

Article

Does Teacher Engagement Matter? Exploring Relationship Between Teachers' Engagement in Professional Development and Teaching Practice

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Abstract

Professional Development (PD) for teachers in China, as in many other countries worldwide, is receiving increased attention. Within the research context, a gap has been identified for teachers' engagement in PD which may play a mediating role between PD and classroom teaching practice. Therefore, this small-scale research was conducted to explore the relationship between teachers' engagement in PD and teaching practice, and further, the potential PD programme contributors to teachers' engagement in PD. This study employed a mixed-method methodology: a survey (n=124) and interviews (n=14) with Chinese English Language Teaching (ELT) teachers from primary and secondary schools. Results indicated that there was a reciprocal relationship between teachers' engagement in PD and their teaching practice. In addition, based on teachers' different individual PD needs, four types of teacher engagement emerged.

Keywords

Teacher engagement, professional development, teaching practice, individual needs

1 Introduction

Historically, teachers have been expected to look upon teaching more as a vocation than as strictly a job, but over recent decades there have been significant changes to the labour market which potentially impact on how those undertaking teachers' education programs look upon teaching as a career (Watt & Richardson, 2008). Consequently, teachers need not only to be able to keep order and provide useful information to students but also to be increasingly effective in enabling a diverse group of students to learn ever more complex material (Antoniou, 2012; Darling-Hammond, 2006). In this endeavour, teachers are expected to continue learning throughout their careers and to adapt to the changing needs of their society and its children (Dudley, 2014; Sachs, 2000). Additionally, as Day and Sachs (2004) assert, PD should be perceived as a hugely complex process which requires not only cognitive but also emotional involvement.

Although for the majority of teachers, professional development is an intrinsic part of the growth and development cycle of a professional career (Day & Sachs, 2004), it cannot be assumed that all teachers

will get truly engaged in all PD programs and comply with the expectations imposed by their schools or organizations. As Kennedy and McKay (2011) note, teachers are diverse and have different professional and personal needs, and they can react in very different ways as a result of participating in the same professional development activities.

In this study, therefore, the relationship between teachers' engagement in PD and their classroom teaching practice is investigated. Previous research findings have indicated that teacher professional development is positively associated with outcomes of teacher learning (e.g., Antoniou & Kyriakides, 2013; Dudley, 2013; Garet et al., 2001), and there is ample research documenting that teachers' effective teaching is dependent on teachers who are motivated and fully engaged in their work (Klassen, Yerdelen, & Durksen, 2013). Yet, there is little published evidence indicating whether teachers' engagement in PD is one of the critical facilitators or barriers to desired classroom practice. Thus, it can be assumed that the potential impact of teachers' engagement in teacher learning, and classroom practice has yet to be realized. Moreover, the dearth of research concerning teacher engagement in professional development is surprising, especially when compared to the rich body of research concerning work engagement in other settings. Although there are several studies on teacher engagement, they are neither aimed at the study of teacher PD nor teachers' teaching practice. For instance, a study by Hakanen, Bakker and Schaufeli (2006) points to potential antecedents of teachers' burnout and work engagement, focusing on teachers' work-related well-being. Another example is the study of Han, Yin and Wang (2016), in which they provide a better understanding of the relationship between teacher motivation, teacher engagement and teacher commitment in the context of China, without focusing on classroom teaching practice. Thus, although these studies yield valuable information concerning teacher engagement, it appears that there is a need to explore the relationship between teacher engagement in PD and teaching practice. In view of the scarcity of research on teacher engagement in CPD for teacher learning and its critical importance in teaching practice, the arguments in this paper are a response to this need.

The context of this study is primary education settings in China. Like many other countries, over the last decade, China has taken the initiative to introduce large-scale curriculum reform (Q. Gu, 2013). Instead of merely transmitting a fixed body of knowledge, new curricula stress the importance of integrating "knowledge and skills", "process and method" as well as "emotions, attitudes, and values" (M. Gu, 2010). However, as many researchers note, teachers are not likely to be receptive to inconsistent information with their teaching work, due to the fact that most teacher training events are theoretical and abstract, offering little relevance to teaching in the field (Gao, 2008; Lee & Yin, 2011). On the other hand, some teachers find it difficult to apply the various types of pedagogical knowledge and skills delivered through the lecture mode (Dello-Iacovo, 2009; L. Gu & Wang, 2006). Furthermore, there is very little adequate coherent infrastructure for professional development provided at the school or organization level (Lee & Yin, 2011; Wayne et al., 2008). In sum, the inescapable conclusion is that teacher PD in the research context is "not altogether satisfactory" and calls for "urgent remedial action" (Gao, 2008), given that improving teachers' professional development is not only "a major international trend" but also "a new national orientation and direction, integrated into the development and reform of teacher education in China" (Gao, 2008).

