90 discourse of practice. These semantic arrangements are seen as those which capture the
91 ‘sayings’ characteristic of a given practice, through the language that is used in ‘describing,
92 interpreting and justifying’ behaviour (Kemmis et al., 2014, p.32). For example, Rynne and
93 Mallett (2012) highlighted within Australian performance coaching that some individuals
94 maintained isolated learning practices from a fear of being seen to not have all the answers
95 (i.e. perceived as incompetent). As such, the culturally informed discourse of the coaching
96 workplace has the capacity to restrict collaborative learning practices.

97 The material–economic arrangements of the physical space relate to those resources that
98 condition the activity and work of practice. These arrangements are those that enable and
99 constrain the ‘doings’ of practice, as they define ‘what can be done amid the physical set-ups’
100 of practice locations (Kemmis et al., 2014, p.32). For example, within Rynne et al., (2010)
101 study of high performance coaches it was noted that coaches on different funding programs
102 had access to varying levels of resources (e.g. programs designated as ‘developmental’ had
103 limited access to sports science and strength and conditioning support staff). As such, the
104 nature of the workplace might predetermine the affordance of collaborative learning
105 interactions, thus promoting or inhibiting opportunities for engaging in generative learning
106 experiences.

107 The social–political arrangements, located within the social space, mediate the social
108 relationships between individuals through the medium of power and solidarity. These
109 arrangements guide the interpretation of roles, rules and organisational function through
110 shared understandings and practical agreements (Kemmis et al., 2014). For example, Culver
111 et al., (2009) demonstrated that within a Canadian youth ice hockey league, fostering
112 cooperative learning amongst coaches was fundamentally challenging given the innately
113 competitive nature of the sport and league. The implications for learning designers is that the
114 construction of coaches’ roles, and the rules within a given context, might impede upon
115 attempts to employ new coaching/learning strategies.

116 The implications of PA for coach education designers is that the interplay between the
117 semantic, physical, and social dimensions of the workplace enable and constrain practice
118 through practitioners participation, where participation is inevitably the outcome of personal
119 dispositions (Hodkinson et al., 2008) Participation therefore acts to shape and reshape the
120 particular ‘site of practice’, creating practice traditions that are intersubjectively and
121 interactionally secured with different participants over time (Kemmis et al., 2014). Thus
122 within any site, there exists a collective memory of the practice that pre-figures and pre-
123 defines the practices created and maintained within and by organisations, their contexts, and
124 the individuals that populate them. The following figure (1) clarifies the nature of this
125 interdependence, demonstrating how the dispositions of ‘individuals’ (left), interact with the
126 arrangements of the ‘sites’ (right), to create the various dimensions of intersubjective space
127 (middle).

128



129

130 Figure 1: Illustration of practice architectures framework (Adapted from Hemmings et al., 2013)

131 The value of practice architectures is to emphasise that practice involve orchestration, of and
 132 between, people and objects, within settings that are spatially and temporally sensitive
 133 (Kemmis et al., 2012). In recognising this, it can be understood that practice architectures
 134 transform over time, creating (practice) traditions that encapsulate the histories of practice
 135 (Kemmis et al., 2014), that through comprehension may inform educational judgements about
 136 what pedagogical change is possible in a given scenario.

137 Coach learning when viewed *in situ* takes place amongst, and within, the particular facets of
 138 spatially and temporally sensitise practice arrangements. As such, in attempting to unravel the
 139 learning milieu of the coaching workplace, the theory of practice architectures provides a lens
 140 by which to examine how the affordance of, and engagement with learning opportunities,
 141 impacts upon the construction and emergence of new learning practices over time. In this
 142 study PA was used to make sense of data that was generated inductively through constant
 143 comparison and engagement with study data. In this way, practice architectures provides a
 144 framework for thinking differently about the education of professional sports coaches,
 145 moving beyond pedagogically narrow perspectives that favours either the individual or the
 146 social (e.g. Communities of Practice, Activity Systems), to consider the cultural, social and
 147 material aspects of learning behaviour, and in respect to the historical and contextual

148 locations of practice. The research question that guided this paper was: ‘In what way does the
149 social, cultural and material arrangement of the workplace facilitate or inhibit learning *in*
150 *situ*’?

151 **Method**

152 *Design of the study*

153 This paper draws upon data from a larger research project that examined the role of
154 organisational culture in shaping elite coaches professional learning. Six professional coaches
155 and three administrative staff were purposively sampled from a high-performance training
156 centre based within the UK, the OHPI (Olympic High-Performance Centre). This approach
157 was taken given the accessibility of the institution to the researchers, and the richness of the
158 case. Utilising an ethnographic approach, data were generated through participant
159 observations and constructivist interviewing (Patton, 1990) conducted concurrently
160 throughout a ten-month period. The goal of this ethnographic approach was to embed the first
161 researcher within the routine and everyday activities of this particular workplace, so that an
162 understanding of participant’s activities, and the meaning tied to such activities, might be
163 attained (Hammersley & Atkinson, 1994). Prolonged emersion within this context (4 out of
164 every 5 working days) assisted in delving beyond surface appearances to make apparent the
165 complex patterning of social practice (Geertz, 1973).

