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Continuing Professional Development of PE Teachers in Different School Levels

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Abstract:
The study made a comparative analysis of the extent of continuing professional development (CPD) engagement of PE teachers in selected schools in Henan, China. It also looked into the CPD needs of the PE teachers. The study showed that the PE teachers' CPD engagement is moderate. It also showed that the extent of CPD engagement is not significantly different among PE teachers at the elementary, high school, and tertiary levels. The study also highlighted the needs of PE teachers in the areas of research, curriculum implementation, information technology, sports training, and English communication

Keywords: Continuing Professional Development, Physical Education, PE Teachers

Introduction

Quality education is a universal agenda that is slow in its progress [1] despite the many interrelated paths toward its achievement. One of the paths toward quality education is continuing professional development (CPD) of teachers. CPD is the effort to maintain and improve teachers' knowledge and practice while in the workforce, enhancing their initial education and induction experiences [2]. According to OECD [3], CPD's primary objectives are updating individuals' skills, attitudes, and approaches in light of the development of new teaching techniques and objectives, new circumstances, and new educational research; enabling individuals to apply changes made to curricula or other aspects of teaching practice; enabling schools to develop and apply new strategies concerning the curriculum and other aspects of teaching practice; exchanging information and expertise among teachers and others, and helping weaker teachers become more effective. It has long been recognized universally that teachers' CPD is essential to the improvement of classroom practice but access to it is still limited. Based on the 2021 Education International report on the status of teachers worldwide, meaningful continuing professional development that is easy to access, responsive to current needs, can be undertaken during work hours, and provided free of charge is still elusive [4]. Globally an average of 43% only is participating in CPD [5].

CPD is also a significant matter in China's education sector amidst its continuing educational reform to attain quality education. According to Xu [6], the reform has drastically changed the roles of Chinese teachers, making the traditional ones incapable of meeting the demands of contemporary parents and society thus, teachers must embrace CPD as well. China's quest for quality education cuts across all the different learning fields including physical education (PE). Through the evolving educational reforms that China started implementing decades ago, PE has become a four-pronged discipline that caters to sports participation, sports skills, physical health, mental health, and social adaptation. This latest change in the PE curriculum made the Chinese PE teachers uncertain how to implement it and reorient their practices

[7]. Even PE teachers in normal schools are not well attuned to the latest changes in the PE curriculum [8]. To address the PE teachers' needs with regards to the new curriculum the Ministry of Education encouraged schools to conduct CPD such as visits and classroom observations.

China's continuing educational reform makes CPD an all-important undertaking. This has led to an increase in research interest about CPD particularly on effective strategies. So far, effective ways of collaborating for professional development have been documented [9], [10]. Despite the increasing number of studies on Chinese teachers' CPD, there is still a remarkable scarcity of quantitative research about it [11]. The need for more studies on CPD includes a specific focus on PE. According to Gong et al., [8], there is scant literature on CPD involving the professional learning of PE educators in China. They also emphasized a focus on identifying specific professional learning and development needs of specific area groups of teachers. In line with this research gap, the study assessed and compared the CPD practices and needs of PE teachers across different educational levels. It is hoped that this approach will lead to more specific CPD interventions as advocated by Gong et al. [8].

CPD practices can be formal like attending seminars and trainings. It can also happen in informal settings at school like casual dialogues with fellow teachers, coaching and mentoring between colleagues, and sharing of ideas. CPD can also be pursued individually through activities like reading, experimenting, and reflecting. These different CPD practices can be seen in the framework developed by Evers et al. [12] which includes the following domains: keeping up to date, experimenting, reflecting and asking for feedback, collaborating with colleagues to improve lessons, and collaborating with colleagues to improve school development. Assessing the level of PE teachers' CPD practices based on Evers et al. [12] framework can help teachers maximize their development.

The most common CPD practice is "keeping up to date" which features acquiring new knowledge and skills related to teaching and subject content. Evers et al. [12] regarded the following practices as keeping up to date: visiting educational sites on the internet, reading pedagogical literature and subject content, and participating in conferences and training courses. The study of Broemmel et al. [13] involving American teachers has shown that 98% of the respondents read some professional literature. The big advancement in information technology, however, enabled teachers not only to read but also to watch video materials with great ease from the internet. On the other hand, Chinese PE teachers mostly prefer training courses to keep themselves updated [8]. Online training courses are also valuable means of teacher development [14].

