

# Exploring the Role of Communities of Practice in Enhancing Professional Development of Physical Education Teachers: A Literature Review."

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**Abstract:** By analyzing relevant literature, this study explores the role of Communities of Practice (CoP) in promoting the professional development of physical education (PE) teachers. CoPs provide PE teachers with a platform for collaborative learning, knowledge sharing, enhancing their teaching skills and effectiveness. Through CoPs, PE teachers can exchange experiences and reflect on teaching methods, thereby improving teaching strategies and fostering professional growth. However, there are some challenges in the implementation of CoPs. Time constraints pose a major barrier, as heavy workloads limit PE teachers' participation in CoP activities. Sustainability is also an issue, with diminished leadership and participation over time. Furthermore, without formal support or recognition from schools, CoPs struggle to secure resources, hindering their growth. Although CoPs offer significant opportunities for the professional growth of PE teachers, issues such as time management, participation, sustainability, and institutional support must be addressed to fully realize the potential of physical education teachers.

**Keywords:** Physical Education Teachers; Professional Development; Communities of Practice.

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## 1. Introduction

With regard to teacher professional development (PD), it is aimed to help teachers enhance their expertise and teaching, and thus better support the academic and personal growth of their students (Sims & Wood, 2021). As pointed out by Hattie (2009), a teacher's teaching capacities and sustained professional development are crucial factors in a student's learning. As for PE teachers, professional development can significantly help them satisfy the changing demands of students and the educational contexts (Armour & Harris, 2013). Nonetheless, PE teachers confront distinct challenges, such as how to stimulate a lifelong passion for physical activities. Thus, constant professional development is needed to reinforce their teaching effectiveness and fulfill the changing education needs (Armour & Yelling, 2007; O'Sullivan & Parker, 2021).

Due to the potential of enhancing professional development and cooperative learning across diverse domains, Communities of Practice (CoP) have been widely acknowledged (Smith, 2003). CoPs are conducive to promoting knowledge and experience sharing and triggering professional growth. As CoPs are featured by collaboration, reflective practice is supported. In this way, teachers can critically examine their teaching approaches and constantly enhance their teaching capacities (Goodyear & Casey, 2015).

This study is aimed to uncover how CoP plays a crucial role in reinforcing the professional development of PE teachers. It explores the forms, content, and challenges for PE teachers when they engage in CoPs, with a view to understanding their genuine needs for informal learning in their professional development journey and laying a basis for better construction of CoPs. The CoPs are expected to offer PE teachers a platform for continuous learning, mutual encouragement, and networking, so as to establish a solid foundation for their professional development and provide ongoing momentum for reforms in physical education

teaching.

## 2. Review of Related Literature

### 2.1. Communities of Practice

The theory of Communities of Practice (CoP), introduced by Lave and Wenger (1991), provides a framework to understand how individuals learn and develop in a social context. CoPs refers to groups of individuals who come together spontaneously due to shared interests, professions, or tasks for interaction and collaborate in order to share knowledge, solve problems, and enhance skills (Wenger, 1998). CoPs facilitate the sharing of knowledge, experiences, and practices, contributing to both individual and collective professional growth. The collaborative nature of CoPs supports reflective practice, so that teachers can critically examine their instructional methods and continuously improve their teaching abilities (Goodyear & Casey, 2015).

The widely recognized CoPs play crucial roles in cultivating specialized development, heightening knowledge sharing, and reinforcing organizational effectiveness. As claimed by Wenger, McDermott, and Snyder (2002), CoPs provide a structured context for people with shared interests to jointly discuss, share, and improve their practices and knowledge. Such a cooperative knowledge sharing is of great significance for keeping and advancing professional criteria (Wenger, 1998). According to Vescio, Ross, and Adams (2008), by participating in CoPs, professionals can engage in reflective practice, get feedback, and delve into new tactics to fortify their professional ability. Such a sustained learning procedure is indispensable for adapting to changing practices and criteria.

### 2.2. Professional Development

In a broad sense, professional development (PD) is the persistent process for individuals to enhance their competencies, knowledge, and skills so as to enhance

performance and upgrade their careers. Beyond that, such a notion includes various activities for promoting professional development, such as formal education, seminars and training (Borko, 2004). As claimed by Hargreaves and Fullan (2012), specialized development encompasses holistic endeavor to enhance people and groups' specialized abilities. It is featured by sustained learning and adaptation to varying criteria and practices in one's domain. Moreover, professional development can remarkably keep professional criteria and address the dynamic features of contemporary working contexts (Guskey, 2002).

### **2.3. Teacher' Professional Development**

Teacher professional development is focused on strengthening skills, knowledge, and teaching practices of educators. The purpose is to improve teaching effectiveness and students' results via sustained learning and professional development (Guskey, 2002). In this process, various activities are designed for supporting teachers to improve their teaching methods, classroom management, and educational tactics. At the same time, this development is important for adapting to education reforms, fusing new techniques, and tackling many student demands (Darling-Hammond, 2017).