166 *Participants*

167 The participants within this study were all employed at a multi-sport (n=5) high performance
168 centre within the UK (6 coaching staff and 3 administrative staff). Of the 9 participants, 7
169 were male and 2 were female (1 coach and the Centre Manager). The age range for all
170 participants was between 37 to 62 years of age (mean age for men: 48, mean age for women:
171 40). All coaches had some form of tertiary education (e.g. undergraduate qualifications) and
172 held at least a level 3 coaching qualification within their respective disciplines. All coaching
173 staff (n=6) worked with between 5 to 10 international level athletes, and subject to the
174 funding status of those athletes, had access to varying levels of specialist support personnel
175 (i.e. strength and conditioning coaches, physiotherapists and nutritionists). Further to this, all
176 coaches were high achieving athletes themselves prior to their engagement with coaching
177 (five at international level and 1 at national level). Of the 6 coaches, the average experience
178 within the field was 14 years, with a range of 5-26 years.

179 The involvement of a range of administrative staff was also sought for this study (*the Centre*
180 *Manager, the Performance Director and the Head Coach*). The administrative participants
181 were all involved in the coaches' everyday practice, guiding the structure of the coaching
182 workplace and defining the measures of success within this context. For these reasons, it was
183 felt that the administrative staff represented significant actors in learning experienced by
184 coaches within this specific workplace context, whose perspectives could not be overlooked.
185 In line with the University's approved ethics procedure, all participants gave informed
186 consent to participate in the interviews in line with the institution's research ethics policy.

187 ***Data Collection***

188 Within this study data was collected via interviews and participant observations conducted
189 throughout the entirety of the 10-month investigation period. This approach provided detailed
190 insight into the evolving dynamic between coaches and the OHPI as a workplace. A total of
191 eighteen interviews were conducted (two per participant), 9 within the first month of the
192 study (to attain an initial, broad understanding) and 9 during the final month of the study (exit
193 interviews to supplement/support observations), with a duration range between 26-58
194 minutes. Interviews were conducted at a private location off site, and guided by a semi-
195 structured protocol derived from the observation data. The question format utilised was
196 'open-ended', characterising an interview process that was 'active' in capturing coaches
197 meaning making of their professional development/learning (Hoffmann, 2007). In achieving
198 a greater emersion within the lived realities of coaches learning, 'probes' supplemented the
199 initial questions in order to capture a greater sense of the whole (Bryman, 2015). Thus, in
200 focusing on the 'how', 'what' and 'why' of participants' experiences, a socially and textually
201 negotiated narrative of workplace learning within this context was created. For example,
202 questions such as *'How does upskilling or professional learning fit into the ethos of the*
203 *organisation?'* were followed up with probes including, *'How were these aims communicated*
204 *to you?'* and; *'Who's responsibility is a coach's professional development?'* Participant
205 observations were conducted over four days of a five-day working week, and generally lasted
206 between 3 to 7 hours depending on a coaches' schedule. Over the course of the study, 44
207 weeks of participant observation were conducted (176 days of observation). Throughout this
208 period, the researcher acted as part of the coaching staff, assisting in the delivery and running
209 of coaching sessions and attended organisational meetings (i.e. sport science support
210 briefings). Data was recorded at the time of completion using field-notes (notebooks), and

211 expanded upon in the evenings to add greater context to routine descriptions of events (this
212 included early interpretations and discussion of the social processes observed).

213 *Data Analysis*

214 Data analysis processes drew from a constructivist approach to the grounded theory
215 methodology (CGTM). The utility of this method was that it provided a ‘flexible’ and
216 ‘adaptive’ approach to generating and making use of data (Bryant & Charmaz, 2007),
217 structuring the research process in a manner that “*looks beyond the obvious and [provides] a*
218 *path to reach imaginative interpretations*” (Charmaz, 2006, p. 181). Importantly, this
219 constructivist revision of traditional GTM recognises the researcher as an active participant in
220 the research process. As such, within this framework meaning is viewed as a co-constructed
221 interpretation of events, mediated by the interrelationship of researcher and participant (Mills
222 et al., 2006). Hence CGTM acknowledges the researcher’s active involvement in
223 understanding phenomena, and offers an interpretive portrayal of the social world that cannot
224 be achieved via the purportedly objective and unbiased stance of traditional grounded theory
225 (Charmaz, 2008). It should also be noted that in this study the primary researcher was a
226 former high level performer within the sport concerned. As such, the researcher held a degree
227 of social status that afforded the identity of ‘affiliated member’ (Corbin Dwyer and Buckle,
228 2009). Whilst arguments can be made that outsiders can more readily identify societies
229 unconscious grammars (i.e. insiders to overlook familiar or routine behaviours) (O’Rielly,
230 2012), we would argue that the shared identity in this instance afforded the researcher a
231 cultural perspective not readily accessible to other researchers (Douglas & Carless, 2012).

