

Pre-service teachers' negotiation of meaning in their Physical Education Teacher Education programme: a two-year follow-up ethnography

Carla Valério, Cláudio Farias, Carla Luguetti & Isabel Mesquita

To cite this article: Carla Valério, Cláudio Farias, Carla Luguetti & Isabel Mesquita (2022): Pre-service teachers' negotiation of meaning in their Physical Education Teacher Education programme: a two-year follow-up ethnography, Physical Education and Sport Pedagogy, DOI: [10.1080/17408989.2022.2097654](https://doi.org/10.1080/17408989.2022.2097654)

To link to this article: <https://doi.org/10.1080/17408989.2022.2097654>



Published online: 06 Jul 2022.



Submit your article to this journal [↗](#)



Article views: 273



View related articles [↗](#)



View Crossmark data [↗](#)



Pre-service teachers' negotiation of meaning in their Physical Education Teacher Education programme: a two-year follow-up ethnography

Carla Valério ^a, Cláudio Farias ^a, Carla Luguetti ^b and Isabel Mesquita ^a

^aCIFI2D, Faculty of Sport, University of Porto, Porto, Portugal; ^bInstitute for Health and Sport at Victoria University, Melbourne, Australia

ABSTRACT

Background: Research demonstrates the benefits of communities of practice (CoP) for teachers' professional learning in Physical Education (PE). However, much less is known about how CoPs can be used to understand pre-service teachers' (PSTs) professional learning in their Physical Education Teacher Education (PETE) programmes. Negotiation of meaning (NofM) is a crucial concept regarding learning inside of a CoP. Hence, understand how meaning is negotiated in initial teacher professional development might allow the enhancement of the social learning strategies in PETE programmes.

Purpose: This article draws on the CoP theoretical framework, and specifically the concept of NofM to understand how PSTs negotiated meaning during a two-year PETE programme. In particular, the focus is on the challenges faced by PSTs throughout the PETE social interactive process.

Participants and settings: The setting was a PETE programme in Portugal. In year one, the participants were three university teacher educators (TE) and 25 PSTs. In year two, the participants were three PSTs from year one who were in their school placement, a university supervisor (US) and one cooperating teacher (CT).

Data collection and analysis: This study was an ethnography with a two-year longitudinal design. Data were collected through the ethnographer's participant-observations (first author), meetings of the PSTs with the mentoring team (TEs, US, CT), and the ethnographer's field diary, reflexive log, and audio-recordings. Data analysis involved the constant-comparative grounded theory method.

Findings: Analysis resulted in the identification of three key challenges during the course units, for PSTs in the first year of their PETE programme: (a) the diversity and disconnections within the course units; (b) (the lack of) membership; and (c) the absence of democratic spaces in PETE class discussions. In the year two of PETE during the school placement, three challenges were identified for the negotiation of meaning (NofM): (a) the lack of dialogue with and focus on pedagogical practice by the cooperating teacher; (b) working together and the pressure to individualise PSTs' education process; and (c) unreachable support and supervision from the university.

Implications: We suggest that PETE programmes should emphasise pedagogical strategies that create spaces for the cultivation of CoPs. For instance, we suggest PST engagement in continuous and planned

ARTICLE HISTORY

Received 14 January 2022
Accepted 23 June 2022

KEYWORDS

Communities of practice;
negotiation of meaning; pre-
service teachers;
ethnography; PETE
programmes

group work across curricular years (e.g. peer-teaching and micro-teaching experiences) to increase work group membership. We recommend the emphasis on discussion sessions mediated by a facilitator (e.g. TEs, CTs, or US) where the different working groups could share their repertoire of learning experiences as a CoP. Moreover, we suggest optimisation of a base of pedagogical knowledge regarding course units' integration between the TEs of the PETE to systematise the process and also, an increased connection between the university and the host school. Additionally, we propose continuous professional development by the CTs to facilitate the requirements of the PETE programme.

Introduction and theoretical framework

The concept of this paper started one year after the first author finished a two-year ethnographic study of a Physical Education Teacher Education (PETE) programme. In reflecting on this study, she was confronted with several dilemmas, particularly regarding the required group work for pre-service teachers (PSTs) in the first year of their PETE programme (e.g. peer-teaching and micro-teaching experiences), the interaction with the teacher educators (TE) and the ongoing interactions with cooperating teachers (CT) and university supervisors (US) in their school placements (second year). After studying this PETE programme, the first author decided to understand the role of communities of practices (CoPs) in the PSTs' professional development throughout the entire process of their PETE programme. This intent arose due to the possibilities of cultivating CoPs motivated by the curricular characteristics of the PETE programme expressed in its policy.¹ Knowing that working as a CoP was an expected feature of this PETE programme, it was a crucial point to start digging into how PSTs' professional learning structure was influenced by the situated, learning-based CoP sphere.

In physical education (PE), CoPs have been used primarily as a professional learning strategy for teachers (Hunuk 2017; Patton and Parker 2017; Parker et al. 2021). In this body of research, teachers in CoPs demonstrated changes in attitudes and beliefs (Deglau and O'Sullivan 2006; Oliver et al. 2018) and professional identities (Luguetti et al. 2018); and development of a sense of community and empowerment (Goodyear and Casey 2015; Tannehill and MacPhail 2017; Gonçalves et al. 2021). Furthermore, CoPs have been a way to overcome traditional professional development in PE by developing teacher agency and constant collaboration between stakeholders (e.g. teachers, PSTs, and teacher educators). In a recent Scopus review, Parker et al. (2021) found 95 empirical studies in 12 languages between 1990 and 2020 about CoPs and PE professional development. Teachers were the focus of 75% of the studies, revealing that fewer studies focused on PETE programmes and PSTs' professional development.

Some studies explored CoPs as a professional learning strategy aimed at supporting PSTs' learning (Herold and Waring 2018; Luguetti, Oliver, and Parker 2020). This body of research explored what crucial aspects of CoPs cultivation were being supported or neglected during PETE programmes, particularly the interactions between PSTs, CTs, US, and others on school placements. One of the crucial aspects of learning in a CoP, and yet under-researched, is the negotiation of meaning (NofM) (Wenger 1998). According to Wenger (1998), NofM is the process of experiencing the world, and acknowledgement of engagement in the world as meaningful. Meaning is always the product of its negotiation, and it exists neither in us, nor in the world, but in the dynamic relation of living in the world (Wenger 1998). Moreover, situated meanings do not simply reside in individual minds, instead, they are negotiated between people through communicative social interactions (Gee 2004). Although considerable research has shown the benefits of cultivating CoPs as a means for in-service teachers' professional learning (Deglau and O'Sullivan 2006; Goodyear, Casey, and Kirk 2014; MacPhail et al. 2014; Armour et al. 2015; Menter and McLaughlin 2015; Hunuk 2017; Tannehill and MacPhail 2017; Luguetti, Oliver, and Parker 2020), much less is known about how a CoP

framework, particularly the concept of NofM, can be used to understand how PSTs progress to become teachers in their PETE programmes. There is a dearth of examination of PSTs' engagement in CoPs during the entire course of their PETE programmes and of how CoP involvement might represent an important role in their professional development (Parker et al. 2021).

