

Peer-Support in Online Training Courses: The Experiences of Peer-Supporters

Nguyen Dieu Cuc¹, Ngo Thi Thanh Thuy²

¹ cucnd@niem.edu.vn, National Academy of Education Management (Vietnam)

² ngothuy@moet.edu.vn, Enhancing Teacher Education Program
Ministry of Education and Training (Vietnam)

ABSTRACT

This study explored the experiences of 13 core teachers of Enhancing Teacher Education Program when supporting their peers to fulfill online learning courses via the learning management system. It used a qualitative and interpretive methodological approach through semi-structured interviews to investigate the forms and factors affecting peer support in online learning. Research findings showed two forms of peer support via online and offline modalities. Exploring enabling factors for peer support in online learning is a great support of local administrative agencies and school leaders, core teachers' personal experiences and reputations. However, core teachers identified a number of challenges including the limited digital skills and low learning motivation of recipients, core teachers' heavy workload, and unreasonable compensation. These research findings contribute to the knowledge of teacher professional development and put forward recommendations to improve the online training courses and the work of core teachers in Vietnam.

KEYWORDS: Peer support, online teacher professional development, online training courses.

1. Introduction

Teachers are key working members in schools and the most important factor influencing student achievement and school improvement (Cheng & Cheung, 2003; Desimone, 2009). In the context of rapid changes in education, demand for higher pedagogical standards, and the need for high-quality education, teachers are expected to continuously increase their professionalism (Bubb, 2004). Teacher professional development (TPD) refers to processes and activities to help teachers enhance their personal qualities, develop professional knowledge, skills, expertise, and change attitudes with aims to improve students' learning and contribute to school development (Desimone, 2009; Dean, 2009; Guskey, 2000, 2002; Hirsh, 2009; Mizell, 2010). As TPD is a career-long process that tends to accompany continuous inquiry into teachers' teaching practice (Birman, Desimone, Porter, & Garet, 2000), peer support is one of the significant and cost-effective forms of TPD to support teaching and learning, especially in developing countries (Avalos, 2011; Westbrook et al., 2013).

Teachers in Vietnam involve in a variety of TPD activities such as degree upgrading courses offered by MoET and universities, seminars, summer workshops, short courses from local to national level to school-based activities such as hosting "Good Teacher" title competitions, class observations, observations of other

teachers, weekly faculty meetings, mentoring, seminars and speeches from famous speakers, proposal initiatives, self-study programs, demonstration lessons, and lesson study (Hallinger, Tran, & Truong, 2021; Hallinger & Walker, 2017; McAleavy et al., 2018; Saito, Sato, Michiyama, & Murase, 2017; Tran et al., 2020a; Tran et al., 2018). Of which, teacher collaboration via peer support has been recognized as one of the most popular forms of TPD to support teachers' learning, provide reflections, and share new ideas in learning (Truong, 2021; Do, Tran, & Truong, 2020). However, far little attention has been paid to peer support in general and peer support in online training courses in particular.

This paper addresses these gaps in the literature by presenting research from focus group discussions (n=13) with a sampling of core teachers in Vietnam in 2021. The study aims to investigate the experiences of core teachers who play the role of peer supporters in online training courses via learning management system (LMS). It addresses the following research questions: (i) what are forms of peer support in online TPD, and (ii) what advantages and challenges core teachers faced when supporting their peers online. Peer support is defined as teachers' collaborative efforts and activities within and beyond schools to develop their personal and professional competencies and improve teaching practice (Huston & Weaver, 2008; Little, 1982). This study contributes to the knowledge and practice of TPD in online learning in the context of implementing the 2018 General Education Curriculum (GEC). Findings from this study could advance understanding of how core teachers support their peers in online learning courses and the factors influencing their support.

The findings from the present study show that core teachers support their peers online via LMS and group chat, and offline via professional seminars, demonstration lessons, teaching observation, and school visits. When performing the role of peer supporters in online training courses for the first time, core teachers gained advantages from great support of local administrative agencies and school leaders, core teachers' personal experiences and reputations. However, they must face many challenges such as the limited digital skills and low learning motivation of recipients, core teachers' heavy workload, and unreasonable compensation. A number of recommendations have been made in order to improve the peer-support in online teacher professional development.

2. Literature review

2.1. Peer support

Peer support refers to teachers' collaborative efforts and activities within and beyond schools to develop their personal and professional competencies and improve teaching practice (Huston & Weaver, 2007; Little, 1982; Mercieca & Kelly, 2017). Other interchangeable terms are used to present this idea such as peer coaching, teacher collaboration, and mentoring (Rahman, 2019). Peer support can occur through both formal structured and informal mechanisms with activities such as reflecting on teachers' work practice, sharing experiences and ideas, preparing teaching materials, conducting action research, developing professional knowledge

and skills, teaching each other, solving teaching problems, and providing practical advice (Cordingley et al., 2005; Little, 1982; Rahman, 2019 Robbins, 1995). In addition, peer support is also a source of emotional and social support for teachers (Kelly & Antonio, 2016; Mercieca & Kelly, 2017). Peer support may be a reciprocal relationship, each team member serves as both a coach and the recipient of coaching, and a one-way relationship with one team member serves as the coach for the others (Huston & Weaver, 2007; Millis, 1999). From the constructivist and agentic viewpoint, Charteris and Smardon (2014) emphasize the active role of participants as agentic co-learners and co-constructors of knowledge in a peer learning process rather than being “absorbers” or passive recipients of knowledge from the coach.

