The Role of Professional Learning Communities for Teacher Innovation: A Comparative Study in Beijing and Hong Kong

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Abstract

This research explores how professional learning communities influence teacher innovation and how contextual factors differ in their impact. Teacher innovation, which refers to the implementation of innovative ideas raised by teachers, has become increasingly popular over the last decades. Teachers as innovators can significantly enhance the likelihood of improving schools' educational practices due to their professional judgment and knowledge engagement. Teachers' ongoing learning is crucial for successful innovation, and professional learning communities have been widely accepted as an effective way for schools and educational institutions to sustain professional learning with the collective purpose of enhancing students' performance. The theoretical framework guiding this research is the social capital theory. Through semi-structured interviews with 94 teachers and school leaders, this study reveals that professional learning communities foster teacher innovation through four key dimensions: 1) mutual trust and respect as a foundation; 2) shared practice and knowledge as a source of inspiration; 3) peer collaboration to provide feasibility; and 4) shared responsibility to provide guarantee. When comparing Beijing and Hong Kong, it is observed that promoting teacher innovation through professional learning communities is easier in Hong Kong due to the relatively diverse admission pathways and low power distance. However, the low in-group collectivism in Hong Kong may limit teacher innovation due to weak peer collaboration. This research offers valuable guidance for teachers and school leaders on how to promote teacher innovation effectively during professional learning communities.

Keywords: professional learning communities, teacher learning, teacher innovation, culture difference, school change

1.   Introduction

The schools need to constantly change, improve, and adapt practices to intensify the quality of instruction and effectiveness of teaching that is necessary for students' achievements (Earl & Katz, 2002; Jeremy & Swinson, 2012). Recognizing teachers as innovators, rather than passive listeners, is critical for better understanding the evolving educational practices (Holdsworth & Maynes, 2018). Teacher innovation can be integrated in various ways, but the most impactful approach is through implementing novel ideas, methods, tools, and content, which can motivate teachers and unleash the creative potential of students (Jiafang & LU, 2014; Rigolizzo & Amabile, 2015; Starko, 2001).

Teachers' professional learning is pivotal for successful innovation (Bakkenes, Vermunt, & Wubbels, 2010), and evidence supports professional learning communities as an effective way to promote teachers' learning (Jones, Stall, & Yarbrough, 2013). The transformation in teaching practice, resulting from teachers' participation in professional learning communities, can be attributed to shared values and a focus on student learning (Dogan, Pringle, & Mesa, 2015). Through collaboration and interaction with peers, teachers can refine their skills and teaching strategies through regular practices and discussions (Hargreaves & Dawe, 1990). However, limited research proposed that the professional learning process could let teachers learn and implement novel teaching methods and strategies, but the flush relationship between the professional learning communities and teacher innovation is still under-researched.

Professional learning communities encompass various dimensions, yet the impact of specific dimensions on teacher innovation and how they influence it have received little attention. Moreover, it remains unstudied how different cultural contexts may affect the impact of professional learning communities on teacher innovation. Therefore, it is crucial to broaden research boundaries and consider external influencing factors for professional learning communities to better promote teacher innovation in diverse cultural contexts.

2.   Theoretical framework

Social capital encompasses economic, cultural, and social elements that profoundly influence human actions (Bourdieu, 1986). Extensive research has identified several dimensions of social capital, including structural, relational, and cognitive aspects (Nahapiet & Ghoshal, 1998). Structural social capital, characterized by networks, relationships, and ties within work teams, plays a critical role in generating advantages for organizations (Adler & Kwon, 2002; Ali-Hassan, Nevo, & Wade, 2015). The network ties within structural social capital foster a tight association among team members, enhancing collaboration and knowledge exchange within the team (Akhavan & Mahdi Hosseini, 2016). Relational social capital is formed by the relationships and behaviours among individuals. It revolves around elements such as trust, participation, norms, and obligations, shaping the cooperative dynamics within a group or community (Vallejos, Macke, Olea, & Toss, 2008). In the cognitive dimension of social capital, shared narratives, codes, interpretations, and visions become valuable resources that enhance collective understanding and foster innovative thinking (Vallejos et al., 2008).

