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## A narrative review about physical education learning strategies towards innovative teachers' professional development: Are communities of practice being romanticized?

**KEYWORDS:**

Physical education. Communities of practice.

Teacher professional development.

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**ABSTRACT**

Physical education teachers, in all their levels of career development, experience complex processes of professional learning. Moreover, educational policies worldwide have moved towards a student-centred learning which highly increases the density of teacher's professional development. Communities of practice have been highly reported in literature as a powerful learning strategy for professional development concerning pedagogical innovation with the ability to promote change. Thus, the present narrative review aims at reporting specific work on how communities of practice work as a teacher learning strategy towards the implementation of innovative pedagogical practices. To that end, we firstly overview the theoretical framework used on communities of practice fieldwork in order to clarify the main concepts. Secondly, we present an analysis of the communities of practice benefits and challenges and the literature on teacher educators' development and pre-service teachers' development inside of a physical education teacher education context, as well as how communities of practice are used as a learning strategy towards student-centred approaches. Additionally, the article offers a summary and possibilities for future research. To conclude, it is acknowledged the need for additional research on the occurring transformations inside of a community of practice and/or a report of the main challenges faced by members while engaging in it, especially in physical education teacher education contexts.

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## Estratégias de aprendizagem em educação física na direção do desenvolvimento profissional inovador de professores: Estarão as comunidades de prática a ser romantizadas? Uma revisão narrativa.

**RESUMO**

Os professores de educação física, em todos os seus níveis de desenvolvimento de carreira vivenciam processos complexos de aprendizagem profissional. Além disso, as políticas educativas avançaram para uma aprendizagem centrada no aluno, o que amplifica a densidade do desenvolvimento profissional do professor. As comunidades de prática têm sido mencionadas na literatura como uma estratégia de aprendizagem para o desenvolvimento profissional e inovação pedagógica com capacidade de promover mudanças educativas. Por este motivo, a presente revisão narrativa tem como objetivo relatar estudos específicos sobre como as comunidades de prática funcionam enquanto estratégia de aprendizagem de professores com vista à implementação de práticas pedagógicas inovadoras. Em primeiro lugar, apresentamos os conceitos teóricos utilizados no campo das comunidades de prática. Em segundo lugar, apresentamos uma análise dos benefícios das comunidades de prática e desafios que as mesmas representam, bem como a literatura sobre o desenvolvimento de professores educadores e o de professores estagiários dentro de um contexto de programa de formação de professores de educação física e ainda, como as comunidades de prática são usadas como uma estratégia de aprendizagem para abordagens centradas no aluno foram apresentados. Além disso, o artigo oferece possibilidades para pesquisas futuras. Concluindo, reconhece-se a necessidade de efetuar investigação adicional sobre as transformações ocorridas dentro de uma comunidade de prática e/ou relatar os principais desafios enfrentados pelos membros aquando do seu envolvimento, especialmente em programa de formação de professores de educação física.

**PALAVRAS-CHAVE:**

Educação física. Comunidades de prática.

Desenvolvimento profissional de professores.

## INTRODUCTION

Research attests the highly complex nature of teachers and pre-service teachers' (PSTs) learning and practice (Davis & Sumara, 1997; Opfer & Pedder, 2011; Strom, 2015). Additionally, in the past two decades or more, education has moved in a direction that considers student-centred learning to be most effective, adding complexity to the teacher's professional development process (Hattie, 2012; Le Ha, 2014). Thus, a narrative of student-centeredness has spiked through educational policies, national curricula, and teacher education, where such approaches to learning have been positioned as effective ways to promote a broad range of educative and health outcomes (O'Sullivan, 2013). Physical education teacher education (PETE) has been considered one of the most important factors in enhancing the quality of physical education (PE) (Armour et al. 2017). However, several studies have indicated that different PETE programmes developed for professional learning are unlikely to be effective, since learning does not directly transfer into school practicum, and suggest that multiple enabling and constraining elements influence the pedagogical decision-making and the enactment of teaching practices (Strom & Martin, 2016).

Hence, to fulfil the complex and inherent demands of teacher education, literature has been enhancing communities of practice (CoPs), or professional learning communities, as an effective tool for teachers' professional development (Parker et al., 2010; Wenger, 1998). In PE research, teachers' have been highly encouraged to work collaboratively as CoPs (Armour & Yelling, 2007; Armour et al., 2017; Deglau & O'Sullivan, 2006; Luguetti et al., 2019; Oliver et al., 2017; Parker et al., 2010; Patton et al., 2015). A CoP is presented as an opportunity for teachers to inquire into their respective practices and to develop a collaborative understanding of how to use new pedagogical approaches (Gonçalves et al., 2021). Thus, this literature acknowledgment places CoPs as a powerful strategy for a professional development based on innovative practices such as student-centred approaches (SCA), which centres this learning strategy as one of the most valuable regarding contemporary PETE demands.

