

# Continuing Professional Development for Physical Education Teachers in China: Basis for Teaching Enhancement Program

Yutao Wang\*

Adamson University/ Doctor of Philosophy in Education with Specialization in Physical Education and Sports/MANILA, The Philippines

\* Corresponding author: Wang Yutao (Email: 18482191701@qq.com)

---

**Abstract:** In pursuit of life-long learning, the teaching profession requires continuing education for institutional promotion, salary increase, and administrative position. Supportive academic institutions increase their teacher's professional learning in the 21st century to increase their students' further education and work as well. China consistently invested in their teachers' professional development but empirical evidence on these programs' effectivity is limited. Specifically, there is a demand for more quality professional development (PD) opportunities for PE teachers focused on the following reasons: (a) the education standards movement, (b) professional organizations, and (c) a call for research on teaching. Apparently, in China, most of them have not recognized their leading role and undervalued their educational career. Thus, this study revisited the impact of the PD programs in China focusing focus its lens on the continuing professional development (CPD) of physical education teachers to address the urgent call to improve the PE-CPD. Guided by the global Continuing Professional Development (CPD) framework, this study investigated the continuing professional development provided to physical education teachers in China and the results of this investigation would be the basis for their teaching enhancement program. The findings revealed that most of the PE teachers in China were male, middle aged with relative bachelor's degree and permanent position, and developing teachers with 1-10 years teaching experience. They partly considered their involvement in skill development opportunities and interaction and collaboration, but highly considered their involvement in personal growth and reflection in their continuing professional development. Their level of involvement in continuing professional development were significantly different considering their age, sex, educational attainment, and years of teaching. Moreover, the found professional development about classroom management very effective and impactful but teaching practices about ICT skills has minimal effectiveness. However, there is a significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to their age, educational attainment, and years of teaching. Nevertheless, the significant relationship found between the their involvement in professional development (PD) and evaluation on the effectivity of the professional development became the basis for the strategic factors to be integrated in the teaching enhancement program for the CPD of PE teachers in the new normal.

**Keywords:** Physical Education (PE) Teachers, Continuing Professional Development (CPD) of PE Teachers Professional Development.

---

## 1. Introduction

Education is generally defined life-long learning because students as well as teachers should adapt with the changing and developing world. Specifically, in life-long learning process, the teachers increase their individual, professional, and technical competencies and discipline. This concept recognizes the world and self (i.e., teachers) to acquire new knowledge in any particular area, to invest for the future, and to create new things, a learning habit and a behavior. It is an endless experience in the development of individuals vis-à-vis community growth (Ozdamli & Ozdal, 2015)<sup>[1]</sup>.

Moreover, life-long learning is an educational paradigm supported by UNESCO's four pillars of education: learning to know, learning to do, learning to live together, and learning to be. It has become an impactful topical discourse in global arena that significantly changes the basic form of the national education system in a conventional way and has become one of the European Union's (EU) long-standing priorities because of its growing influence on education policy in the global world ( Hayat et al., 2019)<sup>[2]</sup>.

In pursuit of life-long learning, the teaching profession requires continuing education for institutional promotion,

salary increase, and administrative position. Though continuing education is a professional investment, teachers consider it optional because graduate studies involve additional expenses. Aside from that, teachers do not find continuing education encouraging because they are overworked, undervalued, or under pressure. So, it is more significant for educational institutions to give them the time and space to self-reflect to realize their potentials and continue their development as professionals (Open Access Government, 2023)<sup>[3]</sup>.

Teachers are the forerunners of education. They are the ones who have direct contact with the students, parents, and other stakeholders, therefore, their education and training must be effective and high standard for them to fulfill all their duties and responsibilities as agent of change (Khan et al., 2019)<sup>[4]</sup>. Supportive academic institutions increase their teacher's professional learning in the 21st century to increase their students' further education and work as well. They recognize that teachers need to develop sophisticated pedagogy to develop student competencies such as mastery of content, critical thinking, complex problem-solving, effective communicative, collaborative, and independent learning skills (Darling-Hammond et al., 2017)<sup>[5]</sup>. Relatively, teacher

preparation and certification significantly correlate with student academic performance (Lu et al, 2017)<sup>[6]</sup>.

One area of PD is the continuing professional development (CPD) which may consist, but not limited to in-service education and training, teacher development, staff development, career development and lifelong learning. CPD is a term that related activities and engagements of teachers within the course of their career which are designed to improve their profession. Specifically, there are three functions of CPD: (1) Align teachers' practice with educational policies; (2) Help teachers improve their performance to improve learning outcomes of students; and (3) improve the prestige of teaching profession (Day & Sachs, 2004, as cited in Ucan, 2016)<sup>[7]</sup>.

PD proponents observed that teachers' CPD is seen as indispensable by almost all governments throughout the world because the core profession of "teaching" is the key role in building knowledge of the society. In fact, it is recognized that one impact of globalization is the change of educational policies and teachers' CPD (Ucan, 2016). In fact, the European Union distinguished PD as a key to its goals of high-quality teaching and teachers' competence in teaching transversal competences in heterogeneous classes while collaborating with colleagues and parents in the community. Despite the complexities of the teaching profession, studies claimed that in-service training is considered as a professional duty in most of all European states even if teachers' involvement is optional (Caena, 2011)<sup>[8]</sup>.