Furthermore, serval researchers highlighted the significance of networks stemming from individuals or social units in promoting knowledge generation and facilitating innovation at the organizational level (Parker, Halgin, & Borgatti, 2016). Also, the need for in-depth research to explore the intricate relationship between innovation and social capital was emphasized

(Akhavan & Mahdi Hosseini, 2016). Moreover, a compelling link between the concept of communities of practice and social capital has been observed, as both play pivotal roles in fostering innovation within organizations. For instance, Pattinson's study revealed that professional learning communities, akin to communities of practice in the business sector, significantly enhance innovation within work teams and groups (Pattinson & Preece, 2014). However, they also pointed out a crucial research gap, underscoring the necessity of engaging a broader population, particularly subordinates in organizations, to gather diverse perspectives, ensuring a more comprehensive understanding of the relationships at play.

Considering ties, trust, and shared narratives, it becomes evident that these factors bear a resemblance to some dimensions of professional learning communities, such as mutual trust, shared knowledge, and collaboration with peers. Also, the study of social capital's relationship with innovation becomes increasingly intricate in various organizational contexts, requiring further exploration and understanding (Filieri & McLeay, 2014).

The research questions could be drawn:
1. 1 Do professional learning communities promote teacher innovation?
2. If yes, how do professional learning communities promote teacher innovation?
3. How would the Chinese/Beijing context influence the potential relationship between professional learning communities and teacher innovation?

3.   Methods and objects

For this research, a qualitative research method was chosen to gain in-depth insights and valuable viewpoints. Semi-structured interviews with open-ended questions were conducted to allow the interviewees the freedom to express their thoughts without predefined options. The interviews were conducted face-to-face in both Beijing and Hong Kong to ensure a direct and personal exchange of ideas.

To ensure the selection of knowledgeable participants, a purposive sampling approach was adopted. This method enabled the researchers to select interviewees who possessed a deep understanding of professional learning communities and teacher innovation, thus enriching the data with expert opinions. Each interview session lasted approximately 30 minutes, providing ample time for the participants to share their perspectives and experiences.

In order to accurately capture the interview responses, the data and conclusions were carefully audiotaped, which allowed me to revisit the interviews and extract nuanced information during the analysis phase.

During the data analysis process, ATLAS.ti, a qualitative data analysis software, was employed to code and organize the semi-structured interview data. This systematic approach helped identify common themes, patterns, and insights emerging from the participants' narratives.

3.1 Participants and interview

The data for this study primarily originated from four interviewed teachers, namely Teacher from Beijing A (TBA) and Teacher from Beijing B (TBB), both working in Beijing, as well as Teacher from Hong Kong A (THA) and Teacher from Hong Kong B (THB), who work in Hong Kong. To ensure the data's realism and comprehensive understanding, each focal teacher and their colleagues, who were familiar with the focal teacher, formed groups of 4-5 participants

for semi-structured interviews. These groups were diverse in terms of subjects taught, grades handled, age, and teaching experience, providing a rich array of perspectives.

Three group semi-structured interviews were arranged for each focal teacher. To gather varied insights, the peers and friends of the focal teacher from other schools within the same region participated in group semi-structured interviews. These external participants, totalling 4-5 individuals per group, added different perspectives and dimensions to the data. Two group discussions were conducted outside their school. Furthermore, individual semi-structured interviews were conducted with school or professional learning communities' leaders, offering valuable insights into the leadership's role in fostering teacher innovation.

In total, 94 school informants shared their narratives and responses, providing a robust and comprehensive dataset. Among the participants, 75.5% had experience in raising innovative ideas during professional learning communities, 23.9% had the motivation to propose innovation but did not act, and 0.6% never exhibited action or motivation towards innovation. Moreover, 42.6% of the participants had experience in participating in related professional learning communities activities for over 15 years, 31.9% with 5-15 years of experience, and 25.5% had joined less than 5 years ago.