In PE, studies have been developed in relation to how CoPs emerge and develop (Goodyear & Casey, 2015; MacPhail et al., 2014; Parker et al., 2010), how teachers' participation in CoPs supported their own professional development (Parker et al., 2012; Patton & Parker, 2017; Tannehill & MacPhail, 2017), and how CoPs improve teachers' pedagogy (Goodyear & Casey, 2015; Oliver et al., 2017; Yoon & Armour, 2017), teachers' content knowledge (Hunuk et al., 2013) and impact on pupil learning (Yoon & Armour, 2017).

Despite the many benefits associated with effective teacher development through participation in CoPs, many questions about how these groups are developed and who benefits from these structures remain unanswered (O'Sullivan, 2007). Therefore, further investigation on understanding the processes that examine the intricacies of effective CoPs is vital. Additionally, while much is known about CoP potential to enhance professional learning, substantially less is known about the processes with respect to how they work,

especially in PETE programmes. To date, little research (MacPhail et al. 2014; Tannehill et al., 2015) has been conducted specifically examining PETE CoPs.

Therefore, considering the reported relevance of CoPs in PE teachers' development towards a student-centred curriculum and the marked lack of evidence regarding the intricacies of its development, the present narrative review addresses literature perspectives and findings regarding this social learning strategy. Particularly, this study addresses an in-depth report of a body of literature, including its critical interpretation, by engaging in a comprehensive reflection about the way literature is exploring CoPs as an effective means to achieve teachers' professional development.

WHAT A COMMUNITY OF PRACTICE ENTAILS:

THEORETICAL-BASED CLARIFICATION OF KEY CONCEPTS

Literature examining CoPs as a teacher learning strategy has been connected to a base terminology related to the main concepts of the development and cultivation of a CoP (e.g., core elements of its constitution), how to progress in terms of learning and participation (e.g., base theory and theory of development) and the stakeholders involved (e.g., the ones responsible for managing relations, discussions, reflection). A broader acknowledgement of these concepts allows a deeper analysis and interpretation of the empirical findings.

### Situated learning theory

Drawing from Lave and Wenger (1991), situated learning theory is a guided by the notion that learning is an active process that occurs via an individual's engagement of practice in sociocultural contexts. The authors stated that situated learning is a form of participation in a CoP, which indicates that a person's knowledge is acquired and constructed by their active participation in a social context rather than by the internalisation of knowledge by an individual (Wenger, 1998). In the framework of *situated learning theory*, participation entails not merely "local events of engagement in certain activities with certain people, but a more encompassing process of being active participants in the practices of social communities and constructing identities in relation to these communities" (Wenger, 1998, p. 4). Here, learning is a process of meaning-making through forms of social practices and identity building in CoP (Wenger, 1998).

### Communities of practice

Lave and Wenger (1991) coined the term *community of practice* to refer to groups of people who shared related concerns, faced interrelated problems, or had a shared passion about a topic, and who as a community sought to strengthen their knowledge and expertise through regular social interactions.

According to Wenger and Wenger-Traynor (2015), to establish a CoP it is necessary to develop three core elements: domain, community and practice. First, the domain refers to a

group's identity which is defined by a shared area of interest. Participants pledge allegiance to the *domain*, and "therefore a shared competence that distinguishes members from other people" (Wenger & Wenger-Trayner, 2015, p. 2). Next, the *community* suggests that members pursue their interests through engagement in purposeful activities and meaningful discussions, facilitating learning from and with each other. Finally, the *practice* represents a shared repertoire of resources including experiences, stories, tools, and processes of addressing any stumbling blocks the group may encounter along the way. Creation of these resources takes considerable time and sustained interaction.

Wenger (1998) suggests CoPs are important places of negotiation, learning, meaning, and identity that, together with the following three dimensions, ensure the coherence of a community: *joint enterprise*, a sense of mutual accountability, interpretations, and rhythms; *mutual engagement*, the act of doing things together, developing relationships, establishing norms and working to maintain the community; and *shared repertoire*, the community's accumulated stories, artifacts, historical events, language, routines or concepts.

Moreover, CoPs are often distinguished as a specialized form of professional development involving members who share self-defined common learning/professional interests, in which interaction and discourse take place over time through discussion, analysis, and problem solving, resulting in professional learning (MacPhail et al. 2014). They are meaningful, purposeful, and revolve around authentic tasks, which contribute to a professional learning process that is valuable and relevant to individual members (Parker et al., 2010).