232 The interview transcripts and field-notes were reviewed and the social processes implicit
233 within the texts labelled or coded. The coding process was iterative in nature as the
234 researchers engaged in a constant comparison of data and emergent themes across three
235 distinct levels of coding (open, focused and theoretical) (Charmaz, 2006). Firstly, a close
236 reading and interrogation of the data line-by-line was conducted, where gerunds (nouns
237 ending in ‘ing’) were used to capture meaning/action within the data via open codes. Where
238 possible, in vivo codes’ were chosen so that the emergent concepts were those that best “*fit*
239 *the data*” (Strauss 1987, p.28), and not guided by the preconceptions of the researchers.
240 Examples of codes included; attaining ownership of space, being comfortable in personalised
241 sites, controlling locations and access, and being free from observation/judgement (Table 1).
242 Building upon the initial coding phase a more focused approach was adopted, reassembling

243 the initially deconstructed data into more substantive characterisations of events. This was
244 achieved by considering frequency of codes and those that made the most analytical sense in
245 capturing the meaning within the data. The final coding phase then sought to consider
246 possible relationships between these focused codes in order to weave the fractured story back
247 together. From here, thematic codes were produced in order to construct a coherent and
248 theoretically driven story of professional coaches' workplace learning experiences. This
249 process informed the final analytical phase of the study as the features of these thematic
250 codes were considered in relation to the cultural-discursive, social-political, and material-
251 economic arrangements of the Institute's practice architecture.

252 **Context of the OHPI**

253 The OHPI represents the central training facility for a large internationally active Olympic
254 sports organisation in the UK. The organisation has large and varied coaching workforce
255 (working at performance, participation and voluntary levels), and is responsible for the
256 management and delivery of coach development for both its voluntary and professional
257 coaching staff. In doing so, they provide a considerable variety of CPD pathways including;
258 traditional level based qualifications, structured mentoring schemes, and supplementary
259 coaching awards (i.e. Disability sports coaching and Injury prevents awards). At the time of
260 data collection, the organisation was in a state of organisational change following the
261 commencement of a new Olympic funding cycle. With this, came a number of significant
262 structural changes including; the appointment of new organisational leads (i.e. Head coach,
263 Performance Director), a reduction in government funding, the enforced redundancy of over
264 half the employed coaching staff, and later the employment of two International consultant
265 coaches. Interesting, in concert with these changes, and stemming from an awareness of a
266 body of work that characterises effective learning as a communal/collaborative activity
267 (Fenwick et al., 2012; Cairns, 2011), the sporting organisation was acting to instil a new
268 organisational message.

269 "It's about us [the institute] ultimately collectively winning more medals. The
270 performance measurement here isn't whether you have coached an athlete to winning a
271 medal or improved a performance, or whether you have been the therapist or the
272 physiologist to the athlete who wins the medals, it's about the whole [the organisation].
273 It's about athletes getting better, and us effectively supporting athletes getting better
274 through our coaches getting better through collaboration and collective thought."
275 (Performance Director)

276 The marked difference to traditional methods was the proposition that coaching success was
277 to be judged not solely on the results of athlete performances alone, but on the coaches'

278 engagement with the ideals and aims of the institute (collaborative learning). As such, the
279 case represented a unique opportunity to assess the implications of organisational transitions,
280 new organisational structures, and funding cycles on the learning experiences of professional
281 coaches. In order to examine how the changing nature of these arrangements ‘conditioned’
282 the learning experiences of the coaches within the Institute each one will now be considered
283 in more detail.

284 ***Trustworthiness: Judging qualitative research***

285 Whilst traditionally the quality of qualitative research has been judged on the measurement of
286 a works adherence to the criteriological measures of trustworthiness and validity (Lincoln and
287 Guba, 1985), this position has been challenged by the argument that interpretive research
288 stands alone from (post)positivistic investigations by the very nature of their ontological and
289 epistemological assumptions (Smith et al., 2014). In recognising these critiques, we accept
290 Smith and Sparkes (2013) invitation to ‘let go of validity’, and engage in the generation of
291 more research-specific criteria. As such, within this study we drew upon the characterising
292 traits of rich rigour, sincerity, credibility and transparency to inform our inquiry (Smith et al.
293 2014). In practical terms, this meant peer debriefing was adopted to not only compare
294 interpretations, but challenge biases and meanings derived from interpretation of data. This
295 was achieved through conversations with key organisational leaders and embedded
296 conversations with significant stakeholders allowing for constructed ideas to be discussed. As
297 such, we would argue that the research presented is credible in that significant time has been
298 spent not to ‘test’ trustworthiness, but to critique, collaborate and reflect upon interpretations.
299 Finally, in providing transparency thick descriptions of findings are provided to capture an in-
300 depth picture of the coaching workplace, and a code map included to demonstrate how data
301 were interpreted (Table 1).