Additionally, despite efforts to move forward from the more linear and simplistic approaches for studying PETE processes used to date (e.g. Luguetti, Oliver, and Parker 2020; Gonçalves et al. 2021), there is still a scarcity of in-depth analysis of the complex PETE culture in its entirety. Ethnography provides in-depth perspectives of a culture experienced by the PSTs while accounting for the wider context of the role of CoPs in PETE programmes in general. Furthermore, although a PETE programme may offer PSTs a spontaneous culture for CoPs to thrive, it cannot be assumed that they will prosper in the future or their learning insights will be transferred when PSTs are confronted by different school placements (Wenger 1998; McLaughlin and Talbert 2001). Hence, throughout this ethnographic work, we sought to achieve understanding of how PSTs negotiated meaning inside of their PETE programme. Specifically, we focussed on following-up the challenges PSTs faced throughout the social interactive processes experienced during a two-year PETE programme.

Negotiating meaning: duality of reification and participation

In the theories of situated learning and CoPs, learning is understood not simply as acquiring new knowledge by the individual, but as a process of participating in learning communities and interacting with others (Lave and Wenger 1991). Three elements characterise learning from this perspective: mutual engagement (identity or membership), joint enterprise (common goals of a learning community), and shared repertoire (subjects or materials shared by the participants) (Wenger 1998). These CoPs are considered a powerful mechanism for teacher growth and development (Parker et al. 2021). Members of a CoP develop together their own understandings of what their practices and profession are about and, while learning is a primary goal for them, they also have the possibility to find meaning in the process of learning (Lave and Wenger 1991; Wenger 1998).

Through a process called legitimate peripheral participation (Lave and Wenger 1991), 'newcomers', those who are learning, (e.g. PSTs), interact with 'old timers' (e.g. TE, CT and US) within the community and then gradually become more experienced in the practices that characterise the community. The meaning of belonging to a community is negotiated in practice through participation in a dynamic that is characterised by social interaction among participants through the contribution of their competencies and personal experiences (Wenger 1998). This negotiation is a fundamental feature of identity since it involves both the creation and adoption of meaning (Martínez-Arbeláiz, Correa-Gorospe, and Aberasturi-Apraiz 2017).

Additionally, the concept of NofM is not only a sign that there is interaction among the participants, but NofM also indicates that participants are engaging in the development of a shared repertoire or a conceptual toolbox and negotiating their meaning together (Wenger 1998). Wenger (1998) distinguishes two interrelated processes of NofM, namely reification (e.g. ascribing physical meaning to something abstract) and participation (e.g. participating in social activities including constraints and tensions that need inquiry) (see Figure 1). Together, reification and participation represent a fundamental duality of NofM, for the cultivation on CoPs, of CoPs evolution over time, of CoPs relations among practices, of the identities of the participants, and of the broader organisations in which CoPs exist (Wenger 1998).

Participation describes the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises (e.g. being a member of the PETE working groups, interacting with the supervising team, observing colleagues, etc.). The concept of reification refers to the process of giving form to experience by producing objects that congeal this experience. In doing so, reification creates points of focus around which the NofM becomes organised (e.g. engaging in the work of planning and producing documents such as lesson plans, teaching units, assessment sheets, etc.).

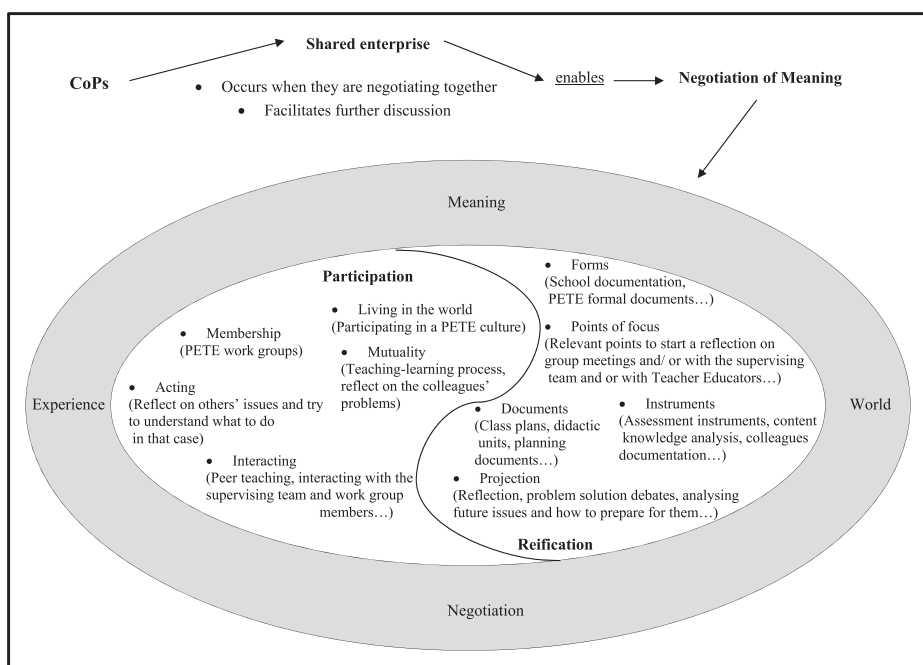


Figure 1. The duality of participation and reification in the process of negotiation of meaning – PETE culture (adapted from Wenger 1998).

Although CoPs are widely considered to be an effective approach for teachers' professional development and teacher education, a scarce number of studies have previously explored the NofM concept within these research contexts (Martínez-Arbelaiz et al. 2017). In following Wenger's (1998) NofM theoretical framework, we understand teacher engagement in a PETE programme to be a process of negotiating meaning around the design of the teacher learning process. From the very beginning in their process of becoming a collaborative group, which eventually might evolve into a CoP, the PSTs in this study engaged collaboratively toward their teaching methods modules – their shared repertoire, and in the second year of school placement. Learning in this NofM sense does not relate to a static cognitive state of mind, but rather to the process of being engaged in negotiating meaning, affecting both participation and reification (Wenger 1998). Thus, we anticipated that NofM is a useful concept to understanding the challenges PSTs face throughout the social interactive processes experienced in their PETE programmes.