The initiation and sustainability of peer support depend on a number of determinants. Cohen et al. (1979) identify that the complexity of tasks and open space teaching environment are major factors promoting teacher collaboration and support for each other. While Little (1982) argues that the formal and informal status of participants determine who are the initiators or leaders of peer collaboration, Cohen (1976) suggests that balanced participation, leadership support, and the satisfaction of faculty members are essential conditions to maintain the work of a collaborative team. Huston and Weaver (2007) add six key factors contributing to the success of peer support, which are goal-setting, voluntary participation, confidentiality, assessment, formative evaluation, and institutional support such as providing funding or honoring the good coaches.

2.2. Peer support in online teacher professional development

Online TPD refers to structured, formal TPD that is provided entirely online, leading to improvements in teachers’ professional skills, behaviors, and teaching practice (Bragg, Walsh, & Heyeres, 2021). Online learning has been emerging as a recent trend in TPD that gained increasing attention in literature. It can overcome limitations of traditional one-shot in-person TPD activities such as time and distance constraints while online training quality is maintained and learning arranged is personalized to learners’ own needs and interests (Bragg, Walsh, & Heyeres, 2021; Christ, Arya, & Chiu, 2017; Yurkofsky et al., 2019). Online TPD can be provided via massive online open courses, micro courses and social network sites (Kelly & Antonio, 2016; Mercieca & Kelly, 2017; Tang, 2021). Online TPD facilitates three types of interactions, including learners - contents, learners - instructors, and learners - learners (Moore, 1989).

While most studies have only focused on online teacher professional development, there is very little in the literature about peer support in online TPD (Kelly & Antonio, 2016; Mercieca & Kelly, 2017). Based on the model of cooperating teacher participation with eleven roles (Clarke et al., (2014) and the psychological notion of social peer support (House, 1981), Kelly & Antonio (2016) suggest a model of online teacher support that includes six forms of providers of feedback, modelers of practice, supporters of reflection, agents of relationship, agents of socialization, and advocates of the practical. Mercieca & Kelly (2017) argue that three of these six roles can occur even in transitory relationships between teachers: responses to

pragmatic requests for support, socialization into the profession, and convening relationships while the remaining three support roles appear to require deeper relationships of trust between teachers: reflection upon practice; feedback upon practice; and modeling of practice.

2.3. The context of the study

Vietnam has implemented the 2018 GEC that transforms from content-oriented to student's competency-based approach with a view to equipping students with essential competencies and qualities to solve problems in modern society and promote lifelong learning skills (Ministry of Education and Training, 2018a). Accordingly, the traditional teaching and learning approach, which emphasizes knowledge transmission and the central role of teachers, must be changed towards supporting and facilitating student's learning, exploiting their potential to develop competencies and qualities (Dinh & Doan, 2019; Hallinger, Tran, & Truong, 2021). To respond to the requirements of education reform, there are a wide variety of TPD activities in Vietnam, ranging from external activities such as degree upgrading courses offered by MoET and universities, seminars, summer workshops, short courses, and good teacher title competitions from local to national level to school-based activities such as hosting "Good Teacher" title competitions, class observations, observations of other teachers, weekly faculty meetings, mentoring, seminars and speeches from famous people, experience initiatives, self-study, demonstration lessons, and lesson study (Hallinger, Tran, & Truong, 2021; Hallinger et al., 2017; Tran et al., 2020a; Tran et al., 2018; McAleavy et al., 2018; Saito et al., 2017). A recently emerging trend of TPD in Vietnam is a school-based approach that highlights job-embedded, contextualized, and continuous and career-long professional development activities (Hallinger, Tran, & Truong, 2021). However, most previous studies point out popular forms of TPD in Vietnam but the existing literature has not dealt with peer support in much detail. In addition, TPD training courses in Vietnam employ all forms of face-to-face learning, online learning, and blended learning (Nguyen et al., 2020). However, most studies shed light on conventional face-to-face learning (Hallinger et al., 2021; Nguyen, 2011; Saito et al., 2017; Tran et al., 2020a; Tran et al., 2021; Truong et al., 2021; Tran et al., 2020b) while very little is known about the practice of online TPD. These literature gaps unblock the potential for exploring greater understanding on peer support in online training courses.

The specific context for this study is online training courses on LMS offered by the Enhancing Teacher Education Programme (ETEP), which has been the largest teacher training project of Ministry of Education and Training implemented from 2017 to 2021 with a view to ensuring all school teachers receive school-based professional development to successfully implement 2018 General Education Curriculum. ETEP aims to reinforce the provision of continuous professional development through two main vehicles: (i) Core teachers and principal advisors, who will be assigned to schools and school clusters to provide face-to-face training and support and (ii) an online platform that can provide needs-based, interactive training and support directly to teachers and principals. The outcomes and contents of the training

courses are regulated specifically in the Decision No. 4660/QĐ-BGDĐT (Ministry of Education and Training, 2019). Approximately 28,000 general school teachers nationwide are selected to participate in blended training courses provided by 07 leading teacher training universities in respective catchment areas (corresponding approximately to regions). Selection of core teachers is carried out on a school basis to ensure each school has one person. The criteria for selecting a core teacher is stipulated in the Circular No. 20/2018/TT-BGDĐT (Ministry of Education and Training, 2018b). After completion of blended training courses every year (approximately 120 sessions/year), core teachers will develop annual plans detailing the training and support to their colleagues. Each core teacher is officially assigned to support a maximum of 50 peers who are working in the same schools or other schools in the local areas. Meanwhile, the remaining mass teachers are provided with online training courses to self-study at their own pace with support from core teachers. The content and format of the online training courses for core teachers and mass teachers are similar to ensure all of them access the unified content and enable core teachers to experience the online course that the mass teachers will self-study for future peer support.