| Core Category | | Negotiating personal engagement | | | |
|----------------------|--|---|---|---|--|
| Focused Codes | Expectations and identification of role boundaries | Negotiating social engagement with colleagues | Assessing value | Constructed identity | Personal/historical dispositions |
| Open Codes | View of the coaching process, redefining expectations of organisations goals, the influencing culture of the sport, making it 'what they wanted', lacking guidance from leadership, working towards personal goals | Recognising personality conflicts/alignments, interpersonal skills, engaging in opportunities to interact with knowledgeable others, guiding behaviour, resisting forced and incompatible relationships, selective engagement, presenting of self to attain response from others, | Making value judgements, cost benefit exchange, considering career progression, considering job security, defining status as a coach, motivation to collaborate, perceiving organisational targets, defining practical knowledge, identifying relevancy, engaging in meaningful activity, viewing competition as a barrier to engagement, Justifying behaviour based on existing practice | Defining self through experience, personal biography and history, being a former an athlete, views on the role of the coach, defining career, considering impression of others, understanding role, defining quality practitioners, redefining title/identity, constructed belief systems | Aligning personal values, longevity in the role, time in a certain context, reciprocity to certain opportunities, intention to be 'collaborative', engaging in routine behaviour, maintaining traditions, 'doing it my way', identifying specific learner needs, considering career transitions, resisting forced and incompatible relationships |

303 **Findings and Discussion**

304 In the following section, data are reported within themes to demonstrate the processes
305 through which coaches' workplace learning experiences were mediated. Participant quotes
306 and field-note excerpts from each thematic database are provided and have been selected to
307 offer clear illustrations of the key points.

308 *Negotiating personal engagement*

309 Within this study, data highlighted the impact perceived roles and shared expectations (of
310 rules and organisational function) played in the mediation of coaches' behaviour. The
311 interplay of these socio-political features constituted practical agreements, negotiated by
312 coaches regarding the appropriateness of particular practices (Kemmis et al., 2014), thus
313 informing their 'Negotiated personal engagement' within the social space of the OHPI. From
314 an organisational standpoint, the perceived definition of coaching roles was clear,
315 characterised by language and employment contracts that articulated the 'support of athletes
316 by working together', and 'coaches developing through collaboration and collective thought'.
317 However, in following the working realities of coaches it became apparent that this message
318 was not consistent throughout the organisation, having been reinterpreted and translated in
319 relation to the discourse, identity, and cultural history of both individuals, and the sport itself.
320 To this end, coaches re-characterised their roles with a disregard for the collaborative
321 ambitions of the sporting organisation, in favour of performative self-interest:

322 "It's up to everyone employed in the institution to kind of find out and make it [their
323 role] what they want it to be. In my head I know that [specific discipline] in this country
324 is underperforming, so I'm here to apply strategic thinking and try and right it." (Stewart,
325 Interview)

326 "My role? My role is to be part of a collaborative, organic, and creative process. It [the
327 institute] was going to be a place where people work together, between medical staff, and
328 coaches and athletes, but it hasn't worked out quite like that... so really I'm just here to
329 look after my myself and athletes." (Frank, Interview)

330 The data above, demonstrates the manner through which coaches' (re)interpreted the social
331 relationships within the OHPI. Indeed, whilst early data suggested some coaches'
332 understandings resonated with the organisations collaborative goals, as the study progressed
333 most were found to adhere to the mantra of 'making it what they want it to be' (Stewart).
334 Through discussions with administrative staff, it was evident that this sentiment was
335 compounded by a lack of definitive leadership from administrative staff, reinforcing a

336 reversion towards more traditional and habitual practices of the past (Partington & Cushion,
337 2013). As was observed:

338 There is certainly some confusion between the roles of Head Coach (Paul) and
339 Performance Director (Stephen) in terms of who is running the OHPI and who is
340 supposed to be relaying the organisational message onto the coaches themselves. When
341 you ask either Stephen or Paul, they will cite it as being in the wheel house of the other,
342 whilst freely agreeing that ‘confusions between roles and his have led to inefficiencies in
343 the running of this place’ (Stephen). To this end, coaches have cited that they were
344 operating within ‘leadership vacuum, left to figure out the new philosophy on our own’
345 (Frank, interview).