Another CPD practice that is popular in China is professional learning communities (PLC). PLCs are groups of teachers collaboratively sharing their expertise [15]. According to Hu et al. [16], PLCs are recognized now as one of the most effective approaches for promoting the professional development of teachers. The PLCs in China exhibit organizational influence, leadership, professionalism, learning capacity, and a sense of community [17]. PLC as a CPD engagement falls under the practice of "collaborating with colleagues to improve the lessons". Evers et al. [12] describe this collaboration as discussing the teaching approaches used in class with colleagues, discussing lessons with colleagues in an electronic learning environment, using peer coaching, preparing lessons with colleagues, and making agreements with colleagues about pedagogical practices. According to de Jong et al., [18], PLC is the most frequently reported form of teacher collaboration among Chinese teachers. On the other hand, Chinese research literature does not offer significant information on experimenting, reflecting asking for feedback, and collaborating with colleagues to improve school development.

Aside from assessing the extent of CPD engagement by Chinese PE teachers, the study also identified their CPD needs. Based on the study of Gong et al, [19], research-related training is one of the CPD needs of Chinese PE teachers. The other popular needs are sports training, and the English language [8]. Knowing the PE teachers' needs can help in formulating an effective intervention for their CPD.

The theoretical foundation of the study is the self-determination theory (SDT) and social constructivism theory. SDT was developed by Deci and Ryan in 1985. According to this theory, people need autonomy, competence, and relatedness to achieve psychological growth [20]. In the context of the proposed study, CPD is seen as a medium to achieve autonomy and competence. The need for competence, to be able to control their own professional goals explains why teachers desire new knowledge and skills. CPD can also be viewed as a form of social constructivism.

Method

The study was conducted in Henan, China during the AY 2023-2024. The respondents of the study were PE teachers from selected elementary, secondary, and tertiary schools. The total number of PE teachers in the selected schools was 180. Given the said population, the minimum sample size required for the study was 123 PE teachers. Sampling was random and apportioned per school. The study utilized a survey questionnaire as an instrument for gathering data. The first part of the questionnaire gathered information about the profile of the respondents. This is to describe the respondents in general. The second part of the instrument assessed the level of the respondents' continuing professional development. The items under this section were adopted from the Measures of Teachers' Professional Development at Work (MTPD) which was developed and validated by Ever et al. [12]. The scale has five factors, keeping up to date (items 1-5), experimenting (items 6-10), reflecting and asking for feedback (items 11-14), collaborating for lesson improvement (15-17), and collaborating for school development (18-21). The third part of the questionnaire is about the CPD needs of PE teachers. Since the instrument was an adopted standardized tool, the researcher did not subject it to validation and reliability tests anymore.

Results and Discussion

Table 1: Overall Continuing Professional Development Practice

CPD Domains	Mean	SD	Interpretation
1. Keeping Up to Date	3.37	0.43	Moderately Manifested
2. Experimenting	3.33	0.43	Moderately Manifested
3. Reflecting and Asking for Feedback	3.36	0.42	Moderately Manifested
4. Collaborating with Colleagues with the Aim of Improving the Lesson	3.34	0.45	Moderately Manifested
5. Collaborating with Colleagues with the Aim of Improving School Development	3.31	0.45	Moderately Manifested
Overall	3.34		Moderately Manifested

Table 1 shows how the respondents assessed their continuing professional development. They rated keeping up to date with a mean of 3.37 and SD 0.43 which is considered moderately manifested. It means that the respondents practice studying subject matter literature, reading pedagogical literature, and

participating in training courses, and short conferences moderately. It is most likely that the respondents recognize these practices as helpful in keeping up with trends in physical education. The respondents practice updating themselves because subject content and pedagogies continue to change. With the popularity of online training and seminars. it easier for the respondents to engage in keeping up-to-date activities. As Yu et al. [14] claimed, online informal learning is becoming a valuable means for teachers' professional development, and for keeping them updated. This could be the reason why Mohalik and Poddar [21] found that online workshops and webinars are well-attended, and considered effective as well.
The respondents' continuing professional development practice in terms of experimenting is moderately manifested based on the mean of 3.33 and SD of 0.43. The respondents exert deliberate effort to undertake something new in their teaching. This is best shown by trying out new applications of ICT in their lessons, applying and evaluating other forms of assessment, and trying out new teaching methods in class. The respondents practiced experimenting because they knew that doing these things contributed to their professional development. The finding conforms with the study of Ambusaidi and Al-Maqbali [22]. They revealed that teachers in Oman try out new ideas in teaching. Their efforts however rely mostly on the advice of supervisors and senior teachers.
The respondents' practice of reflecting and asking for feedback is moderately manifested. This is evidenced by the mean of 3.36 with SD =0.42 The respondents reflect on their strong and weak points, ask student feedback on their teaching, and invite colleagues to attend their lessons. The respondents practice reflecting and asking for feedback because it is an effective way of improving their teaching practices. According to Mathew and Peechattu [23], teachers reflect to analyze and evaluate experiences towards improving future instruction. Reflecting connects the teachers' experiences to pedagogical solutions [24]. The respondents' openness to student and colleagues' feedback is similar to what was observed by Ray [25]. He reported that Canadian teachers in China are open to direct and constructive feedback from their colleagues.
The respondents' continuing professional development in terms of collaborating with colleagues to improve the lesson is moderately manifested. This can be seen in the mean of 3.34 with SD =0.45. The best practice of collaboration towards lesson improvement is through making agreements with colleagues about pedagogical practices and discussing the teaching approaches with colleagues. The moderately manifested collaboration with colleagues towards lesson improvement could be due to a well-established collaborative practice in school. Chinese teachers have professional learning communities that plan their teaching together, observe each other's classes, and reflect collaboratively [26]. The finding is also similar to what de Jong et al. [18] found in their study. It was revealed that the most frequently reported forms of teacher collaboration were teacher communities, lesson study, and teacher inquiry.
Table 1 also shows that the respondents' continuing professional development practice in terms of collaborating with colleagues to improve school development is moderately manifested. The respondents rated this practice with a mean of 3.31 and SD of 0.45. The respondents' most practiced activity in this type of collaboration is giving opinions together about the school development, and assembling working groups with colleagues. The moderately manifested collaboration for improving the school development could be due to the opportunities given by the school administrators to the respondents. It is similar to the report of Macabulos et al. [27]. They noted that Filipino teachers' collaboration with their school leaders for the improvement of their school was evident. Collaboration with the school happens when there is a genuine partnership between teachers and school administrators. Shavard [28] however, reported that a walked-through strategy of collaboration is more prevalent. In many instances, teachers were simply