3.2 Data coding and analysis

The interview data were meticulously analysed using the ATLAS.ti software. During the analysis, four essential dimensions of professional learning communities were identified: mutual trust and respect from colleagues (MTR), shared practice and knowledge (SPK), peer collaboration (PC), and shared responsibility (SR). To provide a comprehensive understanding, each dimension was further classified into three distinct codes representing varying levels of promotion or impact. For instance, the codes for the shared responsibility dimension were categorized as follows:

Shared Responsibility - High Promotion (SR-H): Signifying that shared responsibility has a significant and positive impact on promoting teacher innovation.

Shared Responsibility - Medium Promotion (SR-M): Suggesting that shared responsibility moderately contributes to teacher innovation.

Shared Responsibility - Rarely Promotion (SR-R): Indicating limited or minimal influence of shared responsibility on teacher innovation.

Using this coding system, specific statements made during the interviews, such as "I think shared responsibility could let me be more motivated and confident to innovate.," were appropriately coded as Shared Responsibility - High Promotion (SR-H) to reflect the perception of high promotion.

Furthermore, to investigate the difference in cultural context's influence on the impact of professional learning communities on teacher innovation in Beijing and Hong Kong, three factors were defined: power distance (PD), in-group collectivism (IGC), and performance orientation (PO) (House et al., 2004). Each factor was categorized into three codes to represent the relationship with the impact of professional learning communities on teacher innovation:

Power Distance - Promote (PD-P): Suggesting that the factor promotes the impact of professional learning communities on teacher innovation in the respective cultural context.

Power Distance - No Obvious Relationship (PD-N): Indicating that there is no apparent connection between the factor and the impact of professional learning communities on teacher innovation in the cultural context.

Power Distance - Limit (PD-L): Denoting that the factor imposes limitations on the impact of professional learning communities on teacher innovation in the specific cultural context.

For example, statements like "I think the teacher's leading voices are limited, and some of the improvement measures we proposed were often not adopted by leaders" would be coded as Power Distance - Limit (PD-L), signifying that power distance poses limitations on the impact of professional learning communities on teacher innovation.

Two coders diligently applied the identified coding system to all interview transcripts, ensuring the consistency and accuracy of the data analysis process.

4.   Results

In conclusion, a substantial majority of the interviewees acknowledged that professional learning communities could significantly promote teacher innovation. The findings pertaining to mutual trust and respect (MTR) revealed that approximately 94% of the interviewees expressed strong agreement that mutual trust and respect (MTR) highly promotes teacher innovation. 4% of the participants indicated a moderate level of promotion, while 2% of the respondents believed that the impact was limited. Regarding shared practice and knowledge (SPK), an overwhelming 96% of the respondents perceived a high promotion of teacher innovation. Only 4% of the interviewees suggested a moderate impact of shared practice and knowledge (SPK) on teacher innovation. Concerning peer collaboration (PC), 89% of the participants agreed that peer collaboration (PC) could highly promote teacher innovation. However, 11% of the participants thought that peer collaboration (PC) only had a moderate level of impact on teacher innovation. Finally, all participants, totalling 100%, agreed that shared responsibility (SR) could highly promote teacher innovation, emphasizing the vital role of shared responsibility within professional learning communities.

To gain a comprehensive understanding of the insights and perspectives of the interviewees, their scripted responses and statements were carefully analysed around the interview questions.