Methodology

This study employed an ethnographic framework. Ethnography is exploratory in nature, and it consists of in-depth fieldwork and active, prolonged involvement of the ethnographer with the local context being studied (Reeves et al. 2013). Therefore, a two-year longitudinal design was employed throughout the PSTs' PETE programme courses since the beginning of the curricular year through school placement in the second year.

Research scenario and participants

The researched PETE programme is structured as a two-year master's in Portugal. The programme (biannually) accepts approximately 120 students who have completed a sport science bachelor's degree and accredits them with an official teaching licence if students successfully finish the

programme. In the first year, PSTs learn theoretical concepts and explore them in practical classes by taking on student and teacher roles through peer-teaching and collaborative microteaching with primary students. In the second year, PSTs engage in a full year of school placement (approximately 450 h total), supported by a supervising team from the faculty (US) and the host school (CT). In the first year of this study, the participants included a group of 25 PSTs and three TEs. In year two, the participants were three PSTs in their school placement who participated in the year one study, a US and one CT.

Throughout this ethnographic work, (Maria²) engaged in first-year curricular classes, peer-teaching and micro-teaching experiences with PSTs. Moreover, she participated in after class meetings where they planned their next classes as a group or reflected about previous teaching moments. Additionally, Maria followed a group of the original PSTs through their school placement with their CT of the host school and their US in the second year of the PETE programme.

As a PhD student, first author Maria developed a research project about the role of CoPs in the professional development of PE PSTs as a novice ethnographer. She completed her PETE master's degree in the same university and programme three years prior to initiating her PhD, and experienced herself the PETE programme culture, which allowed an insider perspective. On one hand, Maria's inside positionality allowed her to understand the PETE culture better and establish intimacy with the context, which promotes both the telling and the judging of truth. On the other hand, Maria's positionality led to disadvantages such as greater familiarity might lead to a loss of objectivity as well as unconsciously assumptions about the research. Therefore, this study is situated in the interpretative paradigm (Smith and McGannon 2018) and advocated for a naturalistic set of methodological procedures (Denzin 2006). A relativist ontology (Holstein and Gubrium 2013), data triangulation and the support of critical friends were employed to provide rigour. In this study, ethical approval was sought from the University Ethics Committee (CEFADE 07 2021).

Data gathering

The whole process of data collection was a follow-up of two-year PSTs' development process throughout a PETE programme using an unstructured approach (Bryman 2016). Hence, in order to triangulate data, multiple data points were collected using the following methods:

- (a) *Participant observation*. This method is essential to ethnography since increasing the amount of time spent with the culture in study allows a less intrusive perception of the researcher by the participants (Sands 2002). Thus, Maria engaged in a two-year follow-up of the PETE programme. In the first year she observed first semester theory classes, which ran for six weeks, so she observed 6 classes. Then in the second semester, Maria observed classes for practical teaching skills, three per week for 13 weeks. Additionally, she engaged (semester two) in weekly discussions after class and also informal conversations with the PSTs, which added 45 observation entries. In the second year, in the PSTs school placement, Maria observed 3 classes per week (one for each PST), formal meetings with the CT (one per week, some of them with the presence of the US) and 2 informal meeting moments with the PSTs for a total of 39 weeks (resulting in 234 entries).
- (b) *Field diary*. Ethnographer often have to take notes that summarise the proiminent events, behaviours and the researcher's initial reflections (Bryman 2016). During participant observations, Maria used a field diary to record main events, which allowed for the documentation of class contexts, groupwork dynamics, strategies for doing group task assignments and PSTs' relationships with the TEs and US (resulting in 279 entries).
- (c) *Audio recording*. Since wandering around continuously taking notes could runs the risk of making people self-conscious about the researcher enterprise (Bryman 2016). For that reason, Maria audio recorded her thoughts when important events occurred, and she needed a quick, precise description while keeping up with events (resulting in 17 audio recordings).

This action allowed for greater understanding of specific circumstances and contexts while Maria wrote the reflexive log.

- (d) *Reflexive log*. According to Atkinson and Hammersley (2007, 151) 'Ideally, every period of observation should result in processed notes and the reflexive monitoring of the research process'. Therefore, at the end of each week, Maria wrote a reflexive diary entry about the week's main events, discussing relevant issues that could be considered for future analysis (resulting in 57 entries).

Data analysis

Data analysis operated by adopting a constructivist revision of grounded theory (Charmaz and Belgrave 2019). The data were analysed through an iterative approach, whereby the data collected were analysed shortly after prominent events, which allowed the ethnographer to fully capture central phenomena, develop tentative themes and to capture the evolution of this specific PETE culture over time.

Specifically, the ethnographer engaged in an 'initial coding' with a line-by-line coding strategy, followed by a 'focused coding' phase, where the most prominent codes of the initial phase were selected (e.g. codes related to PSTs' interaction in work groups, how they engaged in reflexive processes, how the supervising team was involved in work groups, etc.). Through the data analysis, the ethnographer started to code larger segments of data and being more selective and direct (e.g. NofM occurrences, CoP features during work group). Since there were multiple data sources, field diary and audio-recordings data were coded prior to the weekly reflexive log being written, which allowed a concentration of the main and most relevant events of each week in the reflexive log. Then the reflexive log of each week was also coded, and the resultant themes from the focused coding phase were shared with the critical friends for further analysis.

Lastly, she engaged in a process of 'theoretical integration', where the previously identified categories were integrated with theoretical concepts (e.g. CoPs main dimensions: mutual engagement, a joint enterprise, and a shared repertoire; NofM in a CoP and their participation and reification).

Findings

Two phases were identified regarding the challenges faced by PSTs during their PETE programme experiences and how meaning was negotiated throughout the social interactive learning opportunities: (a) negotiating meaning during course units and, (b) negotiating meaning during school placement. In the first phase during course units,³ three challenges were identified: (a) diversity and disconnect in course units; (b) (lack of) membership; and (c) absence of democratic spaces in class discussions. In the second phase during the school placement, three challenges were identified: (a) the lack of dialogue with and focus on pedagogical practice by the cooperating teacher; (b) working together and the pressure to individualise PSTs' education processes; and (c) lack of support and leadership from the university.