346 Conversation with Stewart: ‘Let’s not forget what Stephen’s job is here, and why the
347 previous Performance Director is no longer around, medals...not achieving the goal that
348 was set for him in the last [funding] cycle... What does that mean for us [the coaches]’?
349 Ultimately we have to perform too... we are going to be measured in the results of our
350 athletes... the way we always have’. (Field-note, July)

351 Interestingly, these sentiments also highlighted the notion that coaches negotiated their
352 learning engagement in light of their personal dispositions; inclinations to behave in a
353 particular fashion rooted in a person’s life and membership in communities both inside and
354 outside of a particular social setting (i.e. the workplace) (Hodkinson and Hodkinson, 2004).
355 When discussing his preference for seeking learning opportunities away from the OHPI,
356 Andrew illustrated,

357 For me it’s been good [the nature of institute], I’ve liked the freedom to be able to do my
358 own thing and do the things that have come naturally... making use of support [learning]
359 processes I’ve used since before we had a [OHPI]” (Interview).

360 Within this section, the data discussed captures how coaches re-constructed their
361 understandings of ‘roles’ in respect to their personal dispositions (i.e. Stewart), the historical
362 legacies of the context (the particular sporting organisation), and engagement in wider/past
363 communities (i.e. International coaches in foreign sporting systems). This not only acted to
364 shape perceptions and intentionality towards collaborative learning opportunities, but sought
365 to inform the culture of practice within the institute, notably that of ‘looking out for number
366 one’ and ‘being measured in medals’. In so much as culture shapes how we think, act, and
367 interact, this shared understanding informed the patterns of relationships between people, and
368 between people and objects (Kemmis & Heikkinen, 2012). As Richard stated:

369 “I know Stephen wants me and Stewart to be doing more together... but as far as I’m
370 concerned I already have what I need, to figure out the things I need to figure out... I’ve
371 worked with [external support network] for years, and really I’m just going to keep doing
372 that because it is what works for me... why change what works?” (Interview).

373 *Impacting (Learning) Cultures*

374 According to Kemmis and Heikkinen (2012) in order to comprehend the nature of practice,
375 we must consider how it exists in the semantic space of ideas that appear in and through the
376 discourses of activity. Within this theme, data illustrates how the language of coaches and
377 administrative staff informed the ‘learning culture’ present within the institute, a condition
378 that represented the interplay of multiple cultural messages entrenched within the workplace
379 context, coaches’ histories, and the sport itself. This interplay of ideologies informed the
380 language utilised to define and justify behaviour, shaping individual’s perceptions of, and
381 intentionality towards learning engagement.

382 From interviews and observations, it was clear that upon entering the workplace coaches
383 brought with them an individualised culture bound within their dispositions, identities, and
384 experiences within broader fields/communities of activity (Griffiths & Armour, 2012;
385 Hodkinson et al., 2004). For some, these engagements meant they were more naturally
386 aligned to the organisations collaborative aspirations, using phraseology such as; ‘shared
387 understandings’, ‘for the team’, ‘becoming a community of coaches’, and ‘working with
388 others’, to define their role. Yet for others, the International coaches in particular, this feature
389 had the propensity to impinge upon their inclinations towards collaborative engagement. As
390 was observed:

391 Within the International (performance) system coaches are far more autonomous,
392 dictating their coaching behaviours, relationships, and goals without the need for
393 accountability to a national governing body. As Terrance stated, “I think we [Richard and
394 himself] are more used to deciding what we do and do not do, within our programmes,
395 within our development... not having to justify decisions to people like Stephen
396 (Performance Director) or other coaches. It can be a bit grating... I feel like we just don’t
397 speak the same language... it’s been uncomfortable trying to fit into some else’s way of
398 doing things. Hopefully once it settles down and we can get back to our own routines
399 (Field-note, April).

400 The result of this disparity, as the Head Coach referred to it, was a ‘divided workforce, where
401 British and International coaches clashed in the ways they expected to work’ (Paul,
402 Interview). Interestingly, findings indicated that this sentiment was compounded by a deep
403 rooted sense of anti-Americanism embedded within the cultural history of the sporting
404 organisation. Regarded as a ‘hangover from previous regimes’ (Paul Head, Coach), the
405 administrative staff often discussed the historical challenge associated with the employment
406 of coaches that weren’t British. As one coach commented:

407 The fear has been that the organisation does not value British coaches in the same way
408 they might a foreigner, they seem more exciting... so there can be hesitancy in working
409 with them... people can feel challenged and that doesn’t bode well for this new idea
410 [collaborative institutional goals] ... (Julie, Interview).

411 In terms of workplace learning, this acted to limit the learning opportunities afforded staff
412 within the OHPI as some coaches were hesitant to engage collaboratively with colleagues.
413 For example:

414 In attempting to reconcile concerns regarding his coaching practice, Frank has repeatedly
415 attempted to seek Richards's [International Coach] advice on reviewing his season.
416 Despite being the most suitable candidate for this task given his background, Richard has
417 continually found other more 'important' tasks to occupy himself. As Frank explained:
418 'I've tried to embrace the sentiments of this new look institute, but Richard doesn't
419 care... why? because thinking like an International coach and he thinks I've got to look
420 after my team, my interests... I won't be trying that again' (Field-note, June).

