

The Impact of Professional Learning Communities on Pre-service English Teachers' Professional Development in China

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Abstract: *Professional Learning Communities (PLCs) have been extensively studied for their impact on teachers' professional development, yet research on pre-service English teachers in China, pivotal for nationwide English teaching assignments, remains scarce. This study explores how PLCs influence pre-service English teachers' professional development across five knowledge domains. 30 pre-service English teachers, 2 teacher educators and 10 in-service middle school English teachers were involved in the study. Data was collected through field notes, written reflections and student interviews. Findings suggest substantial effects on personal, pedagogical and social knowledge, moderate influence on contextual knowledge, and no clear impact on sociological knowledge. The study contributes practical insights and theoretical implications for pre-service English teacher education and PLCs practice.*

Keywords: *Professional Learning Communities, Pre-service English teachers, Teachers' professional development*

1. Introduction

In 2014, the China Ministry of Education issued the directive on the Implementation of the Excellent Teacher Training Plan. This marked a new stage of development for China's teacher education. China has initiated the implementation of the Excellent Teacher Training Plan to vigorously revitalize teacher education in order to improve professionalism, innovation ability and comprehensive quality of teachers [1]. This strategic reflects the importance of investing in the development of educators to ensure a high standard of teaching and learning outcomes in the future.

According to Goodwin, the development of quality teachers relies on the development of five main knowledge domains which include personal knowledge, contextual knowledge, pedagogical knowledge, sociological knowledge and social knowledge [2]. As a result of this re-conceptualisation of quality teaching, teacher educators are finding traditional pre-service teacher education to be insufficient [3] in that it mainly focuses on taught courses which pay more attention on theoretical knowledge [4] and local teaching practicums which only offers a loosely connected and narrow experience of teaching constrained by prescribed curricula, teaching plans and textbooks [5]. As the major source of middle school English teachers, education model of pre-service English teachers urgently needs to be reformed [6]. There is a need for a more comprehensive and practical approach, including additional diverse and broader experiences to pre-service English teacher education in order to better equip them with the skills and competencies needed to navigate the complexities of modern teaching environments and effectively meet the diverse needs of students [3].

An example of one such approach is the professional learning community (PLC). PLCs are collaborative structures within educational institutions where teachers engage in continuous dialogue, reflection, and action to enhance their teaching practices and student learning outcomes [7]. Numerous studies have suggested that the implementations of PLCs can significantly contribute to student learning outcomes and teachers professional development [8]. In China, PLC is also fashionable with a notable growth of research in the past decade [9]. However, previous researches were mostly conducted to describe the characteristics of PLCs or adopt the PLC framework to interpret in-service teachers' collective work [10] and their self-efficacy [11]. Limited research exists on the perspectives of pre-service teachers in China, who are pivotal for nationwide teaching assignments. Their professional development during pre-service training profoundly influences their future teaching. The current study thus explores the impact of PLCs on pre-service teachers, using English teachers as a case study, to

investigate the influence of PLCs for their professional development. Specifically, the current study addressed the following questions:

- (1) Do PLCs influence the professional development of pre-service English teachers in China?
- (2) How do PLCs influence the professional development of pre-service English teachers in China?

2. Literature Review

2.1. Professional Learning Communities (PLCs)

PLCs are community platforms where individuals with similar commitments join together to engage in cooperative work via an ongoing process of knowledge sharing and research to maximize specific results ^[12]. Key characteristics of PLCs include shared values and vision, collective responsibility, reflective professional inquiry, collaboration, and a focus on student learning ^[13]. PLC has led to a paradigm shift for the professional development of teachers and effectiveness of PLCs in improving teacher efficacy and student achievement is well-documented ^[14]. Conventional PLC activities typically take the shape of one-time seminars, quick courses, or workshop training that is delivered in a cascade fashion and lasts for one day or seven to thirty days ^[15].