In the United States, professional learning is the basis of high involvement of teachers in CPD. They create research-consistent policies and improvements on students' achievement based on geographic, demographic and policy context diversity. Apparently, only four states in US have conducted studies on PD which featured the following: teacher licensing, standards and development, individual professional development plans required of teachers; minimum levels of professional development for license renewal; and induction and mentoring requirements for beginning teachers (Caena, 2011)<sup>[9]</sup>.

In China, the Ministry of Education of China implemented the Teacher Law in 1993 which has placed the teachers' professional development in the educational reforms in China. Its goals focused on developing professional development policies with frameworks which guide teachers on their learning and gradually improve their teaching pedagogy (Guo & Yong, 2013). China consistently invested in their teachers' PD. In fact, in 2010, the country's flagship teacher PD program (MOE and MOF, 2010) launched the National Teacher Training Program (NTTP). This program aimed to improve the country's teaching quality both in urban and rural schools since decline on student's academic performance specifically in rural regions was reported (Lu, et al, 2017)<sup>[10]</sup>.

Likewise, China's investment on their teachers' PD was instrumental in the country's curriculum reform which has drawn a new face on their teachers' PD. Since PD has become a major part of the teachers' practices, teachers were required to engage in research managed and supervised by the government. To strengthen this policy, the Chinese government provided incentives to entice teachers to participate in research endeavors as part of their professional development programs (Kambona, 2019). Currently, PD is one of the Chinese government's initiatives to improve the human capital of rural students and the equity of educational outcomes between rural and urban students in the country. For

this reason, the Ministry of Education invested in the (NTTP) and its ambitious goals by recommending content training content focused on ethics in teaching (10%), subject-specific knowledge (40%), and pedagogical practices (50%) respectively (Lu, et al, 2017).

Despite the huge amount of investment for PD programs in developing countries including China, empirical evidence on these programs' effectivity is limited (Bruns & Luque, 2014; Yan, 2013; Government of Chile, 2003; Government of India, 2013, as cited in Lu, et al, 2017). Though few studies addressed 'effectiveness' of teachers' CPD, deficiencies were reported in all the teacher practice and student outcomes (e.g., Aelterman et al., 2013 as cited in Lander et al., 2022). Specifically, there is a demand for more quality professional development (PD) opportunities for PE teachers focused on the following reasons: (a) the education standards movement, (b) professional organizations, and (c) a call for research on teaching (Parry, 2020).

Physical education teachers are the dominant players of a school's physical education and its class. Apparently, in China, most of them have not recognized their leading role and undervalued their educational career. Their weakened career position and bad reputation are caused by their low responsibility in the school. Second, the lack of policies and systems of physical education have caused stagnant attitude and contempt to PE teachers, that can be a violation of their rights. Lastly, PE teachers are compelled to require students to join PE routinary activities such as calisthenics and entrance exam which hinders the students' aspiration and interest and eventually dislike physical education. These PE teacher factors are brought about by unrealistic development of school physical education in China especially in secondary schools with increased academic pressure on all courses which have nothing to do with the entrance exam have become less important, including physical education (Jin, 2016).

Thus, the proposed study will revisit the impact of the PD programs in China since consistency and continuity are very instrumental in the success of PD programs particularly in teacher practice and student outcomes. In addition, the proposed study will focus its lens on the continuing professional development (CPD) of physical education teachers since "limited research on CPD in physical education (PE-CPD) suggests that current provisions are largely ineffective, particularly regarding access, and the specific teaching of motor skills (e.g., throw, catch, run). There is an urgent call to improve the PE-CPD where online programs may provide a promising avenue for more accessible and effective delivery (Lander et al., 2022)." Lastly, this study will contribute to the dearth of literature that explains the limitations and reasons for not achieving the PD's desired outcomes on the change to teachers' practice and student outcomes enhancement within schools.

## 2. Research Paradigm

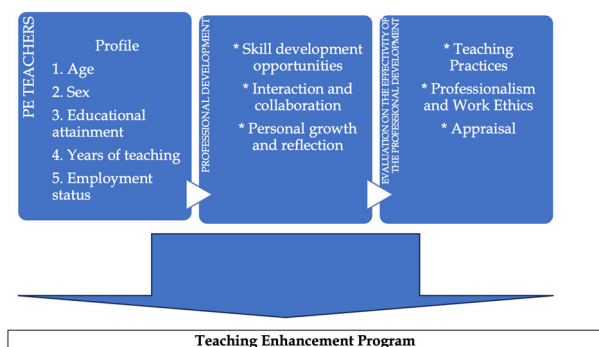
This study aims to investigate the continuing professional development provided to physical education teachers in China and the results of this investigation will be the basis for their teaching enhancement program. To achieve this purpose the research paradigm (figure 2) presents the process of the study using its adopted research tool, the standardized instrument of the Organization for Economic Cooperation and Development (OECD)'s Teaching and Learning International Survey (TALIS).

First, the profile of the PE teachers will be collected to declare their age, sex, educational attainment, years of teaching, and employment status in the selected universities in China. Their profile will be used to correlate their responses to the questions relative to their professional development.

Second, the selected participants will declare their level of involvement in the professional development provided by their respective schools and their own development for their profession based on their skill development opportunities, interaction and collaboration, personal growth and reflection. Their responses will be compared to their profile to further analyze.

Next, the selected participants will evaluate effectivity of the professional development they participated to their teaching practices, professionalism and work ethics, and appraisal. Their responses will be compared to their profile and correlated to their involvement in professional development (PD).