421 To this end, some coaches were forced to look beyond the confines of the OHPI in order to
422 fulfil their learning needs given the lack of opportunities to engage with colleagues. Indeed,
423 when questioned on this very notion, two coaches reported:

424 What I've had to do is find a peer group away from here to discuss my ideas and where I
425 need to develop what I have done this year... if that's the way it has to be, fine. (Frank,
426 Interview)

427 This animosity between English and International has left a bad taste in people mouths...
428 it has gotten to a point where most people are going back to looking elsewhere for help.
429 (Julie, Interview)

430 A final dimension, through which culture served to mediate coach learning, was in regard to
431 the sporting culture itself. Indeed, despite early data illustrating a use of language that was in
432 line with the organisations desire to foster collaborative practice, such discourse was filtered
433 and reinterpreted through the cultural medium of the sport. As such, our experience gained
434 from emersion within the working realities of staff, was that the nature of this particular sport
435 subversively favoured behaviour that belied a culture of competitive isolation. To this extent,
436 staff and coaches acknowledged:

437 So we for example, thought that the performance coaches would all sit down together
438 and talk about their training plans and experiences and what is useful for them, but the
439 nature of the world is that the athletes are rivals, although all together we are one team,
440 so there is a troubling juxtaposition there between what we have tried to achieve. (Centre
441 Manager, Interview)

442 For me [this sport] isn't right for this type of thing, working together in this... they
443 [coaches] have very bespoke ways of doing things, they like to be competitive, which I
444 think is then hard to integrate. (Stewart, Interview)

445 Look I'm not paid to mollycoddle anyone. When it gets down to it, I'm not going to be
446 measured in terms of how well I work with Tom, Dick, or Harry... I'll get measured in
447 medals. (Richard, Interview).

448 Such a finding is consistent with a body of work that recognises the results-driven and
449 contested nature of professional sport as a deterrent in the development of learning

450 relationships amongst coaches (Mallett et al., 2016; Occhino et al., 2013). Certainly, whilst
451 there was the propensity for generative interactions between coaches within the institute, the
452 dominant discourse was that of competitive and isolated learning practices. To this end, the
453 semantic arrangements as informed by sayings' characteristic of practice, were significant in
454 determining coaches' intentionality towards collaborative engagement within their
455 workplace.

456 *Changing organisational structures*

457 For Kemmis et al., (2014) the material-economic arrangements of a given practice
458 architecture refer to the resources that make possible the practical 'doings' of activity. Within
459 this study, the theme of changing organisational structures captures this notion, where the
460 interplay of territoriality, and government funding, contextualised the learning possible
461 within the OHPI. For coaches, these features were inextricably linked to the cultural-
462 discursive and socio-political arrangements addressed above, in terms of how physical spaces
463 were re-contextualised, appropriated, and made use of. While coaches could not change the
464 physical spaces (i.e. the construction a new sports hall, or the development of new
465 equipment) to facilitate their practice/learning, they were able to reconstruct how these
466 physical spaces were used. For example, indicative of the culture of competitive isolation,
467 coaches displayed (entrenched) territorial behaviour in how they made use of physical space
468 within the training centre. Through the territorial personalisation and marking of areas, they
469 created self-expressive micro-geographies, where 'unusual norms', identities, and private
470 realities could be enacted (Parr, 2000).

471 Frank utilised his area to store personal training equipment, Stewart leaves his massage
472 bed in an area that makes it difficult for other groups to use that space, and Terrance
473 makes a point to court with his athletes on the outside field, almost ensuring that
474 different groups never cross paths. (Fieldnote, May).

475 If we were a real co-operative he (Richard) would say don't worry Frank I'll do my
476 session in the afternoon, or work in with me, or I'll just move the twenty meters... but he
477 doesn't because he doesn't care and doesn't want put himself out by sharing his space
478 (Frank, Interview).

479 everyone has their spot... so like down by the matts is where Richard lives and I guess
480 everyone knows that, so people don't go and use that area... for some people there will
481 be unwritten rules about where you can and cannot base yourself because you will be on
482 someone turf... (Julie, Interview).

483 Data indicated that these constructed boundaries had the propensity to impede knowledge
484 sharing activities amongst coaches as they were often utilised to seek isolation, and at times
485 regulate social relations between colleagues (Altman, 1975). For one coach in particular, the

486 safeguarding of a personalised space represented their perception of becoming an expert
487 coach, thus defining their perceptions towards the learning opportunities offered by the
488 institute.

489 Sometimes the most successful coaches are the ones that manage to isolate themselves
490 from distractions... the institute can have distraction around it, having your own space is
491 important to manage those... sometimes just having people around you, questioning you,
492 challenging you, it can get in the way... (Stewart, Interview).