Negotiating meaning during course units

Different course units were observed in the beginning of the PETE programme, where PSTs participated in working groups that engaged in assigned work such as peer-teaching, micro-teaching sessions, discussions. The 25 PSTs self-enrolled in distinct groups of about five at the beginning of their first year. Although working in groups was one of the fundamental features of this PETE programme, which balances the number of opportunities with the high volume of work required, there

were several constraints that made it difficult to negotiate meaning during social learning experiences.

The challenges faced by PSTs due to the diversity and disconnections in the course units

In the first year, there was a wide range of different teaching approaches employed in every course unit. For example, in volleyball, the group responsible for teaching the session assigned their individual members to give instruction to small groups of PSTs, with three or four PSTs students per 1 PST instructor, whereas in athletics, one entire peer-teaching group gave instruction for the same exercise to the whole class.

In addition, regarding pedagogical models, the TEs were not connected with each other even when they were teaching the same pedagogical model (e.g. the same pedagogical model but prioritising different aspects – Sport Education in volleyball and athletics). Consider Maria's reflection about pedagogical models:

Despite the TEs are using the same pedagogical model, the way they prioritize the model features and content knowledge specifications is totally different. In athletics, they are implementing it all (e.g. establishing a season, promoting affiliation by using the same clothing, to exploring all the possible student roles, etc.) and content knowledge is only discussed prior with the group that is going to lead the peer-teaching lesson. In volleyball, the TE explores content knowledge with the whole class before starting the peer-teaching sessions. (Reflexive log, first year of PETE, January 2020)

Therefore, the PSTs were unable to comprehend the broader applicability of the teaching-learning/planning or assessment strategies in the wider context since they had to work in accordance with the specific requirements of the different units. Maria noted it in her field diary:

The PSTs often talked about the details of each unit, letting discussion about specifications of pedagogical and content knowledge fade away inside the required adjustments. João said to Francisco, "You cannot use that table of exercise criteria in the athletics plan, it is just for volleyball", while Francisco replied, "But I find it easier if I had the criteria in the lesson plan while teaching, but that's ok, I will make my own lesson plan and give that one to the teacher [TE]". (Field diary, First year of PETE, March 2020)

Thereafter, PSTs opted to build the process around a TE's preferences without asking if they could try it differently, rather than negotiating meaning of the best approaches and knowledge between the different strategies they experienced as peer learners.

This NofM is a duo of participation and reification along the process. Accordingly, Wenger (1998, 67) argued that, 'reification always rests on participation: what is said, represented, or otherwise brought into focus always assumes a history of participation as a context for its interpretation'. In turn, participation always organises itself around reification because reification always involves artefacts, words, and concepts that allow negotiation to proceed. Thus, distinct particularities required by each TEs in course units (that could not extend to others) could generally be viewed as reification processes and will require more intense and specific participation to remain meaningful to the PSTs (Wenger 1998). By repeatedly reifying specific course unit requirements without participating in the broader context of its implementation, diversity of teaching approaches turned into a challenge instead of a range of opportunities.

The challenges faced by PSTs due to (the lack of) membership

In the first year, PSTs conducted peer-teaching and micro-teaching sessions within their course unit group. However, from one course unit to another, membership of the PSTs' working groups often changed. Consequently, PSTs spread required tasks between the group members instead of collaborating through each task. The PSTs were often seated together, working on their computers yet preparing the next assignments individually. Maria reported:

They told me that they have so many units, so much work to do in each one of them ... so they spread the tasks to have everything done. Ana is better at volleyball, so she prepares the next class, João on football because he

is a coach and Maria is working on athletics because they had to prepare for the micro-teaching session. (Field diary, First year of PETE, January 2020)

In fact, PSTs were working at the same place and at the same time, but on different tasks to fulfil the group assignments and guarantee that everything was done on time. This contributed to some challenges along the process:

Angela and Joana were explaining the plan to the other 3 members of the group right after the class started. They were telling them which exercise they were responsible to do the instruction, how to organise the other students and the specific time they had to do it. Also, Angela and Joana were also in the same group on other course units, which made me believe that they were the only two making the lesson plan. (Reflexive log, First year of PETE, May 2020)

In this case, the two PSTs that worked together in different course units were the ones doing the required work for that class.

Therefore, negotiating meaning in this context of splitting tasks instead of sharing tasks complicates the development of a shared repertoire between the group members and consequently, the meaning of the experience. This shared repertoire is essential to promote discussion and develop critical thinking about teaching processes since meaning was to be constructed from the social interactions among and between group participants (Wenger 1998; Martínez-Arbelaiz et al. 2017). Therefore, despite establishing work groups, that effort was not enough to build a sense of membership in most of the PSTs' groups since they were not working collaboratively with each other. Ultimately, this lack of engagement in planned group work could be a major challenge for CoPs' development and cultivation (Parker et al. 2021).

The challenges faced by PSTs in class discussions due to the absence of democratic spaces

The foundation for negotiating meaning in a group is discussion, since social interaction is necessary to attribute meaning to a learning experience (Wenger 1998; Gee 2004). Our findings indicate that group interactions and discussion moments in course units occurred were oriented or directed by the TEs as noted by Maria:

The TE asked to see their lesson plan and asked them to change one of the exercises 5 min before starting. I saw their faces of frustration when the TE said they had to change the exercise immediately! One of them asked his group mate "why do we have to do it? We didn't even try it!" but the TE was already talking to the other group of PSTs. (Field diary, First year of PETE, May 2020)

Many of these discussions revealed signs of frustrations from the PSTs, mostly because of the lack of democratic spaces⁴ they experienced during their pedagogical practice. Furthermore, one result of the limited time attributed to pedagogical practice for each work group resulted in directives and last-minute decisions by the TE. This hindered the opportunities for democratic spaces where PSTs and TEs could discuss major issues and prevented the PSTs to share their opinions. (e.g. discussing about why they had chosen those exercises in the first place? Why they had to make the lesson plan adjustments without even trying what they prepared?). PSTs revealed difficulty in discuss with the TE, in class moments:

João told Martim: "The teacher [TE] told us to change for the $3 \times 2 + 1$ instead of 3×3 ." And Martim asked: "But why? We did that in the previous class, I think they were ready!" and João said: "Let's just do what the teacher [TE] told us because he is not going to explain [to] us why. We'll have to discover later." (Field diary, First year of PETE, May 2020)

Clearly, the PSTs opted to proceed with the TEs' direct instructions without questioning the possibility of asking them the reasons behind those instructions. Hence, due to the absence of democratic space for discussing pedagogical practice issues, PSTs had trouble in developed a shared repertoire of practical teaching experiences since they had to act according to the TE directions. Furthermore, a CoP is defined by its practice in which content knowledge, pedagogical decisions or curriculum are negotiated (Wenger 1998). Since the PSTs in this example did not have the space to engage in a

discussion with the TE about their decision-making process in this peer teaching event, their negotiation was around how to complete the required task in the way the TE wanted, and consequently, meaning attributed to moments of discussion faded.