Finally, the results of the comparison and correlation of these responses will be the basis in designing a teaching enhancement program to promote continuing professional development of PE teachers.



**Figure 1.** Research Design of the Continuing Professional Development for Physical Education Teachers in China as Basis for Teaching Enhancement Program

### 2.1. Acknowledgment

The “Acknowledgment” (no “s) section appears immediately after the conclusion. If applicable, this is where you indicate funding for the work. The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Avoid expressions such as “One of us (S.B.A.) would like to thank ... .” Instead, write “We thank ... .” Sponsor and financial support acknowledgments are included in the acknowledgment section. For example: This work was supported in part by the U.S. Department of Commerce under Grant BS123456 (sponsor and financial support acknowledgment goes here). Researchers that contributed information or assistance to the article should also be acknowledged in this section. Also, if corresponding authorship is noted in your paper it will be placed in the acknowledgment section. Note that the acknowledgment section is placed at the end of the paper before the reference section.

### 3. Research Methodology

This section presents the summary of the research design, sampling technique, data collection methods, data processing methodologies, statistical treatment, and ethical issues that will be used in the course of the study. In clearly discusses the planned data gathering and analysis to guarantee the validity,

reliability, and ethical standards that will be maintained throughout the research process.

### 4. Research Design

To answer the proposed research questions, this quantitative study will employ a descriptive-comparative-correlational research design to analyze the association between the involvement in professional development and the effectivity of professional development among PE teachers.

The descriptive design will allow the use of descriptive statistics to understand the profile of the teacher participants as a variable for correlation and comparison.

The comparative design will be used to differentiate the PE teachers based on demographic criteria such as age, sex, educational attainment, years of teaching, and employment status. This technique allows for the assessment of possible disparities in professional development participation and its effectivity across different groups.

While, the correlational technique will be used to analyze the association between the involvement in professional development and the effectivity of professional development. The correlational analysis estimates the magnitude and direction of linear relationships between variables and the tests the statistical significance (Prematunga, 2012). Thus, it will give meaningful insights into how the level of involvement in the professional development may be connected with its effectivity among PE teachers.

Lastly, descriptive statistics using weighted mean and standard deviation will be applied to analyze the effectivity of the professional development among PE teachers. Descriptive statistics is a branch of statistics that involves summarizing, organizing, and presenting data meaningfully and concisely. It describes and analyzes a dataset's main features and characteristics without making any generalizations or inferences to a larger population. Its primary goal is to provide a clear and concise summary of the data, which leads to insights and understand patterns, trends, and distributions within the dataset (Simplilearn, 2023).

### 5. Sampling Technique

Purposive stratified sampling will be used in this qualitative study to select the Chinese physical education teachers in seven selected Chinese high schools. Purposive sampling is intentional selection of participants based on their ability, experience, knowledge to explicate a specific concept (i.e. professional development) that focus on empirical inquiry (Robinson, 2014).

The sample will be selected from the seven high schools in seven districts of Chengdu in the capital city of Sichuan Province, China. These high schools are appropriate for the study's requirements and can provide a diverse background of participants. Once approved, the participant selection and recruitment will commence conforming with the ethical principles and permissions are acquired from universities and appropriate authorities.

Then, intent letter with recruitment materials will be delivered to selected and referred participants to present the details of the study and its aims. The required sample size is decided by the study goals and resources available. The study will obtain a targeted sample that represents a diverse participants by using purposive sampling and selecting PE teachers from seven Chinese public high schools, allowing for meaningful insights specific to the context of the selected

Chinese universities. Data gathering will be using proper procedures such as surveys or interviews.

## 6. Results, Analysis, And Interpretation

This chapter contains a tabular representation of the data collected, the discussion of the results analyzed and interpreted using statistics. This is presented and discussed based on the order of research questions in the statement of the problem.

### 6.1. Profile of the Respondents

The participants were PE teachers from Chinese public high schools. Tables 1-5 present their age, sex, educational attainment, years of teaching and employment status.

**Table 1.** Age of the Teacher Participants

AGE	TALLY	PERCENTAGE
21 - 25	9	14%
26 - 30	3	5%
31- 35	15	23%
36 - 40	2	3%
41 - 45	16	25%
46 - 50	5	8%
51 - 55	7	11%
56 - 60	7	11%
<b>TOTAL</b>	<b>64</b>	<b>100%</b>

Table 1 shows that most (25%) of the participants were aged 41-45; 23% of the participants were aged 31-35; 14% of the participants were aged 21-25; 11% of the participants were aged 51-55; 11% of the participants were aged 56-60; 8% of the participants were aged 46-50; and few (3%) of the participants were aged 36-40. Predominantly, the PE teachers in China are middle ages (41-45 years old) or a little younger (31-35 years old) which are active and strong enough to teach sports, fitness, and calisthenics.

**Table 2.** Sex of the Teacher Participants

GENDER	TALLY	PERCENTAGE
FEMALE	19	30%
MALE	45	70%
<b>TOTAL</b>	<b>64</b>	<b>100%</b>

Table 2 presents the summary of their profile in terms of sex. Most (70%) of the teacher participants are male while some (30%) are female. The results are expected among PE teachers because “male teachers were more masculine- and authoritative- oriented, more likely to be dominant in terms of skill acquisition and sports development based on students’ interests. Whereas, female teachers were better at carry out teaching through praise, encouragement and patient communication (Huang, 2022).”