3. Methodology

The present study takes a qualitative and interpretive methodological approach to deeply investigate the emic views and experiences of core teachers who are peer-supporters for mass teachers in online training courses (Merriam & Tisdell, 2016). In this section, methods of data collection and analysis will be described in detail.

3.1. Data collection

Ethical approval was obtained from Birmingham City University. The data collection of semi-structured interviews with participants allows researchers to collect rich and detailed data about participants' perspectives on the topic under study (Patton, 2015). Interview protocol included 3 questions on demographic information and the remaining 8 open-ended questions concerning research questions. Open-ended questions were employed to gain spontaneous responses that might best reflect the view of participants (Kvale & Brinkmann, 2015). The first questions are generally neutral, gathering descriptive information about the experience of participants in online training courses while the following questions more deeply explore their perceptions on issues surrounding peer support in these courses.

This study encompassed 13 interviews with core teachers who were randomly selected from the call for participants. All participants are working in local provinces and disadvantaged areas, of which 8 work in primary schools, 2 in lower secondary schools and 3 in upper secondary schools. Interviews were conducted online via Google Meets due to society quarantine and recorded with the consent of participants.

3.2. Data analysis

This study follows data analysis procedures described by Stake (2010) and

Creswell (2013). First, researchers read through the interview transcripts line by line several times to create “memoing” and make margin notes. Second, an open coding strategy was employed to analyze the verbatim transcripts and create concepts and major points establishing initial codes (Stake, 2010). From these open codes, researchers combine the categories and themes reflecting issues or stories. The list of categories and themes was sent to 2 participants for member checking to increase data validation (Cresswell, 2013). After receiving participants’ responses, themes and descriptions were created. The final list of categories and themes includes:

Forms of peer support in online training courses: Supporting peers online; Supporting peers offline.

Enabling factors for peer support: Great support from local administrative agencies and school leaders; Teacher’s personal experiences and reputation; Advantageous online learning; Great support from university lecturers.

Barriers to peer support in online TPD: Limited digital skills of mass teachers; Low motivation for professional development and education reform of mass teachers; Heavy workload of core teachers; Unreasonable compensation.

4. Results

4.1. Forms of peer support in online training courses

4.1.1. Supporting peers online

For each training module, core teachers completed a blended learning course several months before the commencement of mass online training courses for their peers. First, most participants highlighted their role in helping peers with technical issues on LMS since the system is newly introduced to mass teachers, for example, fixing login/logout errors, mastering system functions and uploading assignments. Although the LMS provides chat functionality, discussions on LMS are not popular since new users might find it difficult to follow chats and discussions on it. Alternatively, core teachers form an online group chat on Zalo to quickly respond to peers’ inquiries as this is a favorite instant messaging software on mobile phones for most teachers. Core teachers also remind or urge mass teachers to fulfill learning tasks on time when the courses are only open for a certain period.

“During the online training, mass teachers are required to do assignments, we (core teacher) provide support mainly on technical and IT issues such as ways of learning, operation and steps on LMS, we cannot interfere into the contents” (Mr. M. C)

While technical issues are guided in detail, core teachers tend not to provide answers for professional issues and exercises immediately but encourage group discussions to share diverse perspectives and learn from each other. Core teachers consider their peers as a source of professional expertise. For professional issues that core teachers cannot provide a reasonable explanation, they can forward inquiries to university lecturers to get proper support.

“GEC 2018 documents are very long, it is necessary to have discussion for problem solving and good result in order to implement the GEC successfully” (Ms. A. L)

"We mainly learn from each other. In our Science subject group, people always raise questions whenever there is any problem, then excellent teachers always support by answering quickly. Our Science subject group is very helpful" (Ms. T. L)

4.1.2. Supporting peers offline

Core teachers have a great advantage of participating in blended learning courses with 2-3 days of learning under the instruction of university lecturers while the training course for mass teachers is fully online on LMS. Therefore, for peers working in the same school, core teachers share their professional knowledge and skills obtained from the prior blended learning courses via professional seminars organized once or twice a week. As learning courses provide new concepts and knowledge on reforming teaching and learning, face-to-face discussions between core teachers and peers are essential to reach a consensus before implementation. In addition, core teachers also involve in class observation to provide reflections for coworkers or provide demonstration class for their peers to introduce the application of learning contents into practice.

"Regarding peer support, I myself provide demo teaching for all teachers in our school to observe ways of providing competence-based teaching which reveals new things for them to learn and present in professional meetings on innovative teaching methods and what we learnt from training provided by university so that our teachers can follow new way" (Ms. T. L)

For peers working in the neighboring schools, core teachers can support them via a variety of activities such as professional seminars at provincial, district, or local levels, workshops, rotating class observations, and school visits.

"Regarding module 4 which requires developing a teacher educational plan and subject group education plan, I provided them in the Grade 6 professional meetings. After developing these plans, we drew experience lessons and solved problems and obstacles together. So far, in our district, we have conducted a number of class observations and consultations to teachers of some basic subjects" (Ms. L. A)

4.2. Enabling factors for peer support

4.2.1. Great support from local administrative agencies and school leaders.

When being asked about enabling factors for peer support in online learning, participants tend to first mention the great support from local administrative agencies (district Bureau of Education and Training - DoET for primary and lower secondary schools, and provincial Department of Education and Training - BoET for upper secondary schools) and school leaders. 5/13 participants recognize that their local administrative agencies are "effective top-down leadership", "active", "paying attention to TPD", "support", "professional", "quickly responsive to innovation", "creating the most favorable conditions for core teachers to fulfill tasks". 7/13 participants described their school leaders as "supporting professional activities", "highlighting the importance of TPD", "allowing them to convert peer support activities to one teaching hour per week".