2 Literature Review

2.1 Development of teacher professional development

According to Guskey (2000), professional development refers to processes and activities designed to enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of students". To this end, teachers must continuously learn to stay up to date with new trends, strategies, and methods to meet new classroom challenges (Vries, Jansen, & Grift, 2013), to

contribute to changing their schools into learning communities through improving themselves (Stoll, et al., 2006), and to respond to educational change (Fullan, 2007). To maximize the impact of professional development on teachers' learning and teaching practice, in the past few decades, a range of literature focusing on PD models has emerged. For instance, Guskey (2000) presents six prominent models at the time of his writing: (a) training, (b) involvement in a development process, (c) study groups, (d) inquiry / action research, (e) individually guided activities, and (f) mentoring / coaching. As these PD models differ in their assumptions, expectations, and beliefs about professional growth, Guskey (2003) argues that no single PD model is effective for all individuals under all conditions. Further, he notes that the appropriateness of each particular model of PD is based not only on the inherent characteristics of each but varies depending on the goals, the content and the wider context for implementation (Guskey, 2000, p. 29). In the more recent use, although some terms of these models are a little dated, their structural characteristics remain similar. For instance, compared with "involvement in a development process", "building school-based teacher learning communities" (McLaughlin & Talbert, 2006) seems increasingly popular.

In addition to PD models, to ensure the effectiveness of PD programmes, previous researchers have done extensive theoretical and empirical studies to identify essential features of PD programmes. For instance, Kennedy (1998) notes that the relevance of the content is particularly important in PD programmes, suggesting an important role for content emphasis (cited in Wayne et al., 2008). To take this a step further, based on their correlational analyses, Garet et al. (2001) present a conceptual framework for effective professional development, suggesting five key features that make PD effective: (a) content focus, (b) active learning, (c) coherence, (d) sustained duration, and (e) collective participation (Desimone & Garet, 2015). It should also be noted that there is a sharp contrast between the substantial evidence supporting these features perceived to make PD effective and the disappointing results of many trials (e.g., Garet et al., 2008, 2011), especially regarding the challenges found in lower income developing countries (e.g., Gameda, Fiorucci, & Catarci, 2014). Some researchers argue that well-designed reforms with impressive goals have failed because too much attention has been focused on the desired educational change rather than how the curriculum should be implemented (Rogan & Aldous, 2005).

2.2 Development of work engagement

Generally, work engagement is claimed to be positively correlated with employee outcomes and organizational success (Bakker, 2011; Bates, 2004; Richman, 2006). While no agreement exists on a particular conceptualization of work engagement, it is notable that many studies draw on Kahn's conceptual foundation (e.g., May, Gilson, & Harter, 2004; Rich, Lepine, & Crawford, 2010), and he is also one of the first to theorize about this construct. Therefore, this study takes his construct of engagement as a working definition. Kahn (1990) formally defines engagement as "the simultaneous employment and expression of a person's 'preferred self in task behaviours that promote connections to work and to others, personal presence (physical, cognitive, and emotional) and active, full performances". Specifically, he describes engaged individuals as "being psychologically present, fully there, attentive, feeling connected, integrated, and focused in their role performances" (Kahn, 1992). Thus, from this perspective, work engagement can be described as a "multi-dimensional motivational concept", reflecting the simultaneous investment of "an individual's physical, cognitive, and emotional energy in active, full work performance" (Saks, 2006).

Furthermore, Self-Determination Theory (SDT, Deci & Ryan, 2000) is considered "a strong unifying theory" to guide the research and practice of engagement (Meyer & Gagne, 2008), which is an empirically based theory of human motivation, development, and wellness (Deci & Ryan, 2011). In recent decades, SDT researchers have been arguing that different extrinsically motivated behaviours vary in their level of autonomy (Roth et al, 2007). Research findings have indicated that the teachers' self-

reported autonomous motivation for teaching is expected to promote students' self-reported autonomous motivation for learning by enhancing teachers' autonomy-supportive behaviour (Roth et al., 2007). Thus, an important addition to intervention in teacher PD is to promote teachers' exploration of their professional identity and construction of a professional vision (Assor & Oplatka, 2003). The findings suggest that teachers' autonomous motivation is not only examined as supportive of or suppressing school contextual factors, but also incorporates long-term developmental processes of teacher's personal integration and identity development (Roth, 2014). Moreover, in the studies of SDT, Deci and Ryan (2000) adopt three needs from Connell's self-system model (Connell, 1990) and term them "innate psychological needs": the need for competence (to engage optimal challenges and experience mastery in physical and social world), the need for relatedness (to seek attachments and experience feelings of security and belongingness with others), and the need for autonomy (to self-organize and regulate one's own behaviour). From this perspective, the degree to which teachers perceive that these needs are met determines how engaged or disaffected they will be (Deci & Ryan, 2011).