**Table 3.** Educational Attainment of the Teacher Participants

EDUCATIONAL ATTAINMENT	TALLY	PERCENTAGE
Bachelor's Degree	51	80%
Master's Degree	12	19%
Doctor's Degree	1	2%
<b>TOTAL</b>	<b>64</b>	<b>100%</b>

Table 3 presents the summary of their profile in terms of educational attainment. Most (80%) of the PE teacher participants have relative bachelor’s degree; some (19%) of the them have relative master’s degree; and one (2%) of them has doctor’s degree. Results show that most teacher participants were not graduate students or degree holders which affirms the need for them to acquire professional development.

**Table 4.** Years of Teaching of the Teacher Participants

YEARS OF TEACHING	TALLY	PERCENTAGE
1 - 10	28	44%
11 - 20	12	19%
21 - 30	10	16%
31 - 40	14	22%
<b>TOTAL</b>	<b>64</b>	<b>100%</b>

Table 4 presents the summary of their profile in terms of years of teaching. Most (44%) of the PE teacher participants have been teaching for 1-10 years; 22% of them have been teaching for 31-40 years; 19% of them have been teaching for 11-20 years; and 16% of them have been teaching for 21-30 years. This shows that most PE teachers in public school in China are developing teachers so this is the best time for them to acquire professional development. In fact, “research showed that PE teachers with 1–5 years of teaching experience spent significantly more time in managing and less time in observing than teacher with 6–10 years and more than 10 years of teaching experience (Zhou et al., 2022).”

**Table 5.** Employment Status of the Teacher Participants

EMPLOYMENT STATUS	TALLY	PERCENTAGE
FULL-TIME	15	23%
PERMANENT	49	77%
<b>TOTAL</b>	<b>64</b>	<b>100%</b>

Table 5 presents the summary of their profile in terms of employment status. Most (77%) of the PE teacher participants are permanent faculty in their respective institution; while some (23%) of them are only full time faculty but not permanent. The results show a more secured employment status for PE teachers in China since most of them are permanent full time faculty. Thus, their progress in their professional development can be realized over the years of their employment stay.

### 6.2. Level of Involvement of PE Teachers in Professional Development

Tables 6 - 8 present summary of responses in the level of involvement of PE teacher participants in PD.

Table 6 presents summary of involvement of PE teacher participants in PD in terms of skills development opportunities such as courses/workshops, education conferences or seminars, qualification program, observation visits to other schools, content and performance standards in PE, student assessment practices, classroom management, knowledge and understanding in PE, Knowledge and understanding of instructional practices (knowledge mediation) in PE, ICT skills for teaching, teaching students with special learning needs, student discipline and behavior problems, school management and administration, teaching in a multicultural setting, and student counselling.

**Table 6. Skill Development Opportunities of PE Teachers**

Skill Development Opportunities		Number	%	Description
1	Courses/workshops (e.g., on subject matter or methods and/or other education-related topics)	47	73	Yes, partly considered
2	Education conferences or seminars (Where teachers and/or researchers present their research results and discuss educational problems)	41	64	Yes, partly considered
3	Qualification program (e.g., a degree program)	36	56	No, but considered
4	Observation visits to other schools	29	45	Yes, partly considered
5	Content and performance standards in my main subject field (PE)	28	44	Yes, highly considered
6	Student assessment practices	47	73	Yes, partly considered
7.	Classroom management	34	53	Yes, partly considered
8.	Knowledge and understanding of my main subject Field (PE)	40	63	Yes, partly considered
9.	Knowledge and understanding of instructional practices (knowledge mediation) in my main subject field (PE)	40	63	Yes, partly considered
10.	ICT skills for teaching	30	47	No, but considered
11.	Teaching students with special learning needs	30	47	No, but considered
12.	Student discipline and behavior problems	23	36	Yes, partly considered
13.	School management and administration	41	64	Yes, partly considered
14.	Teaching in a multicultural setting	30	47	Yes, highly considered
15.	Student counselling	42	66	Yes, highly considered

The results show that PE teachers highly considered to be involved in skill development opportunities in Content and performance standards in PE (44%), teaching in a multicultural setting (47%), and student counselling (66%). Thus, these skill development opportunities are highly recommended to be part of their professional development.

While PE teachers partly considered to be involved in skill development opportunities in courses/workshops (73%), education conferences or seminars (64%), observation visits to other schools (45%), student assessment practices (73%), classroom management (53%), knowledge and understanding in PE (63%), knowledge and understanding of instructional practices (knowledge mediation) in PE (63%), school management and administration (64%), student discipline and behavior problems (36%). Thus, these skill development opportunities can be maintained as part of their professional development since the PE teachers realize their importance to their professional growth at some extent.

However, PE teachers did not agree but may consider to be involved in skill development opportunities in qualification program (56%), ICT skills for teaching (47%), and teaching students with special learning needs (47%). Thus, these skill development opportunities can be least prioritized in their professional development. For this reason, they might have acquired sufficient skills and opportunities in these areas, but they can still make provisions on them.

Moreover, it is notable from the results that skill development opportunities in courses/workshops (73%) and student assessment practices (73%) was most preferred topics by the PE teachers. They are followed by student counselling (66%), school management and administration (64%),

knowledge and understanding in PE (63%), knowledge and understanding of instructional practices (knowledge mediation) in PE (63%). Hence, these topics must be highly prioritized since the PE teachers mostly recognized their value in their PD.