"The upper authorities always create the best conditions for us, especially in renovating teaching methods. For example, after attending core teacher training, I requested my school to allow me to provide training to all school teachers, my school leaders supported and provided everything relating to teaching instruments and places to me for training delivery" (Ms. T. L)

4.2.2. Teacher's personal experiences and reputation

4/13 participants report that their personal experiences and reputation are significant factors when supporting peers in online learning. For 2 teachers who have diverse working experience in different schools, they have a large professional network and good relations with teachers. When knowing teachers' characteristics very well, core teachers can apply suitable instruction methods to peers. Participants who have been performing as core teachers for a long time established a firm reputation in the professional community and therefore have a strong impact on coworkers. Particularly, one core teacher reports that as she is both a school teacher and part-time expert in DoET, she holds considerable power to request mass teachers to fulfill learning tasks on LMS.

"I have been working at 4 various schools so I understand well general schools and schools for the gifted. I am socialized and have close relations with half of the teachers in the province so I have no difficulty discussing and sharing with them. It is necessary to understand the features of a school in order to provide suitable support and guidance, especially to the teachers who are older than me" (Ms. T. A)

4.2.3. Advantageous online learning

4 participants recognize that peer support via LMS has many advantages such as time saving and flexibility. When mass teachers can actively access learning materials and watch instruction videos, they can fulfill learning tasks by themselves before requesting the support of core teachers for difficult assignments. Therefore, core teachers do not have to introduce all new knowledge but spend more time emphasizing key learning contents or solving big problems. Online learning and the use of group chat also facilitate mass teachers actively sharing their concerns or raising questions anytime to get support from core teachers and their peers as well. However, 2 participants maintain that offline training is more effective than online courses when they can clearly explain issues and mass teachers are more confident to raise questions.

"In the past, we did not know the content of direct training. At the training, we were provided with training materials and it took us a while to be familiar with the content. But now, they already know the content thanks to online courses. At the direct training, they only have some questions to be solved and cooperate with others to implement training tasks and assignments" (Mr. M. C)

"Online training has one advantage of supporting at any time. Zalo can support at once. In the past, everything was done after the direct training finished, but now we have Zalo to discuss. After the training, we may have something to be clarified. Previously, teachers were afraid to ask what they did not understand but now they are more confident". (Ms. T. A)

4.2.4. Great support from university lecturers

University lecturers are those assigned to provide blended learning courses and continuous support for core teachers. 3/13 participants appreciate the enthusiastic support of university lecturers during peer support, especially in dealing with complicated and knotty problems.

"Lecturers (trainers) are very enthusiastic about supporting us in peer support. Whenever we meet any difficulties, they are willing to support us" (Ms. L. A)

"The trainers are very fervent, they always respond satisfactorily and timely to any questions we have" (Ms. T. L)

4.3. Barriers to peer support

4.3.1. Limited digital skills of mass teachers

The LMS has been newly introduced since 2019 and this is the first time all teachers in Vietnam have received a TPD course on LMS. To complete an online course, mass teachers must finish all learning activities and fulfill a number of formative exercises and summative assignments. Therefore, 4 participants reflected that their peers were struggling with learning on LMS, especially for senior teachers. Nevertheless, core teachers are still enthusiastic and patient in instructing their peers to fulfill learning tasks.

"It is hard to support the teachers who have many years of teaching experience but their IT skill is limited... At the primary level as mine, the number of old teachers is large, they are often nearly 50 years old" (Ms. T. D)

"There is one male teacher who lives 45 km far from the center. He is always the last person who finishes the training task so I make phone calls to encourage him. He said he met difficulties because his computer skills were limited. I myself encouraged him that he should do his best or asked for support from school leaders or let me support him via Zalo. Sometimes I cannot contact him so I have to contact the vice principal instead to ask him to urge that teacher to fulfill the training assignments. It means that I have to use many ways to contact him and remind him about the assignment" (Ms. T. L)

4.3.2. Low motivation for professional development and education reform of mass teachers

Only 2 teachers can cooperate well with mass teachers when the latter is active and eager for learning while 8/13 participants share their biggest challenge that mass teachers have low motivation for learning and changing. Many mass teachers, even junior ones, consider TPD and online learning courses as "mandatory missions" and "a top-down demand from administrators and school leaders" and their learning purpose is not to develop professional skills but to complete the course. Participants describe mass teachers as "demotivated", "unwhole-hearted with education reform", "resistant to change", "familiar with thinking inside the box". These features have led to many harmful consequences such as complaining about learning, delaying the learning progress, submitting assignments late, using previous lesson plans to finish assignments. For offline support activities, mass teachers involve mandatorily

and passively. Therefore, the support of core teachers has no responses from mass teachers and when assessing their peers' assignments, they tend to approve just to finish the task.