In China, teacher collaboration in groups to enhance teaching and learning has a long history ^[16]. Recently, numerous studies have underscored the beneficial impacts of teachers' active participation in PLCs, as emphasized by Gao and Wang ^[17]. These studies have shed light on the positive outcomes associated with teachers engaging in collaborative professional development activities within the educational landscape of China. For example, Wong showed that teachers enhanced their knowledge and skills through collaboration in a subject-based department ^[16]. Sargent noted that even in resource-constrained areas in China, the PLC is an effective method for the diffusion of pedagogical innovations ^[18]. However, research on PLC mainly focuses on teachers, including both experienced and novice teachers ^[16]. In terms of pre-service English teachers, the development of PLC in China is still in the exploratory stage.

2.2. Pre-Service English Teacher Education in China

As mentioned earlier, pre-service preparation is extremely important for future teachers. The pre-service English teacher education curriculum in China is characterized by its rigorous structure, integrating theoretical coursework with hands-on teaching practice. However, traditional teacher-centred pedagogies are still common ^[19], challenges such as insufficient practical training and the gap between theoretical knowledge and classroom application persist ^[20]. Recent reforms have focused on practical training and the development of key teaching skills ^[10] to bridge this gap and better prepare future teachers. There have also been calls to provide additional diverse and broader experiences beyond them to better prepare students for the evolving role of teachers ^[3].

In support of the reform of pre-service English teacher education and to establish an environment conducive to collaborative learning among pre-service English teachers, teacher educators, and in-service teachers, a "pedagogical exchange" of ideas was facilitated through the application of PLCs within pre-service English teacher education, guided by Goodwin's five knowledge domains framework ^[2]. This approach diverges from the traditional novice/expert relationship typically associated with teaching practicums, as highlighted by Mena et al. ^[21]. By leveraging PLCs within the context of Goodwin's framework, this innovative model aims to foster a dynamic exchange of knowledge and experiences among all stakeholders, promoting a holistic approach to pre-service English teacher education that transcends conventional boundaries and encourages collaborative professional growth.

3. Methods

3.1. Participants

This study took place during the third year of the pre-service teachers' undergraduate program. They possessed a foundational understanding of English language and educational principles, yet lacked sufficient teaching practice experience. 30 pre-service English teachers and 2 teacher educators in a local university, 10 in-service middle school English teachers who have rich teaching experiences

from various schools in different cities were involved in the study. All these participants were divided into 5 PLCs and were labeled Group1, Group2, Group3, Group4 and Group5. Each group contains 6 pre-service English teachers (2 of them act as sharers and 4 of them were discussants), 2 in-service middle school English teachers and 1 teacher educator. The author, who at the same time worked as a teacher educator, acted the PLCs coordinator.

3.2. Instructional procedures

Each PLC group met five times for 60-minute sessions via Tencent Conference. In each meeting, 2 sharers introduced a hot education topic (e.g., understanding before teaching, collaborative teaching et al.) after sufficient reading and relevant research. After that, 4 discussants were give time to brainstorm 1-2 highlights and puzzles concerning the given topic. During this process, each group members had time to share their opinions through question-asking, idea-generation, and reflection. Then in-service middle school English teachers and teacher educator should join the discussion. They would be able to draw on their experiences, evolving knowledge to reflect based on real teaching scenario and shed some light on the issues students have during the project.

3.3. Data sources and analysis

Because the purpose of this study was to explore the role of PLCs in facilitating pre-service English teachers' professional development, data sources included field notes, written reflections and student interviews. The author kept detailed field notes immediately after each PLC meeting by reflecting on her observations of the students' responses and behaviors (e.g., students' engagement). Pre-service English teachers were asked to complete brief written reflections (on successes and challenges of working toward the given topics) to learn more about their experiences on the meetings. These reflections can give a better understanding of the participants' reflective processes during the project [22]. After all these PLCs meetings, 10 sharers were asked to complete a 30-minute interview to reflect on their own development through PLCs. Interview questions focused on further exploring pre-service English teachers' reactions and understandings of the impact of PLCs on pre-service English teachers' professional development (see Table 1).

Table 1: Interview Questions

Question Number	Questions
1	Describe your training on Professional Learning Communities (PLCs).
2	Have you seen an improvement in your personal knowledge during the PLCs? In what aspects?
3	Does PLCs enhance your knowledge of teaching environment and teaching resources?
4	Does PLCs enhance your knowledge of teaching methods? Please explain how.
5	How might it affect teachers' sociological knowledge?
6	Does PLCs improve your teamwork ability or leadership abilities? In what way?