### **2.4. Professional Development of Physical Education Teacher**

In terms of PE teachers' professional development, it includes the sustained procedure of acquiring new knowledge and skills to heighten their teaching effectiveness and boost their development. As claimed by Armour and Yelling (2007). Professional development in PE can affect many aspects of education, underscoring its importance. As argued by Parker, Patton, and Sinclair (2016), professional development programs with good structures are conducive to improving teaching results, augmenting student's engagement, and increasing teacher's satisfaction. Additionally, professional development can remarkably help PE teachers tackle modern challenges, such as integration of technology.

### **2.5. Role of CoP in Teacher Professional Development**

#### **2.5.1. Facilitation of Collaborative Learning**

CoPs offer a cooperative context for teachers to engage in shared learning experiences. Through CoPs, teachers can discuss teaching tactics, share optimal practices, and reflect on their teaching approaches (Vescio, Ross, and Adams, 2008). Meanwhile, this collaborative method is conducive to supporting the effective teaching practices' development and cultivating a culture of sustained improvement. As claimed by Wenger, McDermott, and Snyder (2002), the CoPs provide regular interactions, so that teachers can get feedback, conduct self-reflection, and thus improve teaching practices. According to Darling-Hammond (2017), effective CoPs offer persistent and cooperative learning experience, so that they are indispensable for a teacher. Under the help of such continuous engagement, teachers can keep up with the latest pedagogy methods and education research.

#### **2.5.2. Construction of a Sense of Community**

Teacher's professional development can be effectively cultivated by constructing a sense of community within CoPs. As pointed out by Wenger (1998), trust promotes open communication, so that discussions can be more in-depth and

feedback can be more honest. When teachers trust each other, they may participate in meaningful exchanges for professional development. As claimed by Grossman, Wineburg, and Woolworth (2001), sustained collaboration within CoPs is favorable to change personal professional development into a collective enterprise. As demonstrated by Stoll et al. (2006), when CoPs revolve around explicit, shared objectives, members are more engaged, triggering more influential professionals.

#### **2.5.3. Enhancement of Engagement and Motivation**

In any professional development initiative, the critical factors include engagement and motivation. It has been verified that CoPs can very effectively cultivate these components among educators. As pointed out by Vescio, Ross, and Adams (2008), when teachers actively devote themselves to their professional development, they may implement new tactics in their classrooms, causing enhanced teaching practices and student results. In accordance with the Self-Determination Theory of Deci and Ryan (2000), inner motivation is more sustainable and causes higher levels of satisfaction and engagement. Under the background of CoPs, the opportunity of collaborating, solving problems, and innovating within a supportive community nurtures this inner motivation. This makes professional development a more fulfilling process.

#### **2.5.4. Encouragement of Peer Support and Mentorship**

Peer support within CoPs can remarkably cultivate a cooperative learning context for teachers to share challenges, experiences, and knowledge in a non-hierarchical context. As shown by the research, peer support is conducive to creating a trustworthy and open culture (Lieberman & Miller, 2008). Generally speaking, teachers engaging in CoPs can find value in the support offered by their peers, which can trigger not only elevated motivation and job satisfaction, but also a declined sense of isolation (Vescio, Ross, & Adams, 2008).

### **2.6. Different Types of Informal CoPs for PE Teachers' Professional Development**

#### **2.6.1. Peer-to-Peer Learning Communities**

One prevalent type of informal learning for PE teachers is peer-to-peer learning, where teachers form small groups to discuss classroom strategies, share experiences, and provide mutual support. These groups are typically based within schools or local networks. Armour & Yelling (2007) highlight how peer-based informal CoPs among PE teachers offer a valuable platform for exchanging ideas, problem-solving, and reflective practices. This collaborative setting allows teachers to critique each other's methods and discuss how to address common challenges, such as motivating students for physical activities. Schlosser, Parkes, and Brunson (2021) emphasize the importance of professional learning communities in physical education, noting how these environments promote teacher collaboration and shared problem-solving. The authors suggest that engaging in peer-to-peer learning can enhance instructional skills, especially when teachers observe one another in action. Lamb and King (2021) explore the application of peer-to-peer learning in the context of pre-service PE teachers through the dyad model of lesson study. In this model, two pre-service teachers work closely together, planning, delivering, and reflecting on lessons in a collaborative manner.