### Legitimate peripheral participation

In order to articulate the learning as process inside of a CoP, Lave and Wenger (1991) coined the term *legitimate peripheral participation*, referring to 'the development of knowledgeably skilled identities in practice and to the reproduction and transformation of a CoP' (p. 55). In essence, learning to talk the language of the community is foundational to legitimate peripheral participation (Lave & Wenger, 1991) and is representative of the process of newcomers (Goodyear et al., 2019). Moreover, CoPs are groups that evolve as members come and go and as old members leave, and new ones join (Lave & Wenger, 1991). Hence, the notion of legitimate peripheral participation describes how newcomers become fully participating community members, such as the case of PSTs in PETE (newcomers) that are completing their professional development programme in order to become recognized teachers with the help of teacher educators (TEs), cooperative teachers and university supervisors (full members). When newcomers actively participate in CoPs and interact with old-timers, learning can occur naturally (Lave & Wenger, 1991). Thus, the newcomers develop their trajectory of participation towards becoming independent participants by interacting with the experts (Gonçalves et al., 2022).

According to Wenger (1998), participants may be peripheral rather than full members of a CoP, though over time they may become more fully recognized. For PSTs, their experiences in PETE are those of peripheral participants and they actively work toward acceptance as full members of the PE teachers' culture (Sirna et al., 2008).

### Facilitator

Literature entails that a PE CoP with professional learning intentions is characterised as: (a) based on teachers' needs and interests; (b) understanding learning as a social process; (c) including collaborative opportunities; (d) ongoing and sustained; (e) viewing teachers as active learners; (f) improving pedagogical skills and content knowledge; (g) facilitating with care, and (h) focusing on improving students' outcomes (Armour et al., 2017; Patton & Parker, 2017). Furthermore, this adds the importance of the role of a *facilitator* inside of a CoP during teachers' development (Hunuk, 2017).

Facilitators are persons, teachers, TEs or other professionals who mediate professional learning CoPs (Hunuk, 2017; Patton et al., 2012). To be effective, facilitators must understand the institutional pressures, cultures and expectation that separate them from teachers (Fletcher et al., 2020). Within the role of facilitation, the importance of understanding teachers' contexts, listening to their voices, enhancing their self-esteem, observing and being observed during their practice, and building a community of teachers, are seen as essential for teachers' development (Patton et al., 2012). In CoPs, the presence of a facilitator who dialogues with the teachers, analyses their context with them and mediates negotiation among members is important, for example, for initiating and maintaining a CoP (Goodyear & Casey, 2015).

### REVIEW OF EXISTING LITERATURE ON COMMUNITIES OF PRACTICE AS A TEACHER LEARNING STRATEGY

Regarding the latest developments in PETE literature, CoPs have been recognized as an important learning strategy to contribute to the development of a constructivist curriculum and implementation of innovative pedagogies. For instance, understanding the internal social development of the dynamic inside of a CoP and comprehend its broader effect in the teachers' professional development may be of great interest for PETE scholars. Despite not being common in narrative reviews to disclose the types of databases and the inclusion criteria (e.g., Collins & Fauser, 2005), providing some key elements about the search strategy allows the readers to better judge the transparency of the work (Collins & Fauser, 2005).

Therefore, to comprehensively represent research investigation CoPs as a learning strategy, we undertook an exhaustive search of the literature to locate relevant published work, using data bases including Academic Search Ultimate, Education Source, ERIC, APA PsycInfo, Teacher Reference Center (combined via EBSCO host and screened for peer reviewed academic journals only), Scopus and Web of Science. As a first step to locate

papers published in the field of PE related to CoPs, we used the keywords *physical education, physical education teacher education, communities of practice, learning communities, teacher communities* and *professional communities*.

In this narrative review, we developed criteria that better suited the purpose of tracking scientific principles and practical usefulness related to our research purpose. The lead author read the full papers and recommended criteria for developing the narrative review. The criteria proposed were reviewed by the co-authors, all of whom had expertise in PETE. The primary categories addressed the theoretical framework about situated learning theory, CoPs, legitimate peripheral participation, and the role of the facilitator.

Given the proposed criteria, this narrative review begins with setting the scope of the topic via definitions and theories used to enable understanding CoPs as a learning strategy, followed by an explanation of the CoPs benefits and challenges. It then presents the literature on TEs development and PSTs development inside of a PETE context, as well as how CoPs are used as a learning strategy towards SCA. Finally, a summary and possibilities for future research are addressed.