Data was analysed using thematic analysis. The first step was to print out each of the transcriptions, including students' written reflections and interviews. The second phase was to begin coding the data. Then various sets of codes were assembled according to Goodwin's five knowledge domains for teaching and five main themes were extracted. Each theme is explained in the following sections. See Table 2 for the data sources and the volume of the primary data sources.

Table 2: The Data Sources and the Volume of the Primary Data Sources

Data source	Description of data	Volume of data source
Field notes	The author kept detailed field notes immediately after each PLC meeting by reflecting on her observations of the students' responses and behaviors (e.g., students' engagement).	Approx. two pages each group, 10 pages in total.
Written reflections	Pre-service English teachers were asked to complete five brief written reflections (on successes and challenges of working toward the given topics) to learn more about their experiences on the PLC meetings.	Approx. one pages each pre-service teacher, 30 pages in total.
Interviews	10 sharers were asked to complete a 30-minute interview in Tencent Conference to reflect on their own development through PLCs.	30 mins.

4. Findings

This section reports the findings by illustrating pre-service English teachers' PLCs experiences in terms of teacher personal knowledge, contextual knowledge, pedagogical knowledge, sociological knowledge and social knowledge. To illustrate the findings in fine detail, pre-service English teachers' written reflections and interview excerpts are selected as in-field evidence to provide a trustworthy description of their experiences in PLCs. Written reflections are labeled according to the PLC groups, such as "G1" representing reflections in PLC group one and interview excerpts are labeled by participants number, such as "I1" for the first interviewer.

Qualitative data analysis highlights two major findings: firstly, PLCs enhanced the professional development of pre-service English teachers; secondly, PLCs exerted diverse levels of influence on pre-service English teachers' professional development. Personal, pedagogical, and social knowledge exhibited notable positive implications, whereas contextual knowledge demonstrated moderate significance. Conversely, sociological knowledge did not exhibit a significant impact. We briefly expand on each finding below.

4.1. PLC promotes pre-service English teachers' personal knowledge

Teachers' personal knowledge refers to teachers' individual knowledge, encompassing their professional knowledge, experience, beliefs, attitudes, and other aspects. Teachers' personal knowledge plays a crucial role in teaching practice, significantly influencing their professional development and teaching effectiveness^[23]. During the community circles, pre-service English teachers all agreed that among all PLC procedures, they gained a growing self-awareness of their own identities and abilities as English language teachers.

To be honest, I could notice my own strengths and weaknesses during the activities. I knew more about myself and how should I improve. (G3)

During the PLC, my language organization and communication skills have improved through discussions with other teachers in English. (I5)

Some pre-service teachers have expressed feelings of nervousness when presenting in front of peers or educators, often attributed to their limited experience in teaching. Nonetheless, they have the potential to cultivate increased confidence through engagement in PLCs, where more experienced teachers offer valuable insights into teaching skills. This collaborative environment not only fosters skill development but also nurtures a supportive space for pre-service teachers to enhance their confidence and proficiency.

By collaborating with our PLC mentors, I have strengthened my belief and now feel more confident about the future. (G1)

These insights illustrate that PLCs have a positive influence on teachers' personal knowledge and self-awareness. By participating in PLC activities, teachers gain deeper insights into their strengths and weaknesses, improve their language organization and communication skills, and enhance their confidence in the future. This further underscores the importance of personal knowledge in teachers' professional development and the effectiveness of PLCs in fostering teachers' holistic growth.

4.2. PLC enhances pre-service English teachers' contextual knowledge

Contextual knowledge refers to educators' understanding of the specific circumstances, environments, and conditions that influence teaching and learning within a particular educational setting. This knowledge encompasses awareness of the social, cultural, institutional, and situational factors that shape the teaching and learning processes. According to Shulman, contextual knowledge is a crucial component of teachers' professional expertise. Teachers' contextual knowledge enables them to adapt their instructional strategies, classroom management techniques, and assessment practices to suit the unique needs and characteristics of their students and school environment^[24]. During the post-interview, I1 emphasized that a good understanding of the teaching environment is a prerequisite for teachers to carry out teaching tasks successfully.