Negotiating meaning during school placement

Although the first year is not specifically designed and planned for CoP emergence, the university policy states that year two is a potential environment for the CoP to thrive. For their school placement, each PST was assigned full responsibility for teaching a class, whereby they engaged in all the necessary activities required to fulfil teaching duties: from planning to implement suitable learning activities, which were aligned with curriculum guidelines. Moreover, after the actual classes taught by the PSTs, the work group developed time for weekly moments for reflection about their pedagogical practices, as well as formal moments to verify compliance with teaching tasks and to discuss further subjects related to their placement.

The PSTs were assigned to groups of three who were at the same school placements, experiencing the same school community and sharing the same supervising team composed of their CT and a US. The dynamic of this phase allowed for the creation of the basic necessary conditions for the cultivation of CoP. Even so, the challenges that prevented the attribution of meaning to group learning were also noticeable in this phase and are discussed next.

The lack of dialogue with and focus on pedagogical practice by the cooperating teacher

In the second year of the PETE programme, each placement school had its own internal organisation with which the PSTs had to deal with and learn how to navigate. CT had their own assigned classes in addition to their work with PSTs, which resulted in limited available hours to work with the PSTs. For that reason, the weekly CoP meetings were formally organised by the CT to discuss: (a) the whole week's work, (b) school issues and relevant school information, (c) evaluation standards according to the PE group, and (d) assignments including written reflections and lesson plans. If there was any time left, they would talk about their difficulties regarding pedagogical practice with their students. Maria reflected:

The PSTs often asked the CT specific questions about their classes, as if they were trying to get an additional glimpse of help. Most of the time, these questions were about the features of pedagogical models and how to adjust planning in accordance with their aims. These discussions tended to be superficial. This was the third time that João asked about how to better organise his teams to adjust the levels of development without letting the motivation of the better students fade away. The CT encouraged him to try new approaches, but there was never an in-depth group discussion about this issue. (Reflexive log, Second year of PETE, January 2021)

Despite the PSTs' willingness to discuss pedagogical practice issues, they acknowledged a lack of initiative by the CT to examine specific issues, such as pedagogical content knowledge or theoretical knowledge regarding their chosen approaches.

Thus, the CT did not engage in dialogue with PSTs when specific issues arise, despite being their school supervisor and a constant presence in the PSTs' development process. Therefore, the continuous involvement of CTs in the school placement, in comparison to periodical visits by the US, suggests that the CTs are in more favourable position to engage in a facilitator role while establishing a CoP. A credible CoP facilitator guides PSTs about new teaching practices and addresses their concerns about how those will affect interactions during CoP meetings (Guskey 2002). Despite the potential to become a facilitator, the CTs showed difficulties in assuming a facilitator role and/or approaching specific content in a democratic way, since pedagogical discussions were scarce throughout the mentoring process. These meeting moments, which could be the best place to start cultivating a CoP, turned out to be the ones giving reasons for the lack of meaning attributed to the CT role by PSTs.

Working together and the pressure to individualise PSTs' education process

One of the major barriers to NofM in PSTs' meetings was the pressure to individualise their teacher education process. The PSTs were not engaged to assist the development of pedagogical practice by their fellow PSTs unless the US or CT scheduled the observations. Thus, they only observe each other's classes once per month and one in three months with the presence of the US. Moreover, PSTs had little time available to observe each other's classes without a formal arrangement since they had a lot of individual work required for their own process.

After recognised the lack of dialogue between CTs and PSTs, four months after the beginning of school placement the PSTs decided to create another weekly moment for dialogue. The aim of these encounters was to discuss their practices and try to solve collaboratively each other's issues in their placements by engaging in an extra hour of dialogue, expose their doubts, and share tips about planning or support documents for enhancing their pedagogical content knowledge. Maria reported in her observations:

After Martim's class, they [PSTs] were talking about his difficulties and how they were going to solve those problems. Martim said: "I just don't know what to do to increase their time of practice, they [his students] look like they were doing nothing the whole time", and Francisco replied: "Let's help each other, Wednesdays after lunch none of us has classes, so let's meet to get things better". They asked me and the CT if we could be present at those meetings. I confirmed my presence while the CT could not attend because he had a class in that schedule. (Field diary, Second year of PETE, January 2021)

Despite taking a step forward, one feature remained unchanged – they did not have an expert to act as a facilitator who could help them to work as a group. Despite counting on the presence of Maria, the PSTs did not consider her as a facilitator. Although the 'PSTs' meeting strategy' seemed to be a productive way of sharing their experiences and finding solutions for their issues together, one month after starting the meeting, the PSTs stopped considering it meaningful as noted:

Martim asked: "Are we going to do the meeting this Wednesday?" and João replied: "I don't think it's worth it. We did not go to each other's classes, so I don't think we would be able to talk about it! And, we have to write the didactic unit's reflection by Friday, so I think it is better if we skip this weeks' meeting." (Field diary, Second year of PETE, February 2021)

Therefore, despite the PSTs' primary intention to work together to improve their teacher education process and to develop a shared repertoire, their individualisation and self-concern about their own process suppressed these possibilities. Hence, the PSTs made it difficult to pursue a dynamic relation of negotiation about their shared involvement in the same school placement, which affected not only themselves, but all the other participants. Therefore, individualisation turned into a challenge for building a discussion and for sharing a repertoire, which contributed to accentuate their difficulty in meaning attribution to collaborative experiences (Wenger 1998).