#### RESEARCH PERSPECTIVES ON COMMUNITIES OF PRACTICE AS A LEARNING STRATEGY

##### **Communities of practice recognized powers and benefits**

Literature denotes that CoPs can hold the key to real transformation by being ‘a locus of engagement in action, interpersonal relations, shared knowledge, and negotiation of enterprises’ (Wenger, 1998, p.85), and had the power to initiate change in institutions by the conscious confrontation of competing values (Sachs, 2001; Watson, 2014).

Hence, a lot of positive outcomes arise in literature about CoPs, that include teachers informally and collaboratively learning from each other (Armour & Yelling, 2007), forming strong identities as teaching professionals (Deglau & O’Sullivan, 2006), developing a commitment to advocate for their subject at a wider policy level (O’Sullivan, 2007), and creating new images of themselves as teachers (Deglau & O’Sullivan, 2006). Furthermore, studies show that teachers participating in a CoP were highly motivated to reconsider their own practices for improving student learning and developing their programmes (O’Sullivan, 2007). Moreover, teacher participation in a CoP based on teachers’ specific needs increased their students’ learning and changed teachers’ teaching culture positively (Hunuk, et al., 2013). Also, CoPs can contribute to micro change in schools by being a democratic space for teachers’ professional development (Gonçalves et al., 2021; Sachs, 2001; Tannehill & MacPhail, 2017). Results indicated the development of a democratic CoP in a precarious situation through an ongoing and dynamic progression where teachers built their own practice to overcome the marginalization, by creating a space for the negotiation of what was meaningful and useful

for these teachers in their reality (Gonçalves et al., 2021). Likewise, research suggest that participation in CoPs based programme may promote teachers’ learning of disability to help them make sense of teaching in PE context (An, 2021).

Nevertheless, studies argue that contemporary PE CoPs must challenge teachers to become critical and innovative learners in the context of dynamic learning communities (Atencio et al., 2012), since teachers’ professional learning in the CoP impacted on the development of teachers’ pedagogies which then influenced pupils’ learning (Yoon & Armour, 2017).

Furthermore, results of a prolonged study in a continuous CoP context highlight the support that teachers provide one another, the empowerment they developed to address issues posed by their challenging work situations and the motivation that being a member of a CoP afforded them to persevere in teaching in difficult settings and how it contributed to their professional development and learning-over-the-continuum (Tannehill & MacPhail, 2017; You et al., 2018).

Additionally, social media-based CoPs are presented in literature as a ‘new’ method for professional learning that supports pedagogical change and overcomes some of the financial and time implications of facilitators and teachers working together. Studies results show that through social media, the facilitator re-enforced teachers changing practice, aided the development of the practices of an emerging CoP, and by the CoP situating their use of the innovation in the virtual world, teachers were supported in changing their practice over time, and the use of the pedagogical innovation was sustained. Interactions promoted teacher inquiry, challenged teachers to develop their existing use of the innovation further and encouraged them to work together and develop shared practices (Goodyear et al., 2014). Furthermore, established virtual PE CoPs have also highlighted shared values, our shared impact, professional and personal rewards and challenges (Goodyear et al., 2019; Wardd et al., 2021). Facilitator or moderator training could support the development of social media-based CoPs that subsequently and positively impact on teachers’ practices (Goodyear et al., 2019).

##### **Communities of practice recognized challenges and struggles**

While the benefits of CoPs are evident, research still debates the effectiveness of this learning strategy, despite less prominently. Although CoPs, in a very real sense, are self-organising, emerging in response to local conditions and to the needs of their members (Barab et al., 2004; Goodyear & Casey, 2015), it is important to acknowledge the complexity of such structures and their internal dynamics.

Though CoPs have been widely used as a strategy for teachers’ professional development (Parker & Patton, 2017; Vangrieken et al. 2017), their efficiency has been debated twofold. On one hand, as Wenger (1998) highlighted, asserting, “...these kinds of communities produce their own practices is not asserting that communities of practice are in any essential way an emancipatory force” (p. 85). The community might be a place where participants, in a functionalist view, only

reproduce social world conditions instead of questioning and transforming it (Lave & Wenger, 1991). Moreover, it has been debated that these communities may “function as a means to silence dissatisfaction through the hegemonic appeal to “community” and its normalising function as arbiter of ideological control” (Watson, 2014, p. 27).