Table 7 presents the summary of involvement of PE teacher participants in PD in terms of collaboration and interaction such as participation in a network of teachers formed specifically for the professional development of teachers, individual or collaborative research on a topic of interest to you professionally, mentoring and/or peer observation and coaching, as part of a formal school arrangement, engaging in informal dialogue with your colleagues on how to improve your teaching, and assisting a colleague/ peer in his/her task, teaching, inquiry, or work-related concern.

The results show that PE teachers partly considered all these topics to be involved in interaction and collaboration. In particular, participation in a network of teachers formed specifically for the professional development of teachers (72%) is their most preferred topic. They mentioned in the interview that were interested to join national or international faculty organizations for they organize different activities for PE teachers.

Second, they partly consider the individual or collaborative research as well on PE topics or relative profession (55%). This shows partial interest in research whether with their colleagues or as a teacher alone. In the interview, attending research conference builds their confidence not only as teachers but also as researchers.

Third, they partly consider engaging in informal dialogue with your colleagues on how to improve your teaching (53%)

and assisting a colleague/ peer in his/her task, teaching, inquiry, or work-related concern (53%). Some possible reasons for this as surfaced in the interview are their business in class and eagerness to go home early after classes.

The least topic they preferred to be involved in is mentoring and/or peer observation and coaching, as part of a formal school arrangement (45%). Undeniably, these tasks are time consuming which may compromise their class time with their students. One of their honest remarks in the interview is their preference to teach in class instead of observing classes.

Furthermore, previous studies have revealed that if PD opportunities provided are collaborative, interactive, innovative, practical, and/or reflective in nature, PE teachers perceive them as effective opportunities for their professional development. In other words, PE teachers preferred to attend interactive workshops, hear didactic lectures with research evidence which may help them reflect on their teaching, gain new knowledge of sports or teaching, and feel renewed and empowered as PE professionals (Sum et al., 2021).

**Table 7.** Collaboration and Interaction of PE Teachers

B. Interaction and collaboration		Number	%	Description
1	Participation in a network of teachers formed specifically for the professional development of teachers	46	72%	Yes, partly considered
2	Individual or collaborative research on a topic of interest to you professionally	35	55%	Yes, partly considered
3	Mentoring and/or peer observation and coaching, as part of a formal school arrangement	29	45%	Yes, partly considered
4	Engaging in informal dialogue with your colleagues on how to improve your teaching	34	53%	Yes, partly considered
5	Assisting a colleague/ peer in his/her task, teaching, inquiry, or work-related concern	34	53%	Yes, partly considered

Table 8 presents the summary of involvement of PE teacher participants in PD in terms of personal growth and reflection such as increasing understanding of oneself and co-teachers, emphasizing one's strength and loving one's weakness,

clarifying intentions for one's time and talents, defining professionals' goals and being strategic with opportunities for one's growth, developing creative thinking skills, and encouraging engagement in work processes.

**Table 8.** Personal growth and Reflection of PE Teachers

C. Personal growth and reflection		Number	%	Description
1	Increasing understanding of oneself and co-teachers	34	53%	Yes, partly considered
2	Emphasizing one's strength and loving one's weakness	29	45%	Yes, partly considered
3	Clarifying intentions for one's time and talents	41	64%	Yes, partly considered
4	Defining professionals goals and being strategic with opportunities for one's growth	35	55%	Yes, partly considered
5	Developing creative thinking skills	29	45%	Yes, highly considered
6	Encouraging engagement in work processes	24	38%	Yes, highly considered

In terms of personal growth and reflection, the results show that PE teachers highly considered developing creative thinking skills (45%) and encouraging engagement in work processes (38%). This means that these two topics were the most preferred by PE teachers in public school in China. Apparently, it was found out that they general and personal teaching effectiveness had positive effects in their cognitive, skill, and emotional creativity. Therefore, the professional ethics training of PE teachers was suggested to be strengthened (Xiong et al., 2020).

Meanwhile, PE teachers partly considered personal growth and reflection in clarifying intentions for one's time and talents (64%) which involves the principle of intention which may lead to the dimension of leadership. They partly recognized that the providing clear intentions benefit others' time and talents which may promote support from peers. Second, defining professionals' goals and being strategic with

opportunities for one's growth (55%) is partly considered because it requires anticipation of a professional's future as a teacher. They somewhat set objectives in targeting their professional goals to further their career as mentioned in the interview.

Third, increasing understanding of oneself and co-teachers (53%) shows that despite their incredible work perhaps these teachers often faced dismissal by their peers, one remark in the interview. Lastly, emphasizing one's strength and loving one's weakness (45%) is similar to providing positive and constructive to peers which some of them feel uncomfortable to do culturally so they welcome the possibility of this opportunity.

### 6.3. Significant Difference in the Level of Involvement in Continuing Professional Development of PE Teachers According to Profile

Tables 9-13 show the significant difference in the level of involvement in continuing professional development of PE teachers when they are grouped according to profile such as age, sex, educational attainment, years of teaching, and employment status.

Table 9 presents the significant difference in the level of involvement in continuing professional development (CPD) of PE teachers when they are grouped according to age. The results show that their age with the mean of 2.86 (SD 10.77) and level of CPD involvement with the mean of 2.66 (SD 0.40) is significantly different. This means that the age of PE teachers significantly affects their level of involvement in CPD. Since the teacher participants' predominant age range is 41-45 years old, they are more likely involved and interested in CPD.