493 Beyond that, it was interesting to note that with the funding induced reshuffle of
494 organisational structures and staff, coaches were required to renegotiate existing territorial
495 boundaries as new staff entered the workplace. This created the potential for defensive
496 responses to boundaries violations (Brown et al., 2005) as discussed above, whilst making it
497 challenging for others to find a place within the institute. Indeed, when specifically
498 questioned on this transition into a workplace containing already established practitioners one
499 coach stated:

500 It's tricky, you are aware that you don't necessarily have a base, and I don't mean the
501 desk you have in office, it's more than that, it's the [training space]. You float around the
502 centre, working in an around people until you can establish yourself... but that can take a
503 while. (Julie, Interview)

504 Of particular interest, was the clear link between the macro-structural feature of
505 organisational funding and the structure of learning experiences afforded coaches (Griffiths et
506 al., 2016). Within this study, the instigation of staff redundancies following the reduction in
507 governmental funding, acted to dismantle pre-existing resources that the remaining coaches
508 had come to rely on (i.e. social support networks). For two of the coaches, colleagues
509 regarded as valuable informal learning resources were lost to the organisation, leaving them
510 to 'start again' (Andrew) and 'figure out a new way of doing things' (Frank). What is more,
511 the reduction in employed coaches further shrank the opportunities to engage with
512 colleagues, and the breadth of knowledge present within the institute. As Allison suggested,

513 There is only six coaches, that is actually a really small number, especially compared to
514 the fourteen we had. So there's not much to choose from and I suppose that if two people
515 don't necessarily see eye-to-eye, then it blows the whole idea, and as we have seen,
516 makes it uncomfortable for the rest" (Centre Manager, Interview).

517 Interestingly data suggested that the workplace was far from a benign entity, as goals, beliefs,
518 and traditions had the potential to mediate the way in which coaches made use of physical
519 space, a feature that within this study was seen to shape learning behaviour. As such, this
520 fluid environment provided a context that dependant on the nature of the social, cultural, and
521 material arrangements, had the propensity enable and constrain the 'doings' of practice,

522 thereby shaping how certain learning opportunities were valued and engaged with by the
523 participants.

524 *Discussion*

525 The findings above outline the three themes constructed to capture coaches' workplace
526 learning, in terms of their alignment with the arrangements of human behaviour proposed by
527 Kemmis and colleagues. However, though presented as discrete categories, it is important to
528 recognise that the associated practices (the sayings, doings, and relatings) illustrated across
529 the three spatial domains, are in fact interconnected and interrelated in nature. For example,
530 coaches were seen to construct and reconstruct shared understandings of the organisations
531 roles and rules (informed by the dispositions of the individuals and the history of the sport),
532 thus informing how they made use of material and economic resources of the OHPI (i.e. the
533 creation and maintenance of personal territories). The interplay of these conditions then
534 reinforced and facilitated a culture and language (the cultural-discursive arrangements) of
535 professional isolation, where '*looking out for number one*' became the modus operandi
536 within the OHPI.

537 Significantly, the findings of this study illustrate how the macro-structural features of sport
538 (and the associated organisations) can influence the sayings, doings, and relatings of coaches,
539 in ways which can undermine attempts to shape learning cultures (Mallet et al., 2016). The
540 practices described above, illustrate that PAs take form through the relational interactions of
541 coaches, their colleagues, organisations, and the facilities in which they are located. As such,
542 actions and interactions are often informed by the patterns, routines, and traditions enacted
543 across the relational structures of sports, sporting organisations, and the institutions they
544 create. These relational conditions prefigure and predetermine the 'scope of action' (Groves
545 et al., 2010, p. 51) available, in this instance restricting the capacity for coaches to engage in
546 collaborative workplace learning activities. Put another way, coaching practice can be seen to
547 take place within a 'web of connectedness' (Smith et al., 2010, p.7) where the here and now
548 takes place amongst (and is shaped by) the traditions of what has gone before.

549 Therefore, in order to truly instigate change in the context of learning:

550 "Requires more than changing participants *knowledge* about practice; it also requires changing
551 the *conditions* that support their practices – the *practice architectures* that enable and constrain
552 their practices." (Kemmis et al., 2014, p.55, original emphasis)

553 In consideration of this, we argue that engagement with the theory of PA provides coach
554 education designers (coaches, coach educators, sporting organisation and policy makers) with
555 a framework of assessment and review that might better facilitate pedagogical change than
556 has previously been employed. To this end, both practitioners and organisational leaders alike
557 might look to review the dominant beliefs and discourses surrounding their current practices
558 (culturally-discursive arrangements), the rules, routines, and patterns of behaviour that exist
559 within these particular context(s) (socio-political arrangements), and the materials, spaces,
560 and resources utilised in enacting these practices (material-economic arrangements). Through
561 this, an individual coach looking to develop their professional knowledge, or an organisation
562 looking to instigate substantive pedagogic change, could critically examine the nature of
563 current practices, identifying how and why certain forms of behaviour remain (practice
564 traditions). This would in turn provide a foundation upon which to evaluate the suitability or
565 sustainability of any change initiative embarked upon, illustrating where the reconstruction of
566 practice might be required to meet desired goals.