Unreachable support and supervision from the university

Confrontation with the realities of school placement is a serious issue faced by most PSTs (Alves et al. 2019). Notwithstanding, the limited direct support they had from the TEs was comparable to the absence of follow-up and support from the US in the context of their school placement. Consequently, in the moments of formal observations and meeting with the presence of the US, the PSTs showed fear of being assessed:

After the first US class observation (3 months after the school placement starts), they [PSTs, US and CT] had a meeting to talk about the PSTs' pedagogical practices. I felt that the PSTs were only trying to justify what happened when the US asked them about specific moments. Almost if they could not fail in anything. It seemed that they assume that the US was there to evaluate them instead of help with their difficulties. (Reflexive log, Second year of PETE, November 2021)

Despite being the main person responsible for the PSTs' development within the PETE programme, the US was assigned to almost 30 PSTs to monitor in school placements. Thus, these US visits with class observations only occurred three times for each PST in the whole school placement process.

This lack of involvement by the US due to work overload influenced the PSTs' reliance on the US for help:

Francisco told me that if he had to implement that Sport Education lesson plan by tomorrow and needed help, he would not ask the US because he does not feel comfortable. Francisco believes that he is so distant in his knowledge that he would not understand his difficulties in establishing small steps. He said: 'I think he is at a very high level of academic knowledge, and he might think that I am not prepared to do it ... he already has so much to think about. I do not want to show him that I could not do it.' (Field diary, Second year of PETE, December 2020)

Hence, the limited participation by the US in the school placement context contributed to limited dialogue with PSTs to support and share his expertise and also restricted the process of building trust with PSTs to feel that they had a voice regarding their PETE programme. These experiences highlighted the lack of support and leadership from the university. According to Parker, Patton, and Sinclair (2010), a CoP can be fostered by accessing an expert or a facilitator who arranges time for professional dialogue, supports individual and community inquiry, and create spaces for empowering teachers to take ownership over the pedagogical process. Despite expecting the opposite due to PETE characteristics and possibilities of working as a CoP in the school placement, the lack of presence by the US who could fulfil the role of a facilitator as an expert, increased the lack of meaning attribution necessary to develop a social learning space (Wenger 1998).

Discussion and conclusions

This study provides a unique follow-up longitudinal perspective of the entirety of a PETE programme, that enables situated understandings of social learning strategies in the different stages of development of the PSTs. Additionally, the insider perspective of the novice ethnographer, that had previous experience in the culture of study, contributed to a deeper analysis of the process. By looking beyond the obvious she comprehensively acknowledged the presence of many impediments to CoP cultivation.

The following discussion will constructively discuss (a) challenges of negotiating meaning as barriers to CoP cultivation; (b) practical implications for PETE programmes and their cultivation of CoPs; and (c) avenues for future research.

Challenges of negotiating meaning as barriers to CoP cultivation

The demand of course units and PSTs' engagement in different working groups in each unit of the first year promoted strategies of task individualisation instead of collaboration among group members to successfully accomplish the high volume of assignments. Thus, this division of labour hindered the provided opportunities for engaging in meaningful group discussions, whereby PSTs could create a shared repertoire of learning. As argued by Parker, Patton, and Sinclair (2010, 2021), learning within a CoP requires a process of social participation, emphasising the relationship between knowledge and the situations in which it is acquired and engaged. This ineffective group collaboration enacted by the PSTs might have been the major reason for the lack of membership at the start of the PETE programme. These became significant barriers to the development of interaction and discussion between the group members. Indeed, by brokering involvement between the duality of participation and reification, the PSTs cut the chain of meaning negotiation. Consequently, the reification of their assignments (e.g. individual and not collective production of the necessary assignment components), without actively participating in assignment overall construction, removed possibilities for interaction between PSTs and consequently, resulted in a lack of access to the potential wealth emerging from their work together for their collaborative assignments.

Non-dialogical approaches by TEs to the development of PSTs' pedagogical practice (e.g. asking the PSTs to change the lesson plan without further explanation) revealed the lack of reflective group

discussion as a teacher training strategy. Previous research into the development of an PE teachers in-service CoP showed that nurturing a democratic CoP (e.g. emphasises the culture of collaboration and cooperation, claims emancipatory intentions in education, and reduces exploitation, inequality, and oppression) can create a space for the negotiation of what was meaningful and useful for these teachers in their real-life experiences (Gonçalves et al. 2021). The present PSTs' lack of opportunity to debate their pedagogical practice suggests the lack of intention by the TEs to engage in the role of facilitator of the CoP, and thereby allowing PSTs to express their doubts, and creating meaningful, shared experiences. Consequently, the facilitator and expert role of the TEs voice was not evident and effectively meaningful, which could have also reinforced the challenge to promote the establishment of the CoP (Wenger 1998).

As suggested by Yoon, Lee, and Jung (2021), the effectiveness of CoPs depends on both the appropriateness of the internal facilitator's role and the level of teachers' autonomous professional learning. This relationship among the members, which is influenced by cultural aspects (e.g. unreachable support from the US due to the high volume of work he faced in PETE and the PSTs' process of individualising group work) could compromise the possibility of cultivating a CoP with the potential to enhance teachers' professional learning. In our study, some of the critical constraints to PSTs' professional development include the TE/CT lack of free time for conducting additional pedagogical conversations with the PSTs and their lack of ability to address the specific problems of their PSTs' pedagogical practice.

In the school placement, difficulties persisted when considering discussion through dialogue as a meaningful strategy. This communication challenge remained due to the lack of focus in the PSTs' issues of interest (e.g. PSTs' different perspectives on planning and pedagogical models). By limiting the democratic spaces for discussion, the group did not share what they considered important with each other, compromising the development of a shared repertoire and consequently NofM (Wenger 1998). In the case of a successful CoP, Gonçalves et al. (2021) revealed that the CoP members in their study reflected together daily. Furthermore, their shared repertoire was related to the community's 'ways of doing things', the products of community discussion and action, the understandings about the context, and the artefacts the community developed to improve. In contrast, for our study the lack of facilitation by the CT of democratic spaces for discussion, his lack of expertise and the pressing context that pushed PSTs to search for individual developmental (and final grading) goals, limited the creation of a shared repertoire. Therefore, intense involvement by the PSTs with the formal reification of their own process could have pedagogical implications (Wenger 1998). PSTs experienced meaninglessness (Wenger 1998) in multiple aspects of their teaching placements. Meaninglessness was evident when formal discussion structures were missing and TEs neglected to explain pedagogical decisions, such as the case when the TE asking PSTs to change the exercise they planned without further justifications, or the CT agreeing with all the PSTs' lesson plans without predicting practical problems. Conversely, an emphasis on formalism without corresponding levels of participation also resulted in meaninglessness, such as when the CT focussed more on school bureaucracy or generic pedagogical issues rather than PSTs' specific pedagogical practices. Significantly, previous studies suggest that teachers' professional learning is supported and enhanced by receiving and giving feedback or developing and sharing teaching ideas together (Armour and Yelling 2007; Goodyear and Casey 2015), something that the PSTs were missing in their school placement.