"One third of the teachers are only aware of their responsibilities. The young teachers are more concerned, the old teachers are reluctant so we have to provide support a lot. We have to account for their spirit of responsibilities to support him to fulfill the tasks" (Ms. T. D)

"The teachers only complete the tasks for their responsibilities. It becomes an obstacle because doing for responsibility does not create mutual interaction, we only get one-sided information" (Ms. L. M)

"As far as I know, some teachers do not spare time to study for their professional development, they only study modules to pass or even ask other people to study for them" (Mr. K. H)

"Some teachers become cunning when meeting difficulties. For the testing assignment, they do the test first to see which ones are the right answers then they do the test the second time without reading questions. For example, they check the right answers of 33 testing questions, they take a photo of the answers then they do the test the second time by seeing the answers photographed on the phone to select the answers" (Mr. M. C)

"Some teachers are naturally reluctant to renovate. Education innovation basically requires them to change themselves but they do not want to change so they find studying makes them work more, be more active which demotivates them to innovate" (Ms. T. L)

4.3.3. Heavy workload of core teachers

Another major barrier to peer support is the heavy workload of supporters. 7/13 participants reported that they were overwhelmed with an enormous workload. The introduction of online training courses coincides with the outbreak of COVID-19 which leads to fundamental changes in teaching and learning practice and incurs new tasks for teachers. Beside teaching students, most core teachers are in charge of many other tasks at the same time such as Labor Union, Youth Union, teacher leaders of professional groups and school inspectors. Therefore, taking the responsibility of peer supporters largely increases the burden on core teachers when they nearly have no time to rest and recover from mental health. Particularly for female teachers, their excessive workload results in an alarming situation of work-life balance when 3 participants reported that they face health problems or do not have time to take care of their families.

It is difficult to work and attend training at the same time; training and workload are huge. Whenever I hear about a new module, I often joke that I need one more person because primary teachers have to work hard at present due to the pandemic, teaching online and many other things. I am myself very busy, I have to teach directly 7 sessions and one online teaching session. Behind teaching, we have family... For 2 months recently, I have not known about cleaning dishes and sweeping the floor, I have only been studying and sitting in front of the computer. I have not fulfilled the

responsibilities of a wife. It is lucky that my husband and children have not hated me! (Ms. T. M)

"I hope to have one day off per week. Now we are on a full schedule from Monday to Sunday without any day off. Almost all teachers in this city do not have any days off. If we have to implement any further tasks, we have to speed up mostly overnight" (Ms. T. A)

"People often say behind a husband's success is the image of a wife but it is quite the reverse for my case. I rarely stay up to work until 2 am, but often stay up until 12pm" (Ms. T. D)

4.3.4. Unreasonable compensation

Although dealing with a huge workload, 5/13 participants expressed their dissatisfaction when receiving unreasonable compensation for their work as peer supporters. Core teachers explained that although the Ministry of Education and Training has introduced a policy to remunerate core teachers when supporting mass teachers, there is a gap from policy to practice when the financial source and specific remuneration policy are decided by the local authorities. This gap has led to differences in remuneration policies between locals. Although the bonus is minimal, core teachers feel dissatisfied and unmotivated when doing the same work, they do not get any bonus while their coworkers in other provinces or districts do.

"We work not for money. For example, we tutor students for free but it is a motivation, incentives make things well... It is ok if there are no incentives for this but in this case, there are remuneration policies but we do not get them so we feel frustrated. Why do my teacher colleagues in other districts get compensation for their work but we do not in spite of the fact that we carry out the same tasks in the same conditions?" (Ms. T. M)

"Certainly I am responsible for the task that the Provincial Education Bureau gives me. But it is good if there are remuneration policies for our work" (Ms. T. H)

5. Discussions

The present study found that core teachers support their peers via a blend of online and offline modalities, including online private chat groups, professional seminars, demonstration lessons, teaching observations and school visits. The role of peer-supporters in this study reflects four of six roles of teacher peer support in online TPD (Kelly & Antonio, 2016), namely provider of feedback, modeler of practice, supporter of reflections, agent of relationships, advocate of the practical while the remaining role of agent of socialization was not presented. Via online group chat of teachers, the discussion between peer-supporters and peer-recipients, peer-recipients and peer-recipients. Particularly, peer-supporters in this study tend to encourage the sharing between recipients before providing instruction or explanation and there is the emergence of excellent recipients who actively contribute to the forum. This finding echoes the theory of social constructivism when knowledge is constructed in communities of practice through social interaction (Brown, Collins, & Duguid, 1989; Lave & Wenger, 1991; Vygotsky, 1978). It also further supports the idea of e-Community of Practice in previous studies that an e-community of practice with a shared commitment and purpose facilitates interactional activities to promote knowledge sharing and professional development (Hoadley & Pea, 2002; Vrasidas

& Zembylas, 2004; Wenger, 1999; Wenger et al., 2002). This finding reinforces the importance of maintaining learner-learner interaction and utilizing group's collective intelligence in online TPD to consolidate knowledge and fulfill learning tasks (Gillani & Eynon, 2014; Hew, 2016; Tang, 2021; Tawfik et al., 2017).

Interestingly, the great support from local administrators and school managers is the most significant to peer-support and always firstly mentioned by participants. A possible explanation for this might be the highly centralized administrative system and a high Power Distance Index of Vietnam which emphasizes a strong hierarchical relationship (Hallinger & Truong, 2016; Hofstede & Minkov, 2005). As being the lowest rank in hierarchical structure, teachers are familiar with satisfying demands from higher authority without resistance (Hallinger & Truong, 2014, 2016; Nguyen, 2017; Saito et al., 2016; Saito & Tsukui, 2008). Within a school, school leaders, who hold absolute power, are key decision-makers, while teachers are regarded as implementers (Hallinger & Truong, 2014; McAleavy et al., 2018). Therefore, teachers in this study usually tend to recognize the contribution of administrators and school leaders to the success of peer-support. The finding of the present research further confirms the association between school leadership and TPD presented in previous studies (Hallinger & Liu, 2016; Slegers et al., 2014; Tran et al., 2020a). However, the form of school leadership's support found in this study is mainly creating favorable workplace conditions for peer support such as encouragement and highlighting the importance of TPD while allocating school budget for TPD activities or giving a small monetary reward are not mentioned. These results are consistent with those obtained in a recent study of Tran et al. (2020a) when school leaders tend to motivate TPD by reward of spirit. This situation might be linked to a limited school budget for professional development spending (Nguyen, 2011).