Another critique that literature presents to CoPs is that the notion of a CoP was foregrounded by Lave and Wenger (1991), based upon an anthropological perspective, where CoPs were examined in everyday society, and not environments intentionally designed to support learning (Barab & Duffy 2012; Hoadley, 2012). Indeed, studies suggest 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 (Hoadley, 2012). The difference between a naturally occurring community and a community which is fostered is that naturally occurring communities do not have pre-defined learning goals (Barab & Duffy, 2012; Hoadley, 2012). Yet importantly, a CoP cannot be created. Instead, communities must have some form of history for them to emerge from, and members must share a form of history with one another (Barab & Duffy, 2012; Hoadley, 2012). Undeniably, a CoP can emerge as a result of a collective group of individuals working towards achieving the same pre-defined learning goal(s) (Barab & Duffy, 2012; Hoadley, 2012). In the process of working towards achieving the same pre-defined learning goal(s), individuals can develop a shared history with one another, members can develop a unique identity and a CoP can emerge where a community holds its own leadership and agenda(s) (Barab & Duffy, 2012; Hoadley, 2012). Nonetheless, different understandings of a collaborative project may affect mutual engagement in learning groups, which affect the group qualities and may hinder the development of a CoP. Hence, research argues for the importance of making learning goals explicit for all the CoP members (Johannesson, 2020).

Regarding virtual-based communities, despite presenting their recognized benefits and participants foreseeing a great potential, they also entail challenges related with participants' drop off for reasons such as laziness and lack of time, caution when posting texts to an online site, fear of being judged, and inhibition when other, more academically advanced participants, engaged in commentary (Garcia-Monge et al., 2019).

Even though CoPs seem to be a successful learning strategy in PETE programmes, research also demonstrates that scholars should address responsibilities in sending PSTs into contexts that might even be described as toxic. Complex contexts where PSTs must negotiate in striving for an excellent evaluation should warrant specific attention in PETE programs. Research results show that PSTs had to make a considerable effort, focus the attention, and spend energy on various interrelated social tasks aimed at building positive relationships with their supervisor and other PE teachers at the school, raising questions about how prepared programmes are to receive PSTs in a welcoming context (Sirna et al., 2008).

### **Teacher educators' development through communities of practice**

Engagement in CoPs may address teachers' particular needs and interests and encourage them to strive for what is deemed to be a worthwhile, relevant, and meaningful PE experience for their students, by engaging in on-going dialogue, individual and group reflection, systematic action, and mutual respect (MacPhail & Tannehill, 2012; Tannehill et al., 2015). The importance of TEs modelling the development of learning skills and involvement in a CoP with the aim to engage PSTs' in continued professional learning as part of a community is noted in literature (Armour, 2010; MacPhail, 2011). Gillette and Schultz (2008, p. 236) state that “TEs must develop a vision of emancipatory teacher education practice and act on that vision through the creation of CoPs (...) We must be willing to practice what we preach if we expect to foster [related capacities] in our teacher candidates (...) If we are serious about fostering an environment that encourages our teacher candidates to take action and teach for change in the roles as teachers, we must not only facilitate environments that encourage such practice, but also model what we envision in our own daily practice as TEs”.

Research results indicated that engagement in CoP provided a foundation for collaboration and reduced isolation, allowing participants to extend their teaching and research capacities. Hence, significant social dynamics and group processes that shaped their practice included a common focus, personal and professional relationships, safe but challenging spaces, and shared commitment (Patton & Parker, 2017). Moreover, in TE CoPs contexts where the focus was on the 'needs of participants', results revealed that they considered it an excellent context for learning and professional development, since the CoP seem to have acknowledged and satisfied the members' requests. However, in cases where hierarchical pressure affected relationships between CoP members could present a negative influence on teachers' professional learning (Yoon et al., 2021).

Thus, since CoPs call for a break from traditional forms of professional development, the typical role of TEs is also challenged. While CoPs benefit from continued support and input, TEs need to strike a balance between being leaders in facilitating collaboration and sharing their expertise while simultaneously being followers who are sensitive to group members' needs (Armour & Yelling, 2007). Thus, the TEs as providers take on the role of facilitator, with an aim to “guide rather than direct, question rather than show the way, and listen rather than tell (...) not to impose vision, but listen and hear, gently push and pull” (Parker et al., 2012, p. 324).

Additionally, literature facilitator's actions reveal how they can support teachers' empowerment. Those include creating a horizontal relationship with teachers through dialogue; understanding and respecting teachers' learning and struggling with teachers in their reality as an act of solidarity. These facilitator actions contributed primarily to building

a democratic space where the teachers could name, critique and negotiate the barriers they faced helping them seek better professional conditions, organising themselves as a community and pursuing social change (Gonçalves et al., 2021).

Accordingly, literature suggests that the aim of successful facilitation is for facilitators to become part of the group (Patton, et al., 2012). However, research entails that in these higher education communities all active members could collaboratively facilitate the functioning of the community. At various junctures in the community's work, and depending on the community's current focus, facilitation would, perhaps, be led by one member, yet this quickly became a cohesive and joint facilitation (MacPhail et al., 2014).