2.3 Teacher engagement in professional development

In contrast to the extensive research and studies of PD components, there is very little literature focusing on teacher engagement in PD and no discernible published literature on teachers' PD engagement in the context of Primary education settings in China. Given the sophisticated nature of teacher engagement and the importance of teacher professional development, the present study focuses on teachers' engagement in PD, rather than teacher engagement in general. Before outlining the specific procedure of the present study, three questions which may appear minor but are in fact fundamental are raised.

The first question is centred on the role of teachers in the PD. What role does the teacher play in PD? Are they simply "Teacher" or "Teacher Learner"? In the study of the "Best Evidence Synthesis" (Timperley, 2007), researchers make the underlying assumption that teacher professional learning is fundamentally similar to that of student learning, explaining that it is not intended to discount the obvious differences between teacher and student learning situations; rather, it is assumed that the underlying processes and the conditions that promote them are similar in each case. Thus, I propose that teachers play a dual role in the PD context, as a teacher as well as a teacher learner, which is critical to better understanding of teacher engagement in PD learning.

The second point is focusing on distinguishing "participating" from "engaged" teachers in PD. According to Kahn (1990), engagement is a motivational concept which requires being psychologically present, rather than simply physically present. Research findings have shown that prior commitment does not guarantee greater engagement, both voluntary and mandatory teacher participation have co-occurred with positive and negative outcomes for students (Timperley, 2007). It can be assumed that the circumstances that initially lead to participation bear a complex relationship to further engagement. For instance, participating teachers' volunteering may be influenced by administrative and peer pressures. Therefore, I propose that these teachers are participating but not engaged in PD because they lack commitment to the learning process (Timperley et al., 2008). Further, in PD it is teachers' engagement that is positively related to teacher learning and classroom practice, not purely being physically present.

The third one is to specify the types of teachers' engagement. Although there is no consensus on types of engagement in the literature, according to Reschly and Christenson (2013), there is agreement that at a minimum, engagement is comprised of participatory behaviour and some affective components. Some researchers add cognitive engagement (Appleton et al., 2008). It can be argued that teachers' engagement shares some similarity with work engagement (Saks, 2006), especially in behavioural, emotional and cognitive engagement, whereas teachers' social engagement resembles values of the teaching profession more specifically. In particular, teaching involves a level of demand for social engagement—energy devoted to establishing long-term, meaningful relationships with students—that is rarely found in other

professions (Pianta, Hamre, & Allen, 2012). From this perspective, I propose that there are four types of teachers' engagement in the context of teacher PD, which are: behavioural, emotional, cognitive, and social engagement (Table 1).

Table 1

Types of Teachers' Engagement in PD

Teachers' Engagement in Professional Development	
Behavioural Engagement	referring to teachers' involvement in any types of CPD learning, including behaviours such as effort, persistence, concentration, attention and contributing to discussion
Emotional Engagement	referring to teachers' affective reactions in CPD, including interest, enthusiasm, enjoyment and belonging
Cognitive Engagement	referring to teachers' psychological investment in learning, including valuing, self-efficacy, self-regulation, and goal setting
Social Engagement	referring to teachers' moral value and social value, including the pursuit of professional identity and professional vision

Furthermore, I propose that the teachers' engagement in PD is vital because it is one of critical mediators of effective teaching and effective learning. The level of teachers' engagement not only mediates the effects of PD, but also predicts the efficacy of teaching practice, and consequently, student learning outcomes.

2.4 Research questions

In order to understand the potential impact of teachers' engagement in PD, the main aim of this research was to explore the relationship between teachers' engagement in PD and their teaching practice, and further, to identify the PD programme components that may facilitate teachers' engagement or disaffection in PD. It was also hoped that the conclusions drawn from this research would be helpful for the PD stakeholders to enhance PD efficacy through optimizing teachers' engagement. To address this research question, three sub-questions were examined:

- 1) Which are the most effective models for engaging teachers in PD?
- 2) What PD components affect teachers' engagement in PD?
- 3) How do teachers' engagement in PD affect their teaching practice?

3 Research Methodology

3.1 Research design

The purpose of the present research was to explore the relationship between teachers' PD engagement and teaching practice and research questions focus on "what and how", which are generally believed to be best answered through mixed-research solutions (Tashakkori & Creswell, 2007, p.207). Moreover, another rationale for adopting a mixed-method approach is in line with the principles of methodological triangulation. A mixed-method approach can increase the accuracy of data and reliability through triangulation and reduce bias in the research (Denscombe, 2014, p.160), and thereby, strengthen the internal validity of the research (Evans, 2018). To meet the needs of the research aim, a survey and semi-structured interviews were employed to increase the credibility of the results found and afford opportunities for unexpected results (Wilson, 2017). Specifically, quantitative data were obtained through a questionnaire survey, consisting of three parts. The first part was about participants' background information (gender, years of teaching and education level). The second part focused on teachers' perspectives on the impacts of four popular PD models conducted in the research context: study

of theory, demonstration of skills, practice of skills, and ongoing coaching (Guskey, 2000; Joyce & Showers, 2002). The participants were expected to circle out the impact degree of each model on their teaching practice using a Likert scale. In relation to the third part, in order to identify the relationship between teachers' engagement and the PD components, along with the potential facilitators or barriers to teachers' engagement, two questions were used: one regarding the degree of the teachers' engagement towards each of the four PD models, and one on the five identified features of the effective professional development activities which might contribute to their engagement in PD: duration, active learning, collective participation, content focus and coherence (Desimone et al., 2002).