4.1   Mutual Trust and Respect (MTR)

Mutual trust and respect (MTR) will provide the foundation and environment for teachers' creativity and innovation. Teacher from Beijing B (TBB) mentioned that ''being part of professional learning communities is like being in a supportive and nurturing environment. The mutual trust and respect among colleagues lay a strong foundation for my creativity and innovation. When my views and ideas are trusted, respected, and affirmed by my peers, it boosts my self-confidence. This, in turn, encourages me to take more risks and think outside the box in my teaching approaches. I feel empowered to be the first to try out new ideas because I know my colleagues will support and encourage me along the way.'' Some teachers from other schools also stated that ''self-confidence plays a crucial role in fostering teacher innovation within professional learning communities. When our views and contributions are trusted and respected, our self-confidence gradually builds up. This confidence gives us the courage to step out of our comfort zones and try new teaching methods. As teachers, we need

to believe in the value of our innovative ideas and feel supported by our peers. The positive environment within professional learning communities helps in cultivating this self-assurance, which fuels our passion for coming up with more innovative approaches to teaching.'' Teacher from Hong Kong A (THA) and his peers stated that ''when our colleagues trust and respect our innovative ideas, we will be passionate to come up with more ideas. Such an environment will stimulate your creativity because you think you are valuable in these professional learning communities.''

4.2 Shared Practice and Knowledge (SPK)

Shared practice and knowledge (SPK) will inspire the teachers to come up with more innovative ideas and reduce the possibility of failure. Most teachers expressed that ''shared practice and experience are crucial in driving teacher innovation. Teacher isolation can be a barrier to innovative ideas, as it requires recognition and acceptance of our ideas by others. In professional learning communities, the collective sharing of practices and experiences allows us to discover common challenges faced by our peers. This understanding of shared challenges sparks the motivation to find innovative solutions. Furthermore, learning from the experiences of others provides fresh perspectives on familiar concepts, triggering new ideas and approaches to teaching.'' Teacher from Hong Kong B (THB) shared stories ''In one professional learning community's session, a colleague shared their successful project on project-based learning, which led to significant improvements in student engagement. By learning from his experience and adapting it to my teaching context, I implemented a similar project in my classroom. The positive outcomes and increased student enthusiasm validated the value of shared knowledge and encouraged me to explore more innovative strategies. The exchange of experiences from others broadens our horizons and pushes us to think creatively in our teaching practices.''

4.3 Peer Collaboration (PC)

Peer collaboration (PC) will provide the feasibility and make the innovation easier to implement. First of all, the statements were drawn from group interviews as that ''peer collaboration within professional learning communities is instrumental in making teacher innovation more feasible and easier to implement. When a teacher proposes an innovative idea, the collective input and collaborative work of peers help to refine and improve the feasibility of the idea. The diverse perspectives and expertise within the group contribute to identifying potential challenges and finding practical solutions. This collaborative effort accelerates the implementation of teacher innovation and minimizes the problems and difficulties that individual teachers may encounter in the process.'' A school leader mentioned that ''In our school, a group of teachers within the professional learning communities proposed a project to integrate project-based learning across various subjects. Through collaborative planning and group discussions, they shared their respective experiences and expertise. The collective effort ensured that the project was well-coordinated and effectively implemented. The positive results and successful outcomes boosted the confidence of the teachers involved, inspiring them to continue pursuing innovative practices in their classrooms. The peer collaboration within the professional learning communities significantly increased the success rate of the innovative project and encouraged other teachers to explore their innovative ideas.''

4.4 Shared Responsibility (SR)

Shared responsibility (SR) will provide guarantees that if the innovation fails, the teachers will take the least risk. Teacher from Beijing A (TBA) and her friends indicated that ''shared responsibility within professional learning communities is crucial in providing guarantees for teacher innovation. When teachers share the responsibility for implementing innovative ideas, it reduces the fear of failure and the associated risks. Knowing that we are not solely responsible for the outcomes of our innovation alleviates the pressure and encourages us to take more calculated risks. The collective support and collaboration within the group ensure that if any challenges arise during the implementation process, we can work together to find solutions and learn from the experience.'' A principal from an international school in Hong Kong explained that ''shared responsibility within professional learning communities is vital in supporting teacher innovation. Innovation inherently involves uncertainties, and teachers may hesitate to take risks if they feel solely responsible for the outcomes. However, within the collaborative professional learning communities, the shared responsibility creates a collective ownership of the innovative measures. This perspective reduces the fear of negative consequences and encourages teachers to experiment and embrace innovative practices. The supportive environment allows teachers to take calculated risks, knowing they have the backing of their colleagues.'' A teaching and research group leader pointed out that ''now everyone's innovative views will first be recognized by most colleagues in the process of professional learning communities so that even if there is any problem in the operation of this innovative measure, there is an old Chinese slang that the law does not blame the public, and there will be no severe punishment.''