### **Pre-service teachers development through communities of practice**

The literature on the impact of CoP in PE on PSTs concentrates broadly on social aspects around the development of teacher identity and power differentials between agents (Keay, 2009; Rossi, 2013). Whilst notions of apprenticeship learning and legitimate peripheral participation (Lave & Wenger, 1991) are explored within that literature, there is a relative lack of explicit emphasis on the development of knowledge generally and subject knowledge specifically.

Conversely, there continues to be a paucity of interest in research, particularly within the PE domain, in examining TEs roles and practices in embedding the professional responsibility for professional learning for both TE and PSTs in a PETE programmes (MacPhail, 2011). The concern with this is that such a lack of interrogation may contribute to the evidence that PETE programs are overly concerned with producing teachers who pursuit innovative pedagogies rather than lead it by being the main example (O'Sullivan, 2003).

Nevertheless, there is some research that highlights that the process of knowledge development in PETE is socially constructed and complex and the PSTs' development might be influenced by various CoPs, particularly their school placements' PE departments and their university-based learning community. A case study reported in MacPhail et al. (2014) reveals that PSTs' professional learning involved participating in a CoP, in which different pedagogical principles were created. Here, PSTs acknowledged the University-based learning as enhancing their holistic understanding of the learning process, developing those aspects of critical pedagogy that were under-developed in schools. There were found significant gains in the knowledge bases of PSTs engaged in a CoP context where learning took place (Herold, 2019). This enhances the capability of school/university partnerships to facilitate enhanced knowledge development in PETE, by encouraging TEs to consider whether opportunities undertaken in a PETE program, and with colleagues external to the PETE program, encourage an authentic CoP (Herold & Waring, 2018; MacPhail et al., 2014).

On the other hand, research reveals a tendency for TEs and PSTs to developed into two separate CoPs (Lugueti et al., 2019). Several authors describe the challenges that arise in the

relationship between master and apprentices (Lave & Wenger, 1991; Wenger & Wenger-Trayner, 2015; Wenger et al., 2002). Accordingly, it seems typical that PSTs learn mostly in relation to other apprentices, mostly due to their lack of engagement with TEs, despite the efforts of TEs to show the possibilities of an 'open classroom' type of interaction (Lugueti et al., 2019).

### COMMUNITIES OF PRACTICE AS A LEARNING STRATEGY TOWARDS STUDENT-CENTRED APPROACHES

Researchers are expressing that, if PE is to move beyond the traditional pedagogies, then CoPs are a professional learning strategy that can support pedagogical innovation with change (Goodyear & Casey, 2015). Introducing teachers to innovations using a CoP has the potential to promote a sense of co-ownership of the innovation and reduce the likelihood of teachers' resistance (De Jong, 2012). Literature shows that CoPs have contributed to introduce teachers to innovative practices (e.g., SCAs) and, in recent years, CoPs have been used by university TEs to introduce PSTs to pedagogical innovations in PE (e.g., the activist approach (Oliver et al., 2018), cooperative learning model (Goodyear & Casey, 2015), and sport education (Lugueti et al., 2018). Moreover, a CoP allows teachers to come together to inquire into their respective practices and to develop their understanding of how to use new pedagogical approaches (Oliver et al., 2015), which supports the fact that this learning strategy could lead to sustained pedagogical innovation (Parker & Patton, 2016).

Studies referring to PE teachers state that they are typically willing to change their pedagogical practice; however, innovations are rarely sustained beyond initial implementation (Goodyear & Casey, 2015). This had led scholar to raises questions about the common format and quality of professional development opportunities that support teachers in implementing innovations (Brown, 2011; Penuel et al., 2007). The use of a CoP contrasts with the common approach to professional development in that it provides teachers with ongoing, collaborative opportunities grounded in their local contexts and experiences, which can result in a sense of growth and empowerment in their teaching practice (McLaughlin & Talbert, 2006; Tannehill & MacPhail, 2017).

Moreover, regarding SCAs, results of a study were participants created a shared instructional model in the CoP indicate that it helped members to form a strong bond, which ensured the sustainability of the CoP. Nevertheless, a limitation was that the professor, who originally developed the instructional model, was too heavily involved in decision-making, which weakened the teachers' autonomous professional learning. This study indicates that creating and cultivating a PE-CoP with a shared instructional model can help in making strong bonds among members and sustainability of the CoP (Yoon et al., 2021).