briefed through the policy or program which originated from the administrators rather than include them in the framing process.

The overall mean of 3.12 indicates that the respondents' continuing professional development practice is moderately manifested. The finding is somehow similar to what was reported by Mengmeng [29], and Hao and Fadri [30]. Their studies used the same measures of CPD engagement and showed that the CPD of Chinese college teachers is moderate. The finding also conforms with the study of Qian [31] which showed a moderate level of CPD initiatives among Chinese e-commerce teachers.

Table 2: Kruskal-Wallis H Result

CPD Practices	Kruskal-Wallis H	df	Sig	Interpretation
Keeping up to date	0.395	2	.821	Not Significant
Experimenting	0.395	2	.821	Not Significant
Reflecting and asking for feedback	0.395	2	.821	Not Significant
Collaborating with colleagues with the aim of improving the lesson	0.354	2	.838	Not Significant
Collaborating with colleagues to improve school development	0.354	2	.838	Not Significant
Overall Continuing Professional Development	0.395	2	.821	Not Significant

Table 2 shows the test on the difference of continuing professional development practice based on the school-level teaching assignment of the respondents. The Kruskal-Wallis test was used due to the non-parametric nature of the data. The result from the Shapiro Wilk test showed a sig value of .000 which means that the data was not distributed normally.

The Kruskal-Walis H test showed that there is no significant difference (Sig =.821) in the continuing professional development practice of college PE teachers, high school PE teachers, and elementary school PE teachers. The mean ranks of the three groups are not statistically different. The same is true in all the other domains; experimenting (Sig =.821), reflecting and asking for feedback (Sig =.821), collaborating with colleagues to improve the lesson (Sig = .838), and collaborating with colleagues to improve school development (Sig =.838). The overall continuing professional development practice has no significant difference also (Sig =.821). It means that PE teachers at different school levels have the same continuing professional development practice. Based on the results, the hypothesis is not rejected.

Table 3: Continuing Professional Development Needs of the Respondents

CPD Needs	f	Percentage
Research-related knowledge and skills	123	100%
Implementing the PE curriculum	123	100%
Information Technology Utilization in PE	123	100%
Knowledge and skills in certain sports	123	100%
English communication	123	100%

Table 3 shows the continuing professional development needs of the respondents. All of the respondents believe that the presented continuing professional development needs have to be addressed. They want

more knowledge and skills in research and certain sports. They also want to learn more about how to implement the new PE curriculum. Furthermore, they want their English communication to improve. The finding is partly similar to what Gong et al. [19] reported. They claimed that Chinese PE teachers consider research-related training as one of their needs. The other popular needs are sports training, and the English language [8].

Conclusion

The study has shown that the PE teachers' continuing professional development practices are moderately manifested. They exert adequate effort to keep updated, to experiment with new things in class, to reflect and ask for feedback, and to collaborate for the improvement of instruction and the development of the school as well. The current level of CPD practice still has a lot of room for improvement. The CPD areas where teachers need the most support are in research, implementing the PE curriculum, information technology, sports training, and English communication. The study has also shown that the school level has nothing to do with the CPD practice of the teachers. Whether the PE teachers are in elementary, secondary, or tertiary, their aspiration for professional growth is at the same level. It is a sign that China's quest for quality physical education is being felt across all school levels.

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