The present study found that the experience and reputation of peer-supporters is an enabling factor for peer-support in online training courses. This practice might be attributed to a hierarchical value that respects higher rank and age in Vietnamese culture (Truong, Hallinger, & Sanga, 2017). The findings of this study support previous research that highlights the role of members with high social status or with higher skill and knowledge in leading group discussions in a collaborative peer group (Little, 1982). It also corroborates the ideas of Bourdieu (2011) on three types of capitals that determine the power status of an individual. Specifically in this study, cultural capital, which is contributed by knowledge, skills, and intellectual properties, and social capital, which is the resource and power formulated through social networking. The finding on the experience and reputation of peer-supporters is firstly presented in literature on TPD in Vietnam that sheds light on other factors such as workplace conditions, school leadership and teachers' learning motivation.

The current study found that the employment of online platforms and learning management systems is an effective catalyst for peer interaction. This finding is in line with recent studies on online TPD (Acar & Yildiz, 2016; Bostancioglu, 2016; Jin-Hwa & Kim, 2016; Prestridge, 2017; Tang, 2021). By self-learning online on LMS with full access to all learning materials and instruction, mass teachers can have a foundation

of knowledge before inquiring or participating in offline TPD. Nevertheless, the use of Zalo group chat alternatives for forums in LMS could be explained by the fact that teachers feel more comfortable when collaborating on familiar and popular sites than in a formal online system (Kelly & Antonio, 2016; Merciacca & Kelly, 2017).

The great support of university lecturers in difficult areas is an interesting finding in the online TPD. In this situation, core teachers play the role of agents of relationships when they initiate and facilitate new connections between mass teachers and course instructors (Kelly & Antonio, 2016). This finding further confirms the important role of instructors in online TPD in assisting learners in deepening and applying their knowledge observed in earlier studies (Brennan et al., 2018; Moore, Kearsley, 2011; Rhodes, 2002). The collaboration between school teachers and university lecturers also supports the idea of Bragg et al. (2021) that online TPD widens the opportunities for teachers to connect with a larger professional community which they have seldom connected with in traditional TPD activities.

The present study found that mass teachers have limited digital skills, which increases workload for peer-supporters in providing technical advice. This finding is in agreement with Xie et al. (2017) when low technological skills is a main internal barrier to teachers' engagement in and contributions to online courses. A possible explanation for this is that Vietnamese teachers have not been familiar with learning online as well as the learning management system. In addition, Vietnamese people put special emphasis on saving individual public faces with a wish to be appreciated and respected by others (Nguyen, 2015; Phan & Locke, 2016), peer-support recipients might be reluctant to ask for help. This explanation corroborates the idea of Graham & Fredenberg (2015) who found that participants' fear of losing face and technological fear is more impactful than technological aspects. More noticeably, the problem of low motivation for learning is recorded as a major challenge to peer support in online training courses. Although the study of Tran et al. (2020b) found that teachers highly value the importance of TPD for the effectiveness of teaching staff, the quality of teaching and learning, and the success of education reform, the finding of this study and earlier research confirm the low motivations of teachers in professional development activities (Saito & Tsukui, 2008; Saito, Tsukui, & Tanaka, 2008). One explanation surrounding this problem is that teachers' work in public school is extremely challenging and stressful (Saito & Tsukui, 2008). Recently, they must prepare for new lesson plans according to new regulations, while, on the other hand, they must adapt to significant changes caused by COVID-19.

The most interesting finding emerged from this study is that while core teachers must deal with an enormous number of peer-support activities, their remuneration is minimal and varied between locals. This finding is in accord with previous research on the underpaid situation of teachers (Nguyen, 2017; McAleavy et al., 2018) and the small financial rewards given to teachers (Nguyen, 2011; Tran et al., 2020a). A possible explanation might be the lack of school budget for professional development spending (Tran et al., 2020a). However, despite being unhappy with these situations, core teachers do not express their disgruntled attitude and are

still responsible for their peer-support work. This result might be explained by the fact that teachers are ranked lowest in hierarchical education structure and they must perform assigned tasks without resistance (Hallinger & Truong, 2014, 2016). In addition, being consistent with the Confucian values that highlight harmony and non-confrontation values, teachers avoid expressing their dissatisfaction publicly to save face and maintain harmonious relationships (Truong et al., 2017).

6. Conclusions

The main aim of this study is to investigate the experiences of core teachers when playing the peer-supporter role in online training courses. This study has identified that core teachers employ both online and offline channels to help their peers fulfill learning tasks on the platform. The second major finding is the support of local administrative agencies and school leaders, core teachers' personal experiences and reputations, advantageous online learning, and great support from university instructors. However, barriers to peer-support relations are the limited digital skills and low learning motivation of recipients, core teachers' heavy workload, and the unreasonable compensation. These findings strengthen the idea that learner-learner interaction plays an important role in online TPD while the inner learning motivation and digital skills of peer-support recipients mostly affect their learning participation and outcomes. In addition, the support from the workplace and instructors maintains significance to online TPD.