Additionally, literature entails that learning how to move from a theoretical understanding of SCAs to the practice of student-centred pedagogy was an emergent challenge. Specifically, the amount of time that was necessary to build a foundation that allowed for student and teacher understanding,

respect, and comfort, negotiating teacher and student assumptions that were embedded in the status quo of PE, and the struggle to gather and use meaningful data to guide pedagogical decisions. In this study, authors used a CoP to negotiate these challenges whereby they worked to all be able to see and name what was happening in their individual classes and collectively planned what was needed to move forward through those challenges (Oliver et al., 2018).

Furthermore, studies referring to a CoP were TEs implemented a SCA, revealed that they developed a relationship of trust and interdependence. Also, their PSTs created a safe environment that allowed them to overcome fear. Moreover, TEs and PSTs were able to negotiate the different levels of students' engagement during the season and the associated feeling of frustration. Despite of that, TEs and PSTs developed into two separate CoPs and did not engage in many moments of sharing between the two groups (TEs and PSTs) (Lugueti et al., 2018).

Further research reveals that culture, values, beliefs and professional background were critical for the development of the teachers' pedagogical identities in the process of learning to use a SCA within a CoP. These experiences created for some, places to further develop their ideas about teaching, whereas for others they caused great discomfort and a sense of personal loss. The CoP facilitated the development of the teachers' pedagogical identities, changing positionalities, and negotiating culture, values, beliefs and professional backgrounds (Lugueti et al., 2019).

Furthermore, recent literature reinforced the power that a well-planned and structured inquiry-oriented CoP, has on empowering teachers to enact a new SCAs framework, and the student learning that emerged (Calderón & Tannehill, 2021).

## **SUMMARY AND FUTURE DIRECTIONS**

The purpose of this review was to address the current state of research perspectives and findings referring to how CoPs are working as a learning strategy towards PE pedagogical innovation.

As we noted in the theoretical framework, the concepts entail the relevance of CoPs as an active process of social involvement towards a learning goal (Lave & Wenger, 1998). Moreover, the participation of members entails overtime involvement, which means that, to create learning transformation, active on-going participation must be guaranteed (Gonçalves et al., 2022). Hence, to help with the participation of the newcomers (e.g., PSTs) and provide them with powerful knowledge resources, facilitators must acknowledge the importance of their mediation of the learning process, to initiate and maintain a CoP (Goodyear & Casey, 2015). Accordingly, we believe that the base knowledge of CoP development entails further complexity to the process of teacher education. Thus, despite CoPs being highly recognized in literature as a powerful learning strategy, research reveals both its benefits and challenges.

While benefits highlighted in literature entail mainly impact on in-service teachers learning development (Armour & Yealling, 2007; Denglau & O'Sullivan, 2006), some results are also seen

on positive impact of pupils, precarious contexts, disability, innovative pedagogies and virtual-based CoPs (An, 2021; Gonçalves et al., 2021; Goodyear et al., 2019; Yoon & Armour, 2017).

However, on the opposite side of the coin, CoPs' negative points are mainly related to the fact that studies are considering CoPs spontaneous and naturally occurring, instead of acknowledging the possible need to foster specific learning goals to succeed (Barab & Duffy, 2012; Hudley, 2012). This might explain why some results report different acknowledgments regarding the purpose of the collaborative project and how that affected the opportunities for CoPs to prosper (Johannesson, 2020). Furthermore, some studies assumed their interest in analysing negative or contrary findings for the CoP process. However, no negative or contrary findings were found from the available data, since the CoP experience was new and enriching to participants with an opportunity to share their professional experiences for the first time (Hunuk et al., 2012).

Therefore, we believe that researchers should address and report crucial information such as dilemmas faced in the intricacies of a social interaction process. Due to its problematic nature, challenges faced by CoP participants could engage researchers in the development of sustained solutions, which will contribute to a broader theoretical knowledge supporting CoPs development and inform PETE programmes.

Furthermore, regarding particularly the development of CoPs in a PETE programmes context, results entail a major focus on the TEs development (MacPhail, 2011; Patton & Parker, 2017; Tannehill et al., 2015). Many benefits were pointed in the TEs professional development, such as CoPs providing contexts for collaboration, where teachers can extend their teaching capacities. Also, the fact that a common and shared purpose and shared commitment was, once again, pointed as relevant for ensuring CoP flourishing (Patton & Parker, 2017). Additionally, despite not revealing specific processes, literature entails directions for the development of TEs role as facilitators, highlighting the importance of establishing a balance between being a leader and expert, and simultaneously, comprehending and being sensitive to the group member's needs (Armour & Yelling, 2007).