#### **2.6.2. Online Learning Communities**

The rise of digital platforms has expanded opportunities for

PE teachers to engage in informal learning through online CoPs. These communities, hosted on social media, discussion boards, and professional forums, enable teachers to access resources, participate in discussions, and share best practices without geographical limitations. Parker et al. (2012) examine the use of online CoPs in PE teacher education, highlighting how virtual communities offer flexible and accessible environments for teachers to collaborate. Ferreira, Gonçalves & Parker (2022) revealed how physical education teachers build and sustain communities of practice through online platforms, especially when faced with remote teaching. The study explored how teachers interact, share resources, and provide mutual support in virtual communities. This interaction has promoted collaboration among physical education teachers. The study by Gorozidis, Tzioumakis, Krommidas & Papaioannou (2020) provides an innovative case of in-service training for physical education teachers based on social media. PETCoN, through a Facebook group, created an online community for teachers grounded in Self-Determination Theory (SDT).

Informal cross-disciplinary CoPs are those where PE teachers collaborate with professionals from other sectors, such as health professionals or sports organizations. This allows teachers to integrate diverse perspectives and approaches into their teaching. MacPhail et al. (2014) explore how PE teachers collaborate informally with healthcare workers and community sports leaders to enhance their understanding of physical health and fitness, thus improving their teaching practices. These cross-sector CoPs help bridge the gap between PE and health education, promoting a more holistic approach to student well-being.

### **2.6.3. Mentorship and Coaching CoPs**

Informal mentorship or coaching networks form another essential CoP in PE teachers' professional development. Teachers often seek advice from more experienced colleagues or take on mentorship roles themselves, helping less experienced teachers navigate the profession. Patton et al. (2015) found that mentorship relationships within PE teaching communities, whether formal or informal, significantly contributed to the ongoing professional development of novice teachers. These mentorship-based CoPs provided personalized feedback and career guidance, helping teachers reflect on their practices in a supportive environment. Capel and Lawrence (2019) examine the role of mentorship in the professional development of secondary school PE teachers, highlighting its importance in helping novice teachers navigate the challenges of teaching. They emphasize that mentorship not only serves as a mechanism for the transfer of subject-specific knowledge but also plays a crucial role in the development of classroom management skills, emotional resilience, and professional identity. In their analysis, the authors discuss how structured mentorship programs can provide personalized support, allowing teachers to receive tailored feedback and advice on both pedagogical strategies and professional dilemmas.

### **2.6.4. School-Based CoPs**

School-Based are established within schools or districts and consist of teachers working together to address specific institutional goals. PE teachers can collaborate with colleagues in interdisciplinary teams to align their teaching practices with school-wide initiatives. Goodyear & Casey (2015) demonstrate that school-based CoPs help PE teachers align physical education with broader curricular goals, such as promoting student well-being and lifelong physical activity

habits. Duncombe (2005) examined the implementation of school-based collaborative professional learning as a strategy for PD in primary school PE. His analysis underscores the unique benefits of school-based CoPs, highlighting the proximity of teachers working together in the same educational environment. Unlike external workshops or training sessions, school-based CoPs allow teachers to engage with peers who are familiar with the specific needs, challenges, and resources of their shared school context. This shared understanding fosters a deeper level of collaboration and innovation in addressing both common and context-specific issues in physical education.

## **2.7. The Advantages of CoPs in the Professional Development of PE Teachers**

### **2.7.1. Collaborative Learning and Knowledge Sharing**

One of the primary advantages of CoPs is their ability to foster collaborative learning and knowledge sharing among PE teachers. According to Ferreira, Gonçalves, and Parker (2022), CoPs allow teachers to engage in dialogue, share experiences, and reflect on their teaching practices.

### **2.7.2. Cross-Disciplinary CoPs**

This collaborative environment encourages the exchange of ideas and strategies, which can lead to the improvement of teaching methods and pedagogical approaches. Additionally, Gorozidis et al. (2020) highlight that the online CoP, PETCoN, facilitated through social media platforms like Facebook, has proven to be an effective tool for PE teachers to collaborate and share resources, especially when geographical limitations prevent face-to-face interactions. The informal nature of these interactions promotes trust and open communication, enabling teachers to learn from each other's experiences and expertise.

### **2.7.3. Peer Support and Mentorship**

Mentorship is a crucial aspect of CoPs, particularly in the context of PE teachers. Capel and Lawrence (2019) emphasize the importance of mentorship within CoPs, where experienced teachers guide and support novice teachers. This mentoring process not only helps new teachers navigate the complexities of the profession but also fosters a sense of belonging within the teaching community. Through mentoring relationships, teachers can receive personalized feedback, develop their teaching skills, and build confidence in their abilities. Duncombe (2005) further highlights that school-based CoPs provide a structured environment for mentorship, where teachers can engage in collaborative reflection and problem-solving, leading to improved teaching practices.