Practical implications for PETE programmes and their cultivation of CoPs

It is important to acknowledge that the mere existence of a CoP does not mean that the community is a well-functioning social entity or a positive catalyst for effective learning; it can also be dysfunctional in ways that subvert the quality of learning (Wenger, 1998; McLaughlin and Talbert 2001). Problems with developing group discussion, working without common goals or without the support of a facilitator could be critical constraints to the process of social agents attributing meaning

to learning experiences made in that social learning space (Wenger-Trayner and Wenger-Trayner 2020). Thus, we suggest that PETE programmes should differentiate between the creation of spontaneous, naturally occurring CoPs from intentionally fostered ones. Hoadley (2012) suggests that there has been a shift in the way of thinking about CoP from one which naturally occurs to one where a CoP can be supported and fostered to situate learning in an authentic context. Differences between naturally occurring and fostered CoPs lie mostly in the fact that naturally occurring CoPs do not have pre-defined learning goals (Barab and Duffy 2012; Hoadley 2012). We suggest that PETE programmes should emphasise the adoption of new ways of achieving CoP NofM, improve their membership by engaging PSTs in continuous and planned group work across the curricular year, and retain PSTs in the same work group across different course units (at least more than two units).

Regardless, a CoP cannot be just created, and their establishment requires time. Therefore, PETE CoPs should be fostered to have a history of experiences, continuous involvement between the members (e.g., PSTs and their supervisors in facilitators role) (Barab and Duffy 2012; Hoadley 2012) to allow participation and reification to be a duality for NofM in that teaching-learning experience. Furthermore, we suggest the emphasis on sessions for discussion mediated by a facilitator (e.g., teacher educators, cooperating teachers, or university supervisors) where the different working groups (possible CoPs) could engage with each other, exchange ideas and talk about their achievements within a CoP. This could provide the means for several CoPs to flourish during the year by enhancing the possibilities of sharing a repertoire (Wenger 1998).

We suggest that PETE institutions engage in internal reflection about the optimisation of strength based pedagogical knowledge regarding course units' integration. This integrative process might encompass understanding of what each TE is doing and what can be adjusted collectively to pursue a collaborative culture that stimulates CoP cultivation in PSTs' professional development processes. This might lead to stronger preparation for work in group, with the emphasis on specific strategies of working as CoP, attending to the real-life context of school, with the aim to model CoP enactment for PSTs and when they are actual teachers, they may be inspired to start their own CoP.

Moreover, the CTs of the PETE host schools should engage in diverse forms of sustained continuous professional development regarding the logic of the university education programme, to comprehend what is prioritised, e.g. if CoPs are prioritised by TEs in the first year, the CT should be able to understand what a CoP is and how to collaborate in order to ensure development. Furthermore, a closer relation with a space of intervention should be formally integrated between the US and the CT to develop a connection between the university and the PETE bases and the host school.

Avenues for future research

Understanding the role of CoPs in the professional development of PSTs during their PETE programme is necessary and is reflected by the increasing amount of research in this area (Herold and Waring 2018; Luguetti, Oliver, and Parker 2020). Therefore, we suggest that it is important to understand how universities that host PETE programmes understand CoPs functioning and how this learning strategy could translate into future pedagogical practice. In our study, despite emphasising CoP cultivation, this PETE programme did not ensure its development or contribute with specific support for CoP effectiveness. Thus, further research is needed to understand the role of the PETE programme and TEs in CoP development during PST training. This focus will allow researchers to address how to create spaces for PSTs to engage in meaningful negotiations of the process of learning and form CoPs with valuable insights that will translate their learning into the school practicum and in their future teaching practice. Moreover, specifically understanding PSTs' voices regarding their intentions about cultivating CoPs could provide valuable insights about their needs during the professional development processes. The addition of semi-structured or focus group interviews could enhance specific insight into PSTs' experiences. Furthermore, PST

engagement in self-study about their participation in CoP cultivation experiences could be an opportunity to understand their own way of understanding the CoP development process.

Notes

1. The regulatory policy in the university states that “It is in this contact [school placement] that the PST gets to know the contours of the career, becoming, little by little, a member of this educational community, called by the authors [Lave and Wenger (1991)], the community of practice. Thus, it is understood that the school placement work group, constituted by the PSTs, Cooperating Teacher and University Supervisor, should function as communities of practice, leading the PSTs to generate new knowledge and new skills.”
2. Names were changed at this early version to preserve the peer review integrity.
3. A course unit is referred to in many countries as a module or a unit of study.
4. Different from the traditional curriculum where teachers deposit information on students (also known as banking education), democratic spaces imply a kind of teaching in which the students actively participate in understanding and defining the personal and political realities of social life (Freire 1987).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Foundation for Science and Technology (FCT, Portugal) through the (SFRH/BD/141505/2018) grant awarded to the first author.

ORCID

Carla Valério  <http://orcid.org/0000-0002-2199-4695>

Cláudio Farias  <http://orcid.org/0000-0002-1364-0539>

Carla Luguetti  <http://orcid.org/0000-0002-9442-1636>

Isabel Mesquita  <http://orcid.org/0000-0001-5985-9686>

References

- Alves, M., A. MacPhail, P. Queirós, and P. Batista. 2019. “Becoming a Physical Education Teacher During Formalised School Placement: A Rollercoaster of Emotions.” *European Physical Education Review* 25 (3): 893–909.
- Armour, K. M., M. Quesnnerstedt, F. C. Chambers, and K. Makopoulou. 2015. “What is Effective CPD for Contemporary Physical Education Teachers: A Deweyan Framework.” *Sport, Education and Society* 22 (7): 799–811.
- Armour, K. M., and M. Yelling. 2007. “Effective Professional Development for Physical Education Teachers: The Role of Informal, Collaborative Learning.” *Journal of Teaching in Physical Education* 26 (2): 177–200.
- Atkinson, P., and M. Hammersley. 2007. *Ethnography: Principles in Practice* (3rd ed.). London: Routledge.
- Barab, S. A., and T. Duffy. 2012. “From Practice Fields to Communities of Practice.” In *Theoretical Foundations of Learning Environments*, edited by D. Jonassen, and S. Lund, 2nd ed., 29–65. New York: Routledge.
- Bryman, A. 2016. *Social Research Methods*. (5th ed.). London: Oxford University Press.
- Charmaz, K., and L. Belgrave. 2019. “Thinking About Data with Grounded Theory.” *Qualitative Inquiry* 25 (8): 743–753.
- Deglau, D., and M. O’Sullivan. 2006. “Chapter 3: The Effects of a Long-Term Professional Development Program on the Beliefs and Practices.” *Journal of Teaching in Physical Education* 25: 379–396.
- Denzin, N. K. 2006. “Analytic Autoethnography, or déjà vu all over again.” *Journal of Contemporary Ethnography* 35 (4): 419–428.
- Freire, P. 1987. *Pedagogia do Oprimido* [Pedagogy of the oppressed] (17th ed.). Rio de Janeiro: Paz e Terra.
- Gee, J. P. 2004. “Learning Languages as a Matter of Learning Social Languages Within Discourses.” In *Language Learning and Teacher Education: A Sociocultural Approach*, edited by M. R. Howkins, 13–31. Clevedon: Multilingual Matters.