However, in PETE context, the attention that research has been giving to the PSTs' development inside of a CoP structure is still scarce. Mainly, studies focus was on teachers' identity construction and how CoPs influenced PSTs development in PETE, but without in-depth insights about the intricacies of the process. Moreover, research denotes that in PETE, TEs and PSTs often engage in different and disconnected CoPs (Lugueti et al., 2019), which might happen due to the lack of literature support for their shared development. Adding this information to the previous reported fact that few unsuccessful CoPs are reported in literature made us believe that assuming that this learning strategy has the means to promote PSTs development has received little support from empirical research. Furthermore, the fact that PSTs experience multiple enabling and constraining elements that can influence their professional development, adds further complexity to the development and cultivation of a

CoP that calls for active social interactions with stakeholders that might have power over PSTs (e.g., TEs that must evaluate PSTs). Accordingly, it can be argued that PSTs involvement in CoPs adds further complexity to the process of analysis of this collaborative structure and it is precisely in this point that information is scarce.

Additionally, when analysing the connection between CoPs and the development of SCAs, many scholars support the notion of CoPs being an effective learning strategy to pursuit pedagogical innovation (Goodyear & Casey, 2015). Here, authors pointed the relevance of the facilitator role towards positive engagement of the newcomers (e.g., PSTs) in the CoP (Yoon et al., 2021). Nonetheless, literature in this topic reinforced the importance of a well-structured and purposeful CoP (Calderón & Tannehill, 2021). Henceforth, we argue that PETE programmes would benefit from an investment not only in a professional development towards SCAs, but also in a knowledge base support from CoPs development. Namely, support strategies for mentors, planning and structuring process of CoPs domains and continuous moments of facilitation during the process that could be intentionally designed to support learning and based on the specific contexts of its occurrence.

Accordingly, PE teachers in every level of development must embrace and be full participants in existing CoPs or other social collaborative approaches, to establish the programmes they envision while working collaboratively (Beddoes et al., 2019). Moreover, it is added that success in the change process requires all stakeholders being ready to engage in change: prepared and willing to do what it takes to make effective change happen (Calderón & Tannehill, 2021). Nevertheless, since most of the research on CoP as professional development learning strategy has focused of PE teachers, we reinforce that research is still needed to address PSTs and how PETE programmes are designed to promote CoPs with learning intentionality. This would assist the renewal of PETE programmes designs to support, not only curriculum innovation but also, the means to achieve it.

Accordingly, this compels the rethinking of the organization and structure of professional learning in higher education, calling into question the necessity for meaningful reflection for true transformation in PSTs professional learning and practice and how that transformation could translate into their future practice toward educational change. Finally, we believe that literature will enrich if scholars invest on in-depth longitudinal studies (Hunuk et al., 2012) that follow the occurring transformations inside of a CoP and/or reported the main challenges faced by members while engaging in it. This might help PE and PETE community to predict possible problems and avoid a theoretical romanticization of CoPs as a learning strategy that always works.

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## Percursos para a excelência no desporto: Uma reflexão sobre a influência dos padrões de treino e dos fatores psicossociais no desenvolvimento do atleta a longo prazo.

#### PALAVRAS-CHAVE:

Talento. Desenvolvimento do atleta. Especialização precoce. Prática diversificada. Influências psicossociais.

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#### RESUMO

Nas últimas décadas observa-se um aumento da produção científica dedicada ao estudo do desenvolvimento do atleta e do talento no desporto. Diversos estudos têm sido desenvolvidos na tentativa de compreenderem os percursos trilhados pelos atletas, com particular interesse por aqueles que alcançaram um patamar de rendimento superior no contexto desportivo. De uma forma global, a investigação tem identificado dois percursos frequentemente adotados pelos atletas, nomeadamente a especialização precoce e a prática desportiva inicial diversificada. A especialização precoce caracteriza-se pela prática de uma só modalidade desportiva desde tenra idade e pelo investimento em elevadas quantidades de treino altamente estruturado e intenso (prática deliberada). A prática desportiva inicial diversificada considera o envolvimento em diversas modalidades desportivas numa primeira fase de desenvolvimento e uma especialização posterior e mais tardia na modalidade de eleição. Contempla, também, o envolvimento numa prática de cariz informal e lúdico numa fase inicial do desenvolvimento, para além do investimento numa prática estruturada e intensa, que deverá ser progressivamente incluída ao longo do desenvolvimento do atleta. Adicionalmente, as influências psicossociais plasmadas no papel que os pais, treinadores e amigos possuem no percurso desportivo do atleta têm sido igualmente destacadas na literatura enquanto fatores determinantes neste processo. A reflexão e problematização sobre o conhecimento existente no âmbito desta temática será o foco deste ensaio teórico. Para além da revisão do estado da arte, as limitações inerentes a esta linha de investigação serão clarificadas e sugestões para futuros estudos avançadas.

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