### **2.7.4. Continuous Professional Development**

CoPs offer an ongoing, dynamic platform for PE teachers to engage in continuous professional development. Unlike traditional, one-off professional development programs, CoPs allow teachers to participate in long-term learning and development activities. Armour and Yelling (2007) argue that informal, collaborative learning within CoPs provides a more effective form of PD than formal workshops or seminars. The sustained nature of CoPs ensures that PE teachers can continuously refine their teaching methods, stay updated with the latest developments in sports science, and implement new strategies to enhance student engagement in physical education.

### **2.7.5. Practical Application and Innovation in Teaching**

Another key advantage of CoPs is their focus on the

practical application of knowledge and innovation in teaching. Patton, Parker, and Tannehill (2015) argue that CoPs encourage PE teachers to experiment with new teaching strategies and reflect on their effectiveness in real-time. This process of innovation is critical for PE teachers, who must continuously adapt their teaching methods to engage students in physical activity effectively. Lamb and King (2021) illustrate how a dyad model of lesson study within a CoP setting enabled pre-service PE teachers to collaboratively develop, implement, and refine their teaching practices. This hands-on approach ensures that the professional development activities are directly relevant to the teachers' day-to-day teaching responsibilities.

## **2.8. Challenges of CoPs in PE Teachers' Professional Development**

### **2.8.1. Time Constraints**

Time constraints remain one of the primary barriers to the successful implementation of CoPs. Ferreira, Gonçalves, and Parker (2022) argue that PE teachers often struggle to find time to engage in CoP activities due to their demanding teaching schedules and extracurricular responsibilities. The structure of the school day, combined with the additional workload PE teachers face, limits the time they can dedicate to collaborative professional development activities. Armour and Yelling (2007) also highlight this issue, noting that without adequate time allocation, teachers are less likely to participate meaningfully in CoP initiatives.

### **2.8.2. Sustainability and Continuity**

Sustaining CoPs over time poses a significant challenge, especially when there is a lack of continuous engagement and leadership. Parker et al. (2012) emphasize that the sustainability of CoPs depends on consistent leadership and member participation. In many cases, once the initial enthusiasm wanes or external support diminishes, CoPs may struggle to maintain momentum. Goodyear and Casey (2015) further argue that without long-term institutional support, CoPs may dissolve, leading to fragmented professional development efforts.

### **2.8.3. Varied Levels of Participation and Engagement**

Another challenge identified in the literature is the unequal levels of participation and engagement among members of a CoP. Gorozidis et al. (2020) discuss how some PE teachers may engage passively in online CoPs like PETCoN, consuming information without actively contributing to discussions or sharing their experiences. This imbalance in participation can reduce the overall effectiveness of the CoP, as its success depends on active collaboration and knowledge sharing. Capel and Lawrence (2019) also point out that some teachers may be hesitant to engage fully due to a lack of confidence or experience, particularly in mentorship-based CoPs.

### **2.8.4. Institutional Support and Recognition**

The lack of formal institutional support for CoPs is another barrier to their success. O'Sullivan (2014) argues that many schools and educational institutions fail to recognize CoPs as a valid form of professional development. Without formal endorsement or recognition, CoPs may not receive the resources or support needed to thrive. MacPhail et al. (2014) also note that institutional policies and a lack of clear professional development frameworks can limit teachers' opportunities to engage in CoPs, as these activities may not be aligned with traditional PD models or expectations.

## **3. Summary**

The literature highlights several key advantages of CoPs in supporting the professional development of PE teachers. Firstly, collaborative learning and knowledge sharing are recognized as significant benefits, as CoPs provide a platform for PE teachers to exchange experiences and reflect on their teaching practices. This exchange promotes the improvement of teaching strategies and creates a supportive learning environment. Secondly, another key advantage is peer support and mentorship. CoPs facilitate mentorship between experienced and novice teachers, fostering professional growth and community-building. PE Teachers can also engage in continuous professional development, as CoPs offer long-term, collaborative learning opportunities that are more sustained and effective than traditional one-off workshops. Finally, CoPs encourage practical application and innovation in teaching, as PE teachers are supported in experimenting with new teaching methods and refining their approaches through feedback and reflection.

However, the literature also identifies several challenges. Time constraints are a significant barrier, as PE teachers often struggle to find the time to participate fully in CoP activities due to their heavy workloads. The sustainability and continuity of CoPs are also problematic, as maintaining engagement and leadership over time can be difficult without ongoing support. Additionally, varied levels of participation and engagement within CoPs can reduce their effectiveness, with some members contributing less actively. Finally, institutional support and recognition are often lacking, with schools failing to formally endorse CoPs as a valid form of professional development, which limits the resources and backing needed for CoPs to thrive.

In conclusion, while CoPs offer valuable opportunities for professional growth and collaboration among PE teachers, these communities face challenges in terms of time management, participation, sustainability, and institutional recognition, which need to be addressed for their full potential to be realized.

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