567 It is important to recognise that PAs are themselves a fluid concept, subject to transformation
568 and adjustment, as practices are preserved and reconstructed over time by practitioners, and
569 the institutions that diffuse knowledge of their use (Reid, 2011). Indeed, in suggesting that
570 PAs are the product of negotiations between cultural, social and material conditions (Kemmis
571 et al., 2014), it is possible to argue that understandings of practice will logically differ
572 between different sites, communities, and contexts (Goodyear et al., 2016). The findings of
573 this study align with this thinking, as coaches' workplace learning was found not to take
574 place within closed communities (Evans et al., 2006), but in fact operate within a multi-
575 dimensional environment, where individuals held multiple community memberships. As each
576 community was itself the product of socio-cultural conditions (Griffiths & Armour, 2012),
577 coaches' interpretations of the learning affordances of the OHPI were in part a legacy of their
578 engagement in practices constructed (and understood) within broader sites of practice. As
579 such, coaches' engagement with the OHPIs new coach learning strategy varied between
580 groups and individuals, as was evident in the disparity of expected working behaviours held
581 by International and British coaches. It should also be noted, that whilst not explicitly
582 identified as a contributing factor within this case, the broad range of coaching experience
583 encountered (5-26 years) is likely to have played a role in informing community engagement.
584 The implication for education designers and sporting organisations is a need to be familiar

585 with the facets of multiple community participation and individuals associated dispositions,
586 so that the congruencies required for learning engagement can be supported.

587 Within this paper, we have examined the practice architecture present within a UK based
588 Olympic training centre, and illustrated how the conditions of this ecological space acted to
589 impede a sporting organisations attempts to instigate pedagogical innovation. The key
590 message to be taken from this work, and the contribution to existing knowledge of coaching
591 CPD, is that PA offers a new perspective from which education designers and sports
592 organisations can consider the provision and support of workplace learning initiatives.
593 Moreover, PA represents an innovative approach to the study of workplace learning, moving
594 beyond a dualistic focus of agency versus (learning) activity (Armour, 2014; Nelson et al.,
595 2013), to account for the substantive role organisational structures (e.g. funding, organisation
596 cultures, rebranding, leadership, government policy) play in mediating the learning
597 experiences of professional sports coaches. To this end, the approach provides an avenue
598 through which a greater understanding of ‘what works’ in CPD to change learners’
599 behaviours might be pursued.

600 **Final considerations**

601 In this study, we have provided a unique opportunity to examine the instigation of a new
602 organisational culture, and through this uncover the features of collaborative practice that
603 facilitated or inhibited learning. Grounding the theoretical stance of this work within the
604 concept of ‘knowing-in-practice’ (Gherardi, 2014), we have attempted to broaden the
605 evaluative lens through which research examines the CPD of professional sports coaches, by
606 drawing upon Kemmis et al’s (2014) conception of practice architectures. In doing so, the
607 embodied array of activities held within shared understandings that represent workplace
608 practices, have been located within the contexts of time and space, to recognise that people
609 are not sovereign individuals, but understand one another in terms acquired over a lifetime of
610 participation in the social world. The strength of PA is that it addresses criticisms of existing
611 situated learning theories (i.e. Communities of Practice, Activity Theory, Relational
612 Interdependence), by not simply assuming the social world writes itself onto individual
613 persons (Kemmis & Grootenboer, 2008) or that people are active agents writing themselves
614 into practices (Goodyear et al., 2016). This approach has been valuable in characterising the
615 contextual, and conditioned nature of learning ‘*in situ*’, where practice is composed amongst
616 the structures, discourses, activities and relationships of everyday working. To this end, the

617 actions of coaches' captured within this study have been characterised as mutually-
618 intelligible (Schatski, 2002), as they employed characteristic and patterned ways of saying,
619 doing and relating throughout. Coaches were therefore seen to be active agents, entering the
620 OHPI and behaving in ways that were reflective of a legacy of engagements amongst wider
621 communities and practice traditions (i.e. the international coaches reinterpreting their roles in
622 light of past engagements). To this end, these features condition the intersubjective space
623 within which coaches' practice, mediating the learning and CPD afforded coaches.

624 While the results of the present case study are not universally generalizable (Yin, 2009), they
625 do raise several considerations for the provision of coaching CPD. Crucially, this study
626 identifies the need to recognise the coaching workforce as transient in nature, where
627 particularly within performance and professional settings, coaches' can be seen to transition
628 from organisation to organisation globally (where organisations are themselves also in cycles
629 of transition). As such, there is a need for sporting organisations to consider the individual
630 subjectivities of coaches as they enter new environments, questioning how features such as
631 biography, history, or experience might influence responses to new environments and
632 cultures. To conclude, this study raises fundamental questions that need to be addressed in
633 recognising coaches as professionals that negotiate contested and dynamic workplace
634 environments, particularly within a landscape where the workforce are becoming increasing
635 more transitory.

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