**Table 9.** Significant Difference in the Level of Involvement in Continuing Professional Development of PE Teachers According to Age

Test	Mean	Standard Deviation	T-Computed	Interpretation
Age	2.86	10.776913524	27.72754723	Significant
Level of Involvement in PD	2.66	0.4074836905		
Difference	0.20			

Table 10 presents the significant difference in the level of involvement in continuing professional development (CPD) of PE teachers when they are grouped according to sex. The results show that the involvement in CDP of female teacher

participants, with mean of 2.96 (SD 0.28) and male teacher participants, with mean of 3.16 (SD -0.21), is significantly different. Since most PE teacher participants are male, they are more likely to be involved in CPD compared to female.

**Table 10.** Significant Difference in the Level of Involvement in Continuing Professional Development of PE Teachers According to Sex

Test	Mean	Standard Deviation	T-Computed	Interpretation
FEMALE	2.96	0.28588972	-2.218381908	Significant
MALE	3.16	0.44		
Difference	-0.21			

Table 11 presents the significant difference in the level of involvement in continuing professional development (CPD) of PE teachers when they are grouped according to educational attainment. The results show that the involvement in CDP of teacher participants with undergraduate degree, with mean of 3.15 (SD 0.42) and those with graduate degree,

with mean of 2.89 (SD 0.27), is significantly different. This means that PE teachers with bachelor's degree are more likely to be involved in CPD than those with doctoral or master's degree. Perhaps graduate PE teachers acknowledge further knowledge and skills needed in their profession.

**Table 11.** Significant Difference in the Level of Involvement in Continuing Professional Development of PE Teachers According to Educational Attainment

Test	Mean	Standard Deviation	T-Computed	Interpretation
BS Degree	3.152337858	0.4213222899	2.699823694	Significant
Phd/MA Degree	2.893491124	0.2724866529		
Difference	0.26			

Table 12 presents the significant difference in the level of involvement in continuing professional development (CPD) of PE teachers when they are grouped according to years of teaching. The results show that the involvement in CDP of teacher participants with 1 to 17 years of teaching, with 3.11 mean (SD 0.37) and those with 18 to 40 years of teaching,

with 4.01 mean (SD 0.46), is significantly different. This means that the latter are more likely to be involved in CPD than the former because they support the need to increase professional knowledge and skills considering the students' generation and era of development.

**Table 12.** Significant Difference in the Level of Involvement in Continuing Professional Development of PE Teachers According to Years of Teaching

Test	Mean	Standard Deviation	T-Computed	Interpretation
1 to 17 Years	3.119753086	0.3975569091	-8.360867493	Significant
18 to 40 Years	4.018518519	0.46		
Difference	-0.90			

Table 13 presents the significant difference in the level of involvement in continuing professional development (CPD) of PE teachers when they are grouped according to employment status. Results show that the involvement in CDP of full time teacher participants with mean of 3.08 (SD

0.37) and part time teacher participants with mean of 3.10 (SD 0.42) is not significantly different. This means that the employment status of PE teachers does not affect their level of involvement in CPD.

**Table 13.** Significant Difference in the Level of Involvement in Continuing Professional Development of PE Teachers According to Employment Status

Test	Mean	Standard Deviation	T-Computed	Interpretation
FULL TIME	3.084615385	0.37011113	-0.17509112	Not Significant
PERMANENT	3.104395604	0.4217636957		
Difference	-0.02			

Therefore, based on the results, the hypothesis is accepted. There is a significant difference in the level of involvement in continuing professional development of PE teachers when they are grouped according to profile specifically age, sex, educational attainment, and years of teaching.

#### 6.4. Evaluation of PE Teachers on the Effectivity of the Professional Development

The research shows the evaluation of PE teachers on the effectivity of the PD in terms of their teaching practices, professionalism and work ethics, and appraisal.

Presents the summary of effectivity of professional development in terms of teaching practices as evaluated by PE teachers in public schools in China. These teaching practices include courses/workshops, education conferences or seminars, content and performance standards in PE, student assessment practices, classroom management, knowledge and understanding in PE, ICT skills for teaching, teaching students with special learning needs, and teaching in a multicultural setting.

Results show that PD in teaching practices about classroom management (55%) has large impact to teacher participants. This result is necessary since PE teachers spent a considerable proportion of time in managing the class especially with elementary school students who may need assistance in behavioral management and regulation. Generally, teachers in China are more concerned about discipline and have higher requirements for classroom discipline. Likewise, quiet and obedient classes are valued by PE teachers in China. Therefore, teachers have to spend considerable time on management to ensure the successful implementation of teaching tasks (Zhou et al., 2022).

While teaching practices in courses/workshops (72%), education conferences or seminars (64%), content and performance standards in PE (64%), student assessment practices (63%), knowledge and understanding in PE (55%), teaching students with special learning needs (63%), and teaching in a multicultural setting (45%) have moderate impact to PE teachers. Similarly, areas in subject knowledge particularly professional training in sports, related academic research, and institutional activities were found effective by Chinese PE teachers as part of their professional development. Moreover, they believe that formal learning program and international learning activities addressed their professional needs. The cost of the activities was the most significant factor influencing their engagement (Gong et al., 2023). Hence, these areas in PD should remain in attention of PE teachers in China.

However, teaching practices about ICT skills for teaching (38%) has small impact to PE teachers. This result is in contrast with study findings that teachers in China primarily need technological skills in teaching. They believed that the development of ICT skills is important factor of their teaching success (Shi, 2023). However, this evaluation calls for

strengthening teachers' willingness and enriching application contexts of ICT (Chen et al., 2019).