Through PLCs, I have learned what a real classroom is like and how the knowledge and skills we learn are applied in a real classroom. Also, in-service English teachers in this project came from different schools in different cities, provided the opportunity for pre-service teachers to know more

about the changes they needed to make to different schools, students and teaching materials. (I1)

I3 concurred with this perspective and further emphasized that teachers who possess a deep understanding of the contextual factors influencing teaching and learning are better equipped to make pedagogical choices that are responsive to the diverse needs of their students and the demands of their educational context. He elaborated:

In the seminar, the teacher said that when we become a teacher, we will face many different students, and different students will have different thinking. This inspired me to choose teaching methods suitable for different students, and teach students in accordance with their aptitude to achieve better teaching results. (I3)

This underscores the importance of PLCs in fostering a deeper insight into student needs and optimizing teaching practices. What's more, PLC have the potential to enhance pre-service English teachers' sense of professional belonging by directly addressing classroom management challenges often encountered by educators with limited teaching seniority and, consequently, less classroom teaching experience. I2 mentioned that:

In the seminar, my PLC mentor shared with us the strategies of integrating teaching materials with specific cases, which helped me have more understanding of using teaching materials as teaching resources. (I2)

As Goodwin mentioned, prepare student teachers for every possible situation is impossible [2]. Through PLC, pre-service English teachers are exposed to various teaching realities (students, classroom settings, school systems) that can enhance their capacity to navigate complexities within the educational landscape. This exposure not only equips them with the skills to address these challenges effectively but also provides tailored support and professional development opportunities that cater to their specific needs.

4.3. PLC enhances pre-service English teachers' pedagogical knowledge

Pedagogical knowledge includes expertise in teaching methods, curriculum design, assessment strategies, classroom management, and student engagement. Enhancing teachers' teaching methods are at the heart of all types of teacher training. As Brown and Jones emphasized, "Pedagogical knowledge plays a vital role in shaping the teaching practices of English education majors, allowing them to integrate language skills development, literary analysis, and cultural understanding in their instruction [25]." In this study, an overwhelming response from the pre-service teachers was that their pedagogical knowledge has been enriched through attending collaborative learning sessions and participating in classroom observation in PLCs.

My favorite activity is discussion after the sharing. The teachers guided us to reflect on everything related to the topic, both highlights and doubts. After the discussion, we could always found solutions to the problems and understood the pedagogical theories and teaching principles underlying the solutions with the teachers' help. I was always looking forward to this activity. (G3)

What really impressed me is that teachers should give students time to think on their own after asking a question, rather than demanding immediate answers. During the PLC, the teacher would always set aside 2 to 3 minutes for us to think before starting the discussion, and I found that really helpful. So, in my future teaching career, I'll incorporate this into my teaching methods to continuously improve and enhance students learning. (I4)

In addition to English teaching methodologies, some feedback indicates that through PLCs, they also gained insights into cutting-edge teaching theories and interdisciplinary teaching methods.

I learned a method called deep learning during the PLC session, and realized that it can lead students to deep thinking and improve learning efficiency. During the study, I learned that I need to integrate other subjects' knowledge into my teaching and achieve interdisciplinary teaching. (I5)

What's more, as part of pedagogical knowledge, modern technology knowledge involves teachers' ability to effectively utilize technological tools and resources to support student learning during the teaching process. Teachers need to understand how to integrate modern technology to enhance teaching effectiveness and student engagement. As one pre-service teacher mentioned,

Due to a lack of practical experience, I was previously unaware of the current use of information technology in classrooms. Through explanations from experienced teachers, I have gained a full

understanding of popular tools like the Smart Board used in secondary schools today, and have developed some knowledge on how to use them. (G5)

In her view, teachers' knowledge of modern technology is essential, and striving to be proficient in leveraging digital tools and resources to enhance instructional practices and student engagement has been an essential goal of her teaching career.

To conclude, all respondents agreed on the implication of PLC in improving pre-service English teachers' pedagogical knowledge. PLCs provide a platform for teachers to share teaching experiences and methods, facilitating the exchange and sharing of pedagogical knowledge.