As stated earlier, semi-structured interviews were used to obtain the qualitative data, aiming to provide a detailed understanding of how factors were interconnected, and to increase the internal validity of this study (Hochschild, 2009). In particular, the interview questions included two parts: one on participants' background information, and one intended to explain and expand the quantitative data found in the survey and to provide in-depth insights. For instance:

- 1) Which PD models do you think most effective and engaging? In what ways are you engaged in these PD activities?
- 2) Which PD components do you think are most contributing to your engagement in PD? To what degree are you satisfied with these PD activities?
- 3) How do you understand the relationship between your engagement in PD and your teaching practice?

3.2 Participants

Given that the purpose of this research was to gain in-depth views and opinions, a purposive sampling strategy (Cohen, Manion, & Morrison, 2018) was adopted. Although it may not be generalizable, this was not the primary concern of this research; rather, the concern was to acquire detailed information from those who possess relevance and knowledge to PD and teaching practice. Thus, we targeted teachers at a national ELT teacher-training conference for primary and secondary school teachers held in Shanghai, China. In total, of the 124 volunteer teachers who were recruited during breaks between training sessions, 122 consenting teachers (13% male, 87% female) completed the questionnaire survey on-site, and 14 volunteers participated in the interview afterwards. The profiles of interview respondents reflect the true proportion in the population of individuals in ELT in my research context, such as education background (bachelor's degree or above) and gender (more female than male teachers in primary and secondary ELT).

Moreover, considering the content validity (Antoniou & Lu, 2018), three professional PD practitioners in China were invited to review the content of the survey and interview questions, assuring that the content reflected the complete range of the attributes under study. Further, a pilot study was conducted to test out both collection instruments in the research context, with 22 ELT teachers from 3 primary and secondary schools in China, and after that, research questions were further refined.

3.3 Data collection

With the help of the research assistants, the research statements were handed out, including the introductory statement of this study and the statement seeking voluntary informed consent to participate in this research (BERA, 2011). Further, it was made clear that the survey would be anonymous, and how anonymity would be achieved and respected throughout the process. Once the consent forms were signed, the survey questionnaires were distributed. Meanwhile, as the interviewer, I announced the interview schedule plan and received fourteen volunteers to be interviewed. Before conducting the one-to-one interviews, as the interviewer, I explained the protocol to each of the interviewees and

confirmed their consent to record the interview and provide reassurances about the confidentiality of their comments. To collect in-depth thoughts from respondents, the interviews were conducted in Chinese. During the interviews with each participant, although appropriate prompts and probes were used to delve deeper into the topic when it was required, I tried to be non-judgmental throughout.

3.4 Data analysis

In order to integrate the qualitative and quantitative data in a beneficial way, the qualitative data from interviews was regarded as the “main” and quantitative data from the survey as the “subsidiary” counterbalance (Field, 2013). Thus, the survey distributed to the participants was used in a supporting role, and the research design centred on the analysis of the interview data. To address the research questions and to match findings to the research aim, this study adopted descriptive statistics for the survey data and thematic coding for the interview data. In specific, SPSS (Statistical Package for the Social Sciences) was used in all quantitative analyses. There was no attempt made to infer or predict population parameters in survey descriptive statistics; they simply reported what had been found in the survey. The qualitative data were first transcribed and then started searching for the thematic patterns in the coded data through thematic coding (Evans, 2013, p. 268).

4 Results

Based on the present research design, the interview findings will be presented to expand and clarify the survey results in this part. As stated earlier, the survey questions were based on the participants’ experience of professional development in terms of the impact on their classroom practice, their engagement, and contributing factors to their engagement in PD. Accordingly, the interview questions are centered on the same issues to gain more insights into the survey findings. In the following part, survey findings are presented through descriptive statistics and then the findings of the interviews are identified.

4.1 The most effective models for engaging teachers in PD

In responding to the first research question, the survey of the impact of PD models on teachers’ teaching practice was based on a four-point rating scale where 1 is “no impact” and 4 is “considerable impact”. Table 2 presents the mean impact rating of each PD model along with the number of participations of each model.