Research presents the summary of effectivity of professional development in terms of professionalism and work ethics as evaluated by PE teachers in public schools in China. These include maintaining high standard of professionalism, adhering to punctuality and deadline of obligations, exhibiting honesty and ethical conduct consistently, taking responsibility at work with excellence, dedicating to lifelong learning and professional growth, valuing different points of view and treating people with fairness and equality, embracing cooperation and teamwork to actively contribute to a healthy work environment, accepting responsibility in assigned work including its errors, valuing confidentiality and the careful handling of sensitive information, and valuing a strong work ethics that adds to personal and organizational success.

Results show that PD in professionalism and work ethics have large impact to PE teacher participants. In particular, dedicating to lifelong learning and professional growth (91%) and valuing a strong work ethics that adds to personal and organizational success (91%) have the highest evaluation. It is followed by exhibiting honesty and ethical conduct consistently, taking responsibility at work with excellence, accepting responsibility in assigned work including its errors, and valuing a strong work ethics that adds to personal and organizational success all received 83% evaluation as the second highest. While maintaining high standard of professionalism (81%) is the third highest evaluation and adhering to punctuality and deadline of obligations, valuing different points of view and treating people with fairness and equality, and embracing cooperation and teamwork to actively contribute to a healthy work environment all received 73% evaluation as the last highest evaluation.

These results are consistent with the professionalism and work ethics of teachers in China in general. It is found that: (1) Majority of them claimed that they are compliant with the professional ethics when facilitating all the daily routine activities and when working with colleagues and parents despite the several ethical issues that existed with some teachers such as differentiated approach to students from different backgrounds, unawareness of the importance of parents as stakeholders, and unhealthy relationship with colleagues (Ji, 2017). Likewise, almost all teachers in Beijing emphasized their strong moral purposes and commitment to teach to their best, despite identifying the challenges of workload, school contexts and cultures and personal circumstances, which tested their resolve (Day et al., 2023).

Result presents the summary of effectivity of professional development in terms of appraisal as evaluated by PE teachers in public schools in China. These include discussing students' scores, retention and pass rates of students, other student learning outcomes, student feedback on teaching, feedback from parents, how well I work with the principal and colleagues, direct appraisal of the classroom teaching, innovative teaching practices, relations with students,



professional development undertaken, classroom management, knowledge and understanding of PE, teaching students with special learning needs, student discipline and behavior, teaching in a multicultural setting, and extra-curricular activities with students (e.g. school plays and performances, sporting activities).

Results clearly show that most of areas in the appraisal in PD have large impact to teacher participants specifically (1) teaching students with special learning needs (81%); (2) student feedback on teaching, knowledge and understanding of PE, extra-curricular activities with students (e.g. school plays and performances, sporting activities) (72%); (3) teaching in a multicultural setting (66%); (4) classroom management and how well I work with the principal and colleagues (64%); (5) professional development undertaken (56%); (6) direct appraisal of the classroom teaching, retention and pass rates of students and innovative teaching practices (55%); (7) feedback from parents (53%); and lastly (8) relations with students. They evaluated that these appraisals in PD have major effect on them as professionals.

While some areas in the appraisal in PD have moderate impact to teacher participants specifically student discipline and behavior (64%), other student learning outcomes (63%), and discussing students' scores (54%). They evaluated that these appraisals in PD do not have much effect on them as professionals.

Nevertheless, these research findings positively describe the mechanism of teacher appraisal system that evidently facilitates teachers' professional development. The components of this system create pressure and extrinsic incentives that 'push and pull' teachers to improve, and support their growth through guidance and directions with heavy or much impact. Undeniably, environmental factors, such as school culture (i.e., Confucian school culture), contribute to the positive impacts that teacher appraisal has on professional development (Zhang & Ng, 2011).

### **6.5. Significant difference in the evaluation of PE Teachers on the Effectivity of the Professional Development according to Their Profile**

Research shows the significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to their profile such as age, sex, educational attainment, years of teaching, and employment status.

Result shows that their age with the mean of 40.28 (SD 10.77) and PD effectivity evaluation with the mean of 3.49 (SD 0.31) is significantly different. This means that the age of PE teachers significantly affects their evaluation of PD. Since the teacher participants' predominant age range is 41-45 years old, they are more likely affected by the impact of CPD.

On the other hand, Research presents the significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according sex. The results show that evaluation on the effectivity of the professional development of female teacher participants, with mean of 3.41 (SD 0.28) and male teacher participants, with mean of 3.52 (SD 0.13), is not significantly different. This means that the evaluation on the effectivity of the professional development among PE teachers do not vary regardless of their sex.

Research presents the significant difference in the evaluation of PE teachers on the effectivity of the professional

development when they are grouped according to educational attainment. The results show that the effectivity of the professional development as evaluated by teacher participants with undergraduate degree, with mean of 3.53 (SD 0.30) and those with graduate degree, with mean of 3.33 (SD 0.30), is significantly different. This means that PE teachers' evaluation in the effectivity of the professional development to them is different based on their educational attainment. The undergraduate teacher participants claim that the effect of PD is more impactful to them than those with graduate degrees.

Result presents the significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to years of teaching. The results show that evaluation on effectivity of PD of teacher participants with 1 to 17 years of teaching, with 3.39 mean (SD 0.10) and those with 18 to 40 years of teaching, with 3.57 mean (SD 0.27), is significantly different. This result is consistent with their response in their involvement in PD. This means that the latter claim that PD have more impact to them than the former because they have longer length of service in the educational institutions which provided them more opportunities of PD.