4.4. PLC has little impact on the sociological knowledge of pre-service English teachers

Sociological knowledge in the field of English education refers to teachers' understanding and awareness of various social factors, cultural backgrounds, social structures, educational policies within the society and education system. According to pre-service English teachers' reflections and interviews, PLCs has little impact in this respect.

Sorry, I am not quite sure about Sociological knowledge. (I5)

I am not very familiar with this issue after attending PLC activities. (I1)

It is important for students to develop a positive and respectful view towards culture and diversity [2]. However, the majority of PLC participants were unfamiliar with the concept of sociological knowledge and did not gain relevant insights during the activity.

4.5. PLC improves pre-service English teachers' social knowledge

According to Hargreaves, teachers' social knowledge encompasses their ability to build relationships with students, colleagues, and the broader school community [26]. Furthermore, Fullan emphasizes the importance of teachers' social knowledge in promoting collaboration and collective efficacy within schools [27]. This social knowledge enables educators to work together effectively, share best practices, and support each other in professional growth and development. Through the PLCs, every pre-service English teachers took part in collaborative activities, such as case study, collective lesson planning, discussion. Almost all pre-service teachers identified that their PLCs boosted their "collaborative ability" and provided them with "a sense of belonging". They recognized the positive impact that "meaningful discussion within the PLC" had on their learning and growth as a future teacher. The following quote exemplifies this aptitude.

Many collaborative activities were offered in PLCs, such as peer observation, discussions, observing expert teachers' teaching. The more activities I participated in, the more progress I made. I'm willing to spend more time learning to be a good English teacher (G2).

Hence, she urged all pre-service English teachers to be open to sharing and accepting ideas from one another during collaborative learning. Her understanding is supported by I4, who stressed that one of the most intuitive advantages of PLC is that it provides opportunities and platforms for teachers to share knowledge and understanding of the constantly evolving teaching contents. She further explained:

PLCs have improved my ability to collaborate, and in this learning mode, I exchange ideas with my group members in the process and help each other solve problems, which greatly improves my cooperation skills and strengthens friendships. (I4)

She further noted that apart from the collective learning among peers, the most valuable resources came from experienced teachers.

In our daily learning in the college, we do not have the opportunity to collaborate and interact with in-service high school teachers. PLC activities provide us with this opportunity. It definitely maximize the benefits of collective learning. (I4)

Collaboration is currently recognized as a crucial attribute of effective educators, with particular significance for beginner teachers [28]. This emphasis on collaborative practices aligns with the concept of teachers' social knowledge, which encompasses the interpersonal skills and abilities necessary for effective teamwork and communication within educational settings. As highlighted in the study, through engaging in PLCs to collectively tackle teaching dilemmas and obstacles, pre-service English

teachers not only refine their pedagogical approaches but also strengthen their teamwork skills.

5. Conclusion

The study employed qualitative research methods to investigate the learning approaches and outcomes of pre-service English teachers within PLCs through classroom observations, reflections, and interviews. Despite the small number of participants, the project reported on the impact of PLCs on the professional development of pre-service English teachers across five knowledge domains: personal knowledge, contextual knowledge, pedagogical knowledge, sociological knowledge, and social knowledge. These five knowledge domains provide a comprehensive framework for understanding the multifaceted nature of quality teaching and the diverse knowledge and skills that effective teachers possess. As teachers' professional knowledge is typically tacit in nature and not readily accessible or verbalized by teachers [29], PLC can be a way of opening that up for sharing and co-construction. From the study findings, the influence of PLC on these five dimensions was found to vary along a gradient from highly impactful to having little impact. The dimension of personal knowledge, pedagogical knowledge and social knowledge were identified as having immense positive implications. Contextual knowledge was showed moderate influence by the pre-service English teachers as another key capability that was strengthened because of their participation in PLCs. In contrast, sociological knowledge showed no obvious influence.

6. Significance

The research findings lay a solid groundwork for prospective scholars to delve into the impacts of PLCs on pre-service English teachers in China. It also instills confidence in teacher educators to persist in utilizing PLC to enhance their teaching practices. Given that the study participants were exclusively from one university, it is recommended that future research explore the influence of PLC across diverse school settings using a range of research methodologies. This approach will enable a comprehensive examination of the distinct roles played by PLC in different school contexts and the underlying factors contributing to these variations.

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