4.5 Cultural context

Overall, the cultural context plays a significant role in shaping the impact of professional learning communities on teacher innovation in both Hong Kong and Beijing. In Hong Kong, the relatively low power distance and the presence of various admission entrances can strengthen the influence of professional learning communities on teacher innovation. However, the low level of in-group collectivism may limit the impact of professional learning communities in this context.

Conversely, in Beijing, the interviews revealed a more complex relationship between professional learning communities and teacher innovation. Some participants highlighted that the environment of teaching and research group in Beijing is authority-oriented, which can have both positive and negative effects on teacher innovation. On one hand, teaching and research group provide a platform for teachers to collectively address common problems and receive uniform support. However, the centralized power and authority sometimes limit teacher innovation. Participants expressed concerns that their innovative ideas and voices are often ignored, and the decision-making process for implementing innovative policies can be lengthy and bureaucratic. This lack of respect for their innovative contributions can be demotivating and hinder the development of innovative practices in schools.

In Beijing, on the positive side, peer collaboration is strengthened, and the frequency of meetings is increased due to the influence of in-group collectivism. The pressure of test scores has historically led teachers of the same grade to be more competitive. Teachers cherished their teaching experience and practices, as high student scores would earn them reputation and financial rewards. However, in Hong Kong, being an international city with a different

education system, the interviewees stated that students have the freedom to choose from various types of entrance examinations and overseas schools. This results in relatively less examination pressure compared to mainland China. As a result, Hong Kong students are not as academically focused or driven by examination scores as their mainland counterparts.

5. Conclusion

The research findings emphasized the significance of professional learning communities in fostering teacher innovation. Consistent with earlier research, this study confirms that professional learning communities serve as effective vehicles for sustained professional learning, leading to improved teaching practices and student outcomes (Bakkenes, Vermunt, & Wubbels, 2010).

The identification of four pivotal dimensions within professional learning communities that foster teacher innovation - mutual trust and respect, shared practice and knowledge, peer collaboration, and shared responsibility - corroborates with similar studies that have highlighted the importance of collaboration and social connections in promoting knowledge transfer and change (Dogan, Pringle, & Mesa, 2015). The shared values within professional learning communities as drivers of teacher innovation aligns with earlier literature emphasizing the role of collaborative environments in inspiring creative thinking (Hargreaves & Dawe, 1990).

The comparison of the impact of professional learning communities on teacher innovation in different cultural contexts also adds to the existing body of knowledge. The finding that Hong Kong's relatively low power distance and diverse admission pathways strengthen the impact of professional learning communities on teacher innovation is consistent with previous research highlighting the positive influence of participative and inclusive organizational cultures. Similarly, the limitations imposed by Beijing's higher power distance on teachers' freedom to express innovative ideas are in line with studies emphasizing the role of hierarchical organizational structures in impeding innovation.

The study's recognition of the importance of in-group collectivism in facilitating peer collaboration in Beijing further supports previous research that suggests collective effort and support within groups enhance the implementation of innovative practices (Rigolizzo & Amabile, 2015). However, the study also reveals the limitations of low in-group collectivism in Hong Kong, which restricts peer collaboration, aligning with prior research that highlights the need for cohesive group dynamics to foster innovation.

Overall, this research adds valuable insights to the existing literature on professional learning communities and teacher innovation by providing specific dimensions within professional learning communities that contribute to fostering innovation, and by comparing the impact of professional learning communities in diverse cultural contexts. The findings of this study contribute to the growing body of knowledge on professional learning communities role in driving teacher innovation and provide useful guidance for educators and school leaders seeking to harness the potential of professional learning communities effectively.

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