The findings of this study provide important practical implications for the design and organization of online TPD. First, the employment of another private group chat which is also available on LMS shows that this function on LMS should be re-design to be more convenient and user-friendly to learners. Second, a decent remuneration policy for peer-supporters should be applied to stimulate core teachers to perform their roles. Last, a tracking system on learner participation should be included in LMS that allows core teachers to assess their peer's attitudes toward learning.

The findings of this study are limited by several concerns. This study employs a qualitative design which cannot avoid possible influence of personal subjectivity on the validity of findings. The use of interview data only does not allow researchers to triangulate data (Cresswell, 2017). The study is limited by the lack of perspectives from mass teachers who receive support from core teachers. Due to the small sample size of core teachers, who mostly come from local provinces and disadvantaged areas, some data on peer-support relations in urban areas is not available from this investigation.

To extend upon this study's finding, further research should consider more inclusive samples of participants working in different school contexts or include peer discussions on LMS or private group chat to provide a more comprehensive understanding of the features of peer-support in online learning courses. In addition, future research may consider including peer-support relations in different types of online platforms such as massive open online courses, micro courses and social network sites. Lastly, further studies might explore the role of mass teachers who are unofficially assigned as peer supporters but actively contribute to learning courses and support others.

References

- Acar, I. H., & Yıldız, S. (2016). Professional Development of Elementary School Teachers through Online Peer Collaboration: A Case Study. *Turkish Online Journal of Qualitative Inquiry*, 7(4), 422–439. <https://doi.org/10.17569/tojqi.79480>
- Avalos, B. (2011). Teacher Professional Development in Teaching and Teacher Education over Ten Years. *Teaching and Teacher Education*, 27(1), 10-20. <http://doi.org/10.1016/j.tate.2010.08.007>
- Birman, B. F., Desimone, L., Porter, A. C., & Garet, M. S. (2000). Designing professional development that works. *Educational Leadership*, 57(8), 28-33.
- Bostancıoğlu, A. (2016). Factors affecting English as a foreign language teachers' participation in online communities of practice: The case of Webheads in Action. *International Journal of Languages' Education and Teaching*, 4(3), 20-35. <https://doi.org/10.18298/ijlet.1651>.
- Bourdieu, P. (2011). The Forms of Capital. In P. Bourdieu, S. Imre, & K. Timothy (Eds.), *Cultural Theory: An Anthology* (pp. 81–93). John Wiley & Sons.
- Bragg, L. A., Walsh, C., & Heyeres, M. (2021). Successful design and delivery of online professional development for teachers: A systematic review of the literature. *Computers & Education*, 166, 104-158. <https://doi.org/10.1016/J.COMPEDU.2021.104158>
- Brennan, K., Blum-Smith, S., & Yurkofsky, M. M. (2018). From checklists to heuristics: Designing MOOCs to support teacher learning. *Teachers College Record*, 120(9), 1-48.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1): 32-42. <https://doi.org/10.3102/0013189X018001032>
- Bubb, S. (2004). *The insider's guide to early professional development: Succeed in your first five years as a teacher*. London, UK: Routledge Falmer.
- Charteris, J., & Smardon, D. (2014). Dialogic peer coaching as teacher leadership for professional inquiry". *International Journal of Mentoring and Coaching in Education*, 3(2), 108-124. <https://doi.org/10.1108/IJMCE-03-2013-0022>
- Cheng, Y. C., & Cheung, W. M. (2003). Profiles of multi-level self-management in schools. *International Journal of Educational Management*, 17(3), 100–115. <https://doi.org/10.1108/09513540310467796>
- Christ, T., Arya, P., & Chiu, M. M. (2017). Video use in teacher education: An international survey of practices. *Teaching and Teacher Education*, 63, 22–35. <https://doi.org/10.1016/j.tate.2016.12.005>
- Clarke, A., Triggs, V., & Nielsen, W. (2014). Cooperating Teacher Participation in Teacher Education: A Review of the Literature. *Review of Educational Research*, 84(2), 163–202. <https://doi.org/10.3102/0034654313499618>
- Cohen, E. G., T. E. Deal, J. W. Meyer, and W. Richard Scott. (1979). Technology and Teaming in the Elementary School. *Sociology of Education*, 52, 20–33. <http://doi.org/10.2307/2112591>

- Cohen, E. G. (1976). *Problems and Prospects of Teaming*. Research and Development Memorandum No. 143.
- Cordingley, P., M. Bell, S. Thomason, & A. Firth. (2005). *The Impact of Collaborative Continuing Professional Development (CPD) on Classroom Teaching and Learning*. Review: How do Collaborative and Sustained CPD and Sustained but not Collaborative CPD Affect Teaching and Learning? Research Evidence in the Education Library. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Creswell, J. W. (2013). *Qualitative inquiry and research design* (3rd ed.). Sage.
- Creswell, J. W. (2017). *Qualitative inquiry and research design: Choosing among the five traditions*. Sage Publications.
- Dean, J. (2009). *Professional development in school*. Open University Press.
- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38, 181-200. <https://doi.org/10.3102/0013189X08331140>
- Dinh, T. H. V., & Doan, T. T. H. (2019). The current situation of professional development for secondary school teachers in Vung Tau City, Ba Ria - Vung Tau Province. *Hue University Journal of Science*, 6A(128), 113-120. doi: 10.26459/hueuni-jssh.v128i6A.5247.
- Do, T. L. H., Tran, N. H., & Truong, D. T. (2020). The relationship between the pedagogical leadership of principals and teachers' professional development. *Journal of Psychology*, 3(3), 41-57.
- Gillani, N., & Eynon, R. (2014). Communication patterns in massively open online courses. *The Internet and Higher Education*, 23, 18–26. <https://doi.org/10.1016/j.iheduc.2014.05.004>
- Graham, L., & Fredenberg, V. (2015). Impact of an open online course on the connectivist behaviors of Alaska teachers. *Australasian Journal of Educational Technology*, 31(2), 140e149. <https://doi.org/10.14742/ajet.1476>.
- Guskey, T. R. (2000). *Evaluating professional development*. Thousand Oaks, California: Corwin Press, Inc.
- Guskey, T. R. (2002b). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3), 381-391. doi: 10.1080/135406002100000512
- Hallinger, P., & Liu, S. (2016). Leadership and teacher learning in urban and rural schools in China: Meeting the dual challenges of equity and effectiveness. *International Journal of Educational Development*, 51, 163–173. <https://doi.org/10.1016/j.ijedudev.2016.10.001>
- Hallinger, P., & Truong, D. T. (2014). Exploring the contours of context and leadership effectiveness in Vietnam. *Leading and Managing*, 20(2), 43–59.
- Hallinger, P., & Truong, D. T. (2016). "Above must be above, and below must be below": enactment of relational school leadership in Vietnam. *Asia Pacific Education Review*, 17, 677–690. <https://doi.org/10.1007/s12564-016-9463-4>