Research presents the significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to employment status. Results show that evaluation on effectivity of PD among full time teacher participants, with mean of 3.46 (SD 0.31) and part time teacher participants, with mean of 3.50 (SD 0.31) is not significantly different. This result is consistent with their response in their involvement in PD. This means that the employment status of PE teachers does not affect their evaluation on the effectivity of PD.

Therefore, based on the results, the hypothesis is accepted. There is a significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to their age, educational attainment, and years of teaching. However, there is no significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to their sex and status of employment. In other words, the teacher participants acknowledge different levels of effect of PD to them regardless of their sex and status of employment.

The professional development of PE teachers affects the development of their students' basic education to some extent and the development of sports. PE teachers bridge the students to the curriculum when they implement the curriculum successfully most especially now under the new normal. This requires PE teachers to continuously improve their professional ability and optimize the teaching team to wholly improve the teaching quality and general quality of students (Zhang & Zhang, 2019).

### **6.6. Correlation of the Effectiveness of PD and PE Teachers Involvement in Professional Development**

Research presents the correlation of the effectiveness of PD and the involvement of PE teachers in PD. The results evidently show that the effectiveness of the PD and the involvement of PE teachers in PD are significantly correlated. This means that effectiveness of PD predicts the involvement in PD of PE teachers.

Therefore, the hypothesis is accepted. There is a significant

relationship between the involvement in professional development (PD) and evaluation on the effectivity of the professional development of the PE teachers.

This finding supports the value of professional development of PE teachers in China especially in the new normal because of the following reasons: 1) Professional development of teachers is the key to improving the quality of education; 2) Teacher's professional development is the motive power of education reform; 3) Teacher's professional development is an important factor in improving the cohesive force of a school; and 4) Teacher's professional development is the fundamental guarantee for student development (Zhang & Zhang, 2019).

## 7. Conclusions

The following conclusions on the continuing professional development for physical education teachers in China based on the research findings.

7.1. The profile of the PE teacher in China is mostly male, middle aged with relative bachelor's degree and permanent position, who are developing teachers with 1-10 years teaching experience.

7.2. The PE teachers in China partly considered their involvement in skill development opportunities and interaction and collaboration, but highly considered their involvement in personal growth and reflection in their continuing professional development.

7.3. The level of involvement in continuing professional development of PE teachers are significantly different considering their age, sex, educational attainment, and years of teaching.

7.4. Professional development about classroom management is very effective and impactful to PE teachers in China but teaching practices about ICT skills has minimal effectiveness.

7.5. The evaluation of PE teachers on the effectivity of PD in professionalism and work ethics have large impact to PE teacher participants.

7.6. Most of areas in the appraisal in PD have large impact to PE teachers.

7.7. There is a significant difference in the evaluation of PE teachers on the effectivity of the professional development when they are grouped according to their age, educational attainment, and years of teaching.

7.8. There is a significant relationship between the involvement in professional development (PD) and evaluation on the effectivity of the professional development of the PE teachers.

## Acknowledgment

I would like to express my sincere gratitude to my supervisor, Professor DR. RIZAL O. DAPAT. Your careful guidance on my academic path is the key support for me to complete this thesis. Thank you for your selfless help in questionnaire design and data analysis and processing. Under your careful teaching, I have a profound understanding of the methodology and spirit of academic research, and I have also developed a rigorous academic attitude. Thank you for your patient guidance and trust in me, which enables me to continuously break through myself in research and grow into a more independent and mature scholar.

## References

- [1] Amineh, R. J., & Asl, H. D. (2015). Review of constructivism and social constructivism. *Journal Of Social Sciences, Literature And Languages*, 1(1), 9-16.
- [2] Axen, C. (2023, January 15). Skills development: How to develop your skills. *E-learning Industry*. <https://elearningindustry.com/skills-development-how-to-develop-your-skills>.
- [3] Borg, S., & Edmett, A. (2019). Developing a self-assessment tool for English language teachers. *Language Teaching Research*, 23(5), 655-679.
- [4] Caena, F. (2011). Literature review Quality in Teachers' continuing professional development. *European Commission*, 2(20), 1-24.
- [5] Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.
- [6] Day, C. W., Simpson, A., Li, Q., Bi, Y., & He, F. (2023). Teacher professionalism: Chinese teachers' perspectives. *Journal of Professional Capital and Community*, 8(2), 65-89.
- [7] Ealing Grid for Learning (EGFL). Teacher appraisals. <https://www.egfl.org.uk/human-resources/appraisals-and-performance-management/teacher-appraisals#:~:text=Appraisal%20is%20a%20thorough%20yet,and%20to%20develop%20as%20teachers>.
- [8] Engelbrecht, W. & Ankiewicz, P. (2016). Criteria for continuing professional development of technology teachers' professional knowledge: A theoretical perspective. *International Journal of Technology and Design Education*, 26, 259-284.
- [9] Guo, K. L., & Yong, Y. (2013). Policies and practices of professional development in China: what do early childhood teachers think? *Australian Journal of Teacher Education (Online)*, 38(6), 88-102.
- [10] Jin, C. (2016). Analysis on factors of affecting the status of physical education in Chinese school. In *SHS Web of Conferences (Vol. 24, p. 02017)*. EDP Sciences.