Table 2

The Impact of PD Models on Teachers’ Teaching Practice

	N	Minimum	Maximum	Mean	Std. Deviation
Ongoing coaching	121	2.00	4.00	3.388	.6503
Demonstration of skills	121	1.00	4.00	3.380	.6863
Practice of skills	82	1.00	4.00	3.220	.7540
Study of theory	93	1.00	4.00	2.796	.7599

As shown, there were no items receiving an average rating two or lower, indicating that in general terms, respondents felt positive about the impact of PD on their classroom practice. It is clear that “ongoing coaching” and “demonstration of skills” show similar results: the highest participation of 121 and the highest mean impact rating, 3.388 and 3.380 respectively, between “moderate impact” and “considerable impact”. In addition, “practice of skills”, despite being the one with the least number of participations, reaches a similar level of impact rating as the top two. Whereas “study of theory” receives the lowest impact rating of 2.796, somewhere between “slight impact” and “moderate impact”.

Table 3 presents the mean engagement rate of teachers in each model, based on a four-point rating scale where 1 is “almost not engaged at all” and 4 is “highly engaged”. As shown, “ongoing coaching” receives the highest mean rate of 3.328, (SD=0.6485), somewhere between “moderately engaged” and “highly engaged”. Likewise, “demonstration of skills” still reaches the second highest rate (M=3.179, and SD = 0.6899), followed by “practice of skills” (M=3.000, and SD=0.9206). In contrast, “study of theory” reaches the lowest level again (M= 2.533, and SD=0.8150), rated between “slightly engaged” and “moderately engaged”. Further, the rank order of the engagement rate is the same as that of the impact of PD models on teaching practice, suggesting that “ongoing coaching” and “demonstration of skills” are perceived as the most effective and engaging models in their professional development.

Table 3

The Teachers' Engagement Rate of PD Models

	Minimum	Maximum	Mean	Std. Deviation
Ongoing coaching	1.00	4.00	3.328	.6485
Demonstration of skills	1.00	4.00	3.179	.6899
Practice of skills	1.00	4.00	3.000	.9206
Study of theory	1.00	4.00	2.533	.8150

When the research questions above were addressed in the interviews, the informants responded with similar opinions but in greater detail. In the interviews, the most frequently mentioned theme, especially for early-career teachers, is the need for teaching competence. For them, the primary purpose to participate in the PD is to “have control over our teaching outcomes”, and “have the strategies and capacities for our desired teaching achievements”. Thus, the criterion of their ranking order of PD impact is whether it can be directly useful in their daily teaching. This has been interpreted by the informants in the following perspectives.

First, when selecting the most effective models, the respondents contend that “demonstration of skills” models allow them to understand “what” and “why” and most importantly, “how” to attain desired teaching outcomes in their real class teaching. Further, this is exactly why teachers feel highly engaged in these models. As one teacher responds,

“During the Demonstration of skills, the trainer will demonstrate her class designs by showing the process of how she teaches in class. The trainer’s every step or every part in the demonstration can resonate with us and I clearly understand how the target methods work in her demonstration. This makes me confident to apply it in my own class. So, I think this model has a higher rate of thinking and engagement for me.” (Teacher 06)

Similarly, this need for being efficacious in class teaching is also demonstrated by another teacher, who explains,

“If the PD activity only presents teachers with the theory through the lecture or the training meeting, most teachers do not have the ability to apply these theories into their real class. This is the reason why we need a teacher trainer to give us a live demonstration. Through this, we can see a clear procedure on how to rearrange our own teaching materials with new skills integrated. So, I think demonstration is the most effective PD activity for teachers.” (Teacher 14)

In addition to “demonstration of skills”, informants confirm that “ongoing coaching” produces a considerable impact on their improvement in teaching quality. As one teacher comments,

“I prefer “ongoing coaching” because it provides sufficient practice and feedback. The theoretical knowledge can be accessed online or from the books, but it requires the instruction of experienced teachers to help me figure out how to apply it to the practical teaching. Indeed, peer coaching can give me further and consistent guidance about how to apply theories into practice, and more importantly, how to adjust them appropriately according to the particular needs of my teaching class.” (Teacher 08)

Secondly, “ongoing coaching” and “demonstration of skills” are perceived as providing useful opportunities for teachers to think of their own teaching practice from a dual-role perspective: a teacher as well as a learner. As one teacher notes,

“I personally prefer “demonstration” because I can get actively involved in the training from the perspectives of both a teacher and a student. In this way, the whole demonstration process can be associated with my own classes. If the demonstration is presented in an attractive and interactive way, it will make me reflect more on my teaching, and promote my engagement at the same time.” (Teacher 02)

Apart from the major choice of “ongoing teaching” and “demonstration of skills”, “practice of skills” is also regarded as an effective and engaging model with the similar underlying criteria, that is the enhancement of teachers’ teaching competence. It can be further explained by one teacher, who notes,