- Hallinger, P., & Walker, A. (2017). Leading learning in Asia – emerging empirical insights from five societies. *Journal of Educational Administration*, 55(2), 130–146. <https://doi.org/10.1108/JEA-02-2017-0015>
- Hallinger, P., Tran, N. H., & Truong, D. T. (2021): Mapping the professional learning of primary teachers in Vietnam: a multi-method case study, *Professional Development in Education*, <https://doi.org/10.1080/19415257.2021.1879218>
- Hallinger, P., Walker, A., Nguyen, T. H. D., Truong, D. T., & Nguyen, T. T. (2017). Perspectives on Principal Instructional Leadership in Vietnam: A Preliminary Model. *Journal of Education Administration*, 55(2). <http://dx.doi.org/10.1108/JEA-11-2015-0106>
- Hew, K. F. (2016). Promoting engagement in online courses: What strategies can we learn from three highly rated MOOCs. *British Journal of Educational Technology*, 47(2), 320–341. <https://doi.org/10.1111/bjet.12235>
- Hirsh, S. (2009). A new definition. *Journal of Staff Development*, 30(4), 10-16.
- Hoadley, C.M. and Pea, R.D. (2002). Finding the ties that bind: tools in support of a knowledge-building community. In Renninger, K.A. and Shumar, W. (Eds), *Building Virtual Communities: Learning and Change in Cyberspace*. Cambridge University Press, London, pp. 321-54.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2005). *Cultures and Organization: Software of the Mind* (2nd ed.). McGraw-Hill.
- House, J. S. (1981). *Work stress and social support*. Reading, MA: Addison-Wesley Publishing
- Huston, T., Weaver, C. L., (2008). Peer Coaching: Professional Development for Experienced Faculty. *Innovation Higher Education*, 33, 5-20. <https://doi.org/10.1007/s10755-007-9061-9>
- Jin-Hwa, L., & Kim, H. (2016). Implementation of SMART teaching 3.0: Mobile- based self-directed EFL teacher professional development. *Journal of Asia TEFL*, 13(4), 331-346. <https://doi.org/10.18823/asiatefl.2016.13.4.6.331>.
- Kelly, N., & Antonio, A. (2016). Teacher peer support in social network sites. *Teaching and Teacher Education*, 56, 138–149. <http://dx.doi.org/10.1016/j.tate.2016.02.007>
- Kvale, S., & Brinkmann, S. (2015). *Interviews: Learning the Craft of Qualitative Research Interviewing* (2nd ed.). Thousand Oaks, CA: Sage.
- Lave, J. and Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press, Cambridge, MA.
- Little, J. W. (1982). Norms of Collegiality and Experimentation: Workplace Conditions of School Success. *American Educational Research Journal*, 19(3), 325–340. <https://doi.org/10.3102/00028312019003325>.
- McAlevy, M., Tran, T. H., & Pitzpatrick, R. (2018). *Promising practice: Government schools in Vietnam*. Education Development Trust, Berkshire.
- Mercieca, B., & Kelly, N. (2017). Early career teacher peer support through private

- groups in social media. *Asia-Pacific Journal of Teacher Education*, 46(1), 61–77. <https://doi.org/10.1080/1359866X.2017.1312282>
- Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey Bass.
- Millis, B. J. (1999). Three practical considerations for peer consultations. In C. Knapper & S. Piccinin (Eds.), *Using consulting to improve teaching* (pp. 19–28). New directions for teaching and learning, vol. 79. San Francisco, CA: Jossey-Bass, Fall.
- Ministry of Education and Training (2018b). Curricular No. 20/2018/TT-BGDĐT dated 22/08/2018 regarding Standards of General School Teachers.
- Ministry of Education and Training. (2018a). Circular No. 32/2018/TT-BGDĐT dated on 26th December 2018: National general curriculum for general education.
- Ministry of Education and Training. (2019). Decision No. 4660/QĐ-BGDĐT dated 04/12/2019 regarding list of modules for training Core Teacher and Principal Advisors to implement the task of continuous professional development for mass teachers and principals.
- Mizell, H. (2010). *Why professional development matters*. Oxford, OH: Learning Forward.
- Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning* (3rd ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Moore, M. G. (1989). Three types of interaction. *American Journal of Distance Education*, 3(