- Gonçalves, L., M. Parker, C. Luguetti, and M. Carbinatto. 2021. "We United to Defend Ourselves and Face our Struggles': Nurturing a Physical Education Teachers' Community of Practice in a Precarious Context." *Physical Education and Sport Pedagogy* 27 (4): 339–352.
- Goodyear, V. A., and A. Casey. 2015. "Innovation with Change: Developing a Community of Practice to Help Teachers Move Beyond the 'Honeymoon' of Pedagogical Renovation." *Physical Education and Sport Pedagogy* 20 (2): 186–203.
- Goodyear, V. A., A. Casey, and D. Kirk. 2014. "Tweet me, Message me, Like me: Using Social Media to Facilitate Pedagogical Change Within an Emerging Community of Practice." *Sport, Education and Society* 19 (7): 927–943.
- Guskey, T. R. 2002. "Does it Make a Difference? Evaluating Professional Development." *Educational Leadership* 59 (6): 45.
- Herold, F., and M. Waring. 2018. "An Investigation of pre-Service Teachers' Learning in Physical Education Teacher Education: Schools and University in Partnership." *Sport, Education and Society* 23 (1): 95–107.
- Hoadley, C. 2012. "What Is a Community of Practice and How Can We Support It?" In *Theoretical Foundations of Learning Environments*, edited by D. Jonassen, and S. Lund, 2nd ed., 286–300. New York: Routledge.
- Holstein, J., and J. Gubrium. 2013. *Handbook of Constructionist Research*. New York: Guilford Publications.
- Hunuk, D. 2017. "A Physical Education Teacher's Journey: From District Coordinator to Facilitator." *Physical Education and Sport Pedagogy* 22 (3): 301–315.
- Lave, J., and E. Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- Luguetti, C., R. Aranda, O. N. Enriquez, and K. L. Oliver. 2018. "Developing Teachers' Pedagogical Identities Through a Community of Practice: Learning to Sustain the use of a Student-Centered Inquiry as Curriculum Approach." *Sport, Education and Society* 24 (8): 855–866.
- Luguetti, C., K. L. Oliver, and M. Parker. 2020. "Facilitation as an act of Love: A Self-Study of how a Facilitator's Pedagogy Changed Over Time in the Process of Supporting a Community of Learners." *Journal of Teaching in Physical Education* 40 (2): 207–214.
- MacPhail, A., K. Patton, M. Parker, and D. Tannehill. 2014. "Leading by Example: Teacher Educators' Professional Learning Through Communities of Practice." *Quest (grand Rapids, Mich)* 66 (1): 39–56.
- Martínez-Arbeláiz, A., J. M. Correa-Gorospé, and E. Aberasturi-Apraiz. 2017. "Communities of Practice and Negotiation of Meaning among pre-Service Teachers." In *Communities of Practice*, edited by J. McDonald and A. Cater-Steel, 525–543. Singapore: Springer.
- McLaughlin, M. W., and J. E. Talbert. 2001. *Professional Communities and the Work of High School Teaching*. Chicago: University of Chicago Press.
- Menter, I., and C. McLaughlin. 2015. "What Do We Know About Teachers' Professional Learning?" In *Making a Difference: Turning Teacher Learning Inside Out*, edited by C. McLaughlin, P. Cordingley, and R. McLellan, 31–51. Cambridge: Cambridge University Press.
- Oliver, K. L., C. Luguetti, R. Aranda, O. Nuñez Enriquez, and A. A. Rodriguez. 2018. "Where do I go from Here?': Learning to Become Activist Teachers Through a Community of Practice." *Physical Education and Sport Pedagogy* 23 (2): 150–165.
- Parker, M., K. Patton, L. Gonçalves, C. Luguetti, and O. Lee. 2021. "Learning Communities and Physical Education Professional Development: A Scoping Review." *European Physical Education Review* 28 (2): 500–518.
- Parker, M., K. Patton, and C. Sinclair. 2010. "From Committee to Community: The Development and Maintenance of a Community of Practice." *Journal of Teaching in Physical Education* 29 (4): 337–357.
- Patton, K., and M. Parker. 2017. "Teacher Education Communities of Practice: More Than a Culture of Collaboration." *Teaching and Teacher Education* 67: 351–360.
- Reeves, S., J. Peller, J. Goldman, and S. Kitto. 2013. "Ethnography in Qualitative Educational Research: AMEE Guide No. 80." *Medical Teacher* 35 (8): 1365–1379.
- Sands, Robert R. 2002. *Sport Ethnography*. Leeds: Human Kinetics.
- Smith, B., and K. R. McGannon. 2018. "Developing Rigor in Qualitative Research: Problems and Opportunities Within Sport and Exercise Psychology." *International Review of Sport and Exercise Psychology* 11 (1): 101–121.
- Tannehill, D., and A. MacPhail. 2017. "Teacher Empowerment Through Engagement in a Learning Community in Ireland: Working Across Disadvantaged Schools." *Professional Development in Education* 43 (3): 334–352.
- Wenger-Trayner, E., and B. Wenger-Trayner. 2020. *Learning to Make a Difference: Value Creation in Social Learning Spaces*. Cambridge: Cambridge University Press.
- Wenger, E. 1998. *Communities of Practice: Learning, Meaning, and Identity*. New York: Cambridge University Press.
- Yoon, K., C. Lee, and H. Jung. 2021. "Creation of an Instructional Model in a Community of Practice and its Impact on Relationships Between Members." *Physical Education and Sport Pedagogy* 26 (5): 504–516.