“I think “practices of skills” can help improve my teaching practice rapidly and directly. Through more practice, I can quickly understand the essence of teaching... I can make the most rapid progress in this process because I have the highest engagement when practicing knowledge and strategy by myself. Thus, I can reflect more deeply on teaching and both my students, and I will achieve rapid growth in this process” (Teacher 04)

4.2 Prime contributors to teachers’ engagement in PD models

The second research question is to explore what PD components may affect teachers’ engagement in their professional development. Table 4 presents the frequency allocated to each of five PD features, “coherence” (34-40) and “content focus” (28-42) are rated as the most factors influencing teachers’ engagement in PD, followed by “active learning” (14-24) and “collective participation (11-25)”. Specifically, in “ongoing coaching”, “coherence” and “content focus” are most frequently reported, up to 40 and 42 respectively. Whereas “duration” (3-8) is ranked as the least contributing factor.

It can be proposed that respondents are more likely to feel highly engaged when there is a strong connection between PD content and their teaching practice. It also can be argued that “active learning” and “collective participation” play a significant role in increasing teachers’ engagement in PD. However, it seems “duration” is not as important to respondents.

Table 4
Prime Contributors to Teachers' Engagement in PD

	Duration	Active learning	Collective participation	Content focus	Coherence
Ongoing coaching	5	14	21	42	40
Demonstrations of skills	3	24	25	28	39
Practices of skills	7	23	17	28	35
Study of theory	8	22	11	38	34

The survey result was fully in line with the interview data. In the interviews, it is asserted that the strong connection between PD content and teachers' teaching practice not only produces considerable impact on teaching outcomes but is also closely connected to their level of engagement, which is assumed to be a significant mediator between PD activities and achievements gained in the process. As Teacher 06 describes, "If the content presented in PD is exactly what I want to hear and meets my current demand, it will definitely increase my engagement.". This is confirmed by another teacher, who comments,

"I think the most important factor is the "content focus". If the content is directly connected to my own teaching practice, I will have a higher engagement and passion in the process. On the other hand, if the content is not relevant, or it's not what I expected or concerned with, I couldn't be truly involved. So, I think "content focus" is a quite important factor for me to tell whether it is a useful PD activity for my teaching practice." (Teacher 07)

In addition to "coherence" and "content focus", some informants also express their preferences for "active learning" and "collective participation" for the similar reason that these factors can help teachers to develop a secure and caring attachment with their peers. This can be further explained by one teacher, who comments,

"I think "active learning" and "collective participation" will be more prominent for the teachers' growth. Through this approach, the teachers' engagement degree will be higher, because they feel they can be helped and guided by other excellent teachers. For example, in my school coaching, the experienced teachers bring positive effects to new teachers by offering useful suggestions related to many aspects of their teaching practice, not only limited to teaching knowledge. Further, new teachers set their own example in mind and want to become one of them. Therefore, I personally believe that this approach has a greater impact on teacher engagement and teacher improvement." (Teacher 04)

By contrast, when being asked about the influence of the factor "duration", respondents agree that it is the least contributing factor towards teachers' engagement in CPD. As one teacher explains,

"I think "duration" is less important. I have taken part in activities with different durations. I don't think that a longer period spent on PD will have a greater impact on engagement, nor do I think a short period will. What counts is that the content or the personal charisma of the trainer draws my attention to spend time in learning further and makes me reflect on my own teaching practice. My point is that the duration has nothing to do with my level of engagement. So, I think it is not an important factor in this question." (Teacher 05)

4.3 Relationship between teachers' engagement in PD and teaching practice

In relation to the third research question, teachers' comments emphasize the reciprocal relationship between their engagement and achievements in the PD process. As Teacher 13 notes, "teachers' engagement has a direct influence on teacher learning in PD and their classroom practice". Indeed, all 14 informants claim that higher engagement in CPD can lead to better outcomes in their professional learning and classroom practice. Further, they assert that more improvement in PD can motivate them to get more engaged in subsequent PD programmes. This is especially true for middle-career teachers, who note that the higher engagement in PD allows them not only to become more efficient in the classroom, but more importantly, to motivate their autonomy. As Teacher 10 describes, "I think one of best impacts of PD is that it can cheer me up. It can make me eager to enhance my teaching." This can be elaborated on by another teacher who, when explaining the impact of coaching, comments,

"I think coaching produces the most considerable impact on me because it can make me highly engaged, and in turn high performing in my teaching practice. When I am observed by my peers, I am playing a major role and waiting for the feedback from other teachers. In this case, although I am very stressed, the pressure will push me to do lots of lesson preparation beforehand, which I believe eventually maximizes my engagement. I can feel the change in my teaching through the change of my engagement. I can feel how motivated I am after going through this tough but precious process" (Teacher 05)

Informants also comment that the nature of PD for teachers is a kind of learning, so higher engagement can activate teachers to gain more in knowledge acquisition, and more importantly in reflecting on their own teaching. For instance, one teacher explains,

"I always believe that for teachers, PD is more likely to be a process of self-reflection on their teaching. Therefore, the highly engaged teacher may think more and in greater depth about her own class during training or demonstration, adopting more appropriate strategies or even adjusted ideas based on her teaching context to make her teaching more effective. This is vital for both her own teaching and her students. In sum, I think the more teachers are engaged in the PD activity, the more they will benefit from their active thinking and reflection." (Teacher 02)

Similarly, another teacher stresses the fundamental impact produced by getting highly engaged in the PD, who notes,

"When I am highly engaged in knowledge learning, I will further understand and then I can teach my students how to learn, especially the skills that I have gained in my own learning process. In contrast, if I am not really engaged, I can only have superficial grasp of knowledge points and I may teach my students in a very dull way. Therefore, engagement certainly has a direct impact on my teaching, particularly in knowledge learning and in my own classroom teaching." (Teacher 12)

Another teacher elaborates by distinguishing "thinking" in PD from "listening", to indicate the importance of higher engagement, noting that,

"If I am highly engaged in the PD, I will be really "thinking" about the content, rather than only "listening". I will "think" whether the trainer's method of demonstration can be used in my classroom, or I will "think" how to adjust the idea according to the trainer's method. So, the highly engaged teachers are willing to think and have an incentive to improve their classes. In my opinion, the more engagement I possess, the more thinking and motivation I produce, and as a result, I will be more passionate and motivated to achieve improvements. (Teacher 06)

Likewise, this is mentioned by another teacher in a similar way, who states,

“I think engagement definitely has a positive influence. Because higher engagement literally promotes a deeper thinking about teaching. For example, if I am highly engaged in the demonstration, I will have a better understanding and a deeper mastery of the teaching content.” (Teacher 08)

Moreover, the teachers point out that another possible benefit resulting from higher engagement in PD is to facilitate self-regulation and encourage them to self-organize and set their own goals. In their view, the underlying assumption leading to the eventual improvement in their professional development is not solely dependent on the effectiveness of the design or delivery of the PD programme. Rather, the fundamental driver to their professional success is the stimulation of their inherent and active desire to learn. As one teacher explains,

“Before participating in a lecture or a demonstration, I think I should be completely clear about my anticipated goals. Whether the skills of the training can be directly related to my class or not at first sight, I will be fully engaged. Because I think when I hold a strong passion to engage in it, it will arouse my inner active desire to learn. If I am fully engaged in this activity, I will have a further understanding of teaching.” (Teacher 07)

Similarly, another teacher asserts that engagement can be helpful for teachers by motivating them to self-regulate in order to reach satisfactory outcomes. This teacher explains,

“As my goal is to learn some new knowledge and make some change in my own classes, my first need is to learn by myself, from my internal self-learning drivers. With this awareness in my learning process, even if the content presented is not perfectly suitable to my teaching context, I still try to be highly engaged. So, I think if a teacher can make great progress in teaching practice through PD, mainly depending on his or her own strong commitment and active engagement throughout the process.” (Teacher 11)

5 Discussion

The analysis of survey and interview data led to the development of three strategic findings. This part outlines each of these three key findings in turn, providing a summary of discussions from the evidence of respondents and relevant literature review.

5.1 The mediating role of teachers' PD engagement on teaching practice

The first finding acknowledged the mediating role of teachers' PD engagement between PD contextual factors and desirable achievements in teaching practice, which was fully endorsed in all responses in interviews. Furthermore, respondents emphasized the reciprocal effects between teachers' engagement in PD and teaching achievements: higher engagement in PD leads to more autonomy and better performance in teaching practice, and improved teaching efficacy results in more engagement in subsequent PD activities. Although there is no evidence in literature measuring the impact of teachers' engagement in PD on teaching practice, engagement is highlighted in recent research as being closely associated with personal initiative (Salanova & Schaufeli, 2008), performance (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009) and organizational commitment (Han, Yin, & Wang, 2016). Therefore, it can be argued that teachers' engagement in PD can be distinguished as a positive mediator between PD contextual factors and desired teaching practice achievements.

5.2 The facilitators of teachers' PD engagement

The second finding highlighted the possible facilitators of teachers' PD engagement, suggesting that "coherence" and "content focus" of models may have considerable influence in fostering teachers' engagement in PD. There was full support for this position in both survey and interviews, in both early-career and middle-career groups. In addition, "active learning" and "collective participation" were also reported to facilitate engagement in PD. "Duration", on the contrary, was not as important in this arena. In relation to the underlying rationale for these key features, the comments centred on the teachers' PD needs. It can be assumed that how far PD can satisfy a teacher's needs determines how engaged or disaffected he/she becomes in the process of PD. Further, the balance between different needs must be discussed and agreed upon explicitly through the provision of different PD opportunities for teachers from different professional career phases.

Previous studies also indicate that PD content should be differentiated so as to meet the teaching needs and priorities of different groups of participants (Antoniou, Kyriakides, & Creemers, 2015). Furthermore, if organizations wish to "retain the hearts and minds as well as the physical presence of teachers", then PD which is appropriate to their cognitive and emotional needs, concerns and commitment at different times in their professional lives and in different school contexts is essential (Day & Leitch, 2007). Viewed in this light, "coherence", "content focus", "active learning" and "collective participation" could be regarded more as facilitators to foster and develop teachers' engagement in PD than simply the perceived features of PD activities.

5.3 The types of teachers' PD engagement

The third finding centred on the types of teachers' PD engagement. With evidence from the present research data and the literature, it can be argued that the dimensions of teachers' engagement in PD share some similarity with work engagement (Saks, 2006), especially in behavioural, emotional, and cognitive engagement, whereas teachers' social engagement resembles more the values of the teaching profession.

Although according to the present research results, the responses towards the impact of teachers' engagement were largely positive, it should be noted that it is not only the quantity but also the quality of teachers' engagement that determines the efficacy of its mediating role in the process of PD. For instance, from the comments in the present research, we can tell that teachers' behavioural engagement may range from attending the compulsory teacher training to actively contributing to the discussion in various formal and informal events during professional development. Teachers' emotional engagement may range from showing interest in the training content to developing a strong sense of belonging. Teachers' cognitive engagement may range from purely implementing the training content to developing self-regulated learning strategies that promote their expertise as well as professional goal setting. Teachers' social engagement may range from enabling students to gain better performance in academic evaluation to empowering students to achieve broadened learning outcomes.

Therefore, it is reasonable to assume that teachers' engagement in PD can be malleable and responsive to contextual change. Although teachers' engagement might begin with simple participating or liking, with the development of teachers' individual needs, it can result in psychological investment or professional commitment and thus may be a key to confirming the true value of the teaching profession.

In addition to the findings discussed above, participants were also keen to point out the importance of school leadership in fostering teachers' engagement. As Joyce and Showers (2002) explain, the best trainers, working with the most relevant and powerful content, will find little success or receptivity in poor organizational climates. Further, another finding is the narrow conceptualization of PD among teachers in the research context. The majority of respondents were more likely to think of PD as formal events that are "provided" (Kennedy & McKay, 2011). An apparent example is that some teachers did

not realize their peer observation was a kind of PD. This is perhaps because of an imbalanced perception of PD that privileges formal, planned events over informal or unplanned activities (Turner, 2006).

Finally, some limitations of this study are presented. First, the present research was an exploratory study and insufficient to confirm the consistent existence of the causal relationship between teachers' engagement in PD and teaching practice. The findings of the study, especially teachers' engagement and impact of PD on teaching practice were all based on teachers' self-reported data, without any given measurement model or authorized academic paper to measure teaching practice. Therefore, longitudinal research design is recommended to help confirm the causal relationship between these variables in future studies. Second, there is a constraint related to the statistical power. Due to the limited sample of this small-scale study, I did not apply any inferential statistics, since the results would have been skewed and potentially misleading (Field, 2013). Moreover, this present study did not reveal any regional or gender differences among sampling teachers, which may limit the general applicability of the findings.

6 Conclusion and Implications

This study gives evidence that there is reciprocal relationship between teachers' engagement in PD and teaching practice, and further, brings better understanding of teachers' engagement. Teachers' engagement can be perceived as one of the key mediators and indicators of desirable teaching practice. Moreover, variations in teachers' engagement in PD reveal teachers' different individual needs at their different professional career phases.

The results of this study have several implications for the improvement of effectiveness of PD through the greater recognition of the mediating role of teachers' engagement. First, although there have been many strategies focusing on the improvement of teaching quality in terms of teaching methods or skills, it is useful for the PD leaders to explore how to advance teaching practice through fostering teachers' engagement in their different professional life phases. In other words, PD facilitators are expected to find out how to satisfy teachers' individual needs through the provision of differentiated PD opportunities, although they may need to balance the tension between teachers' and schools' needs. Secondly, it is suggested that administrative personnel apply organizational or individual interventions to develop teachers' engagement in PD, and in turn, improve team and school engagement in PD as well. This would be useful not only for encouraging teachers to construct their professional vision, but especially for early-career teachers who are exploring their professional identity. Third, as a crucial mediator and indicator of teachers' teaching practice and student outcomes, teachers' engagement should be recognized and reinforced not only in the research context. The increased recognition of the value of teachers' engagement in PD seems to provide a feasible possibility for desirable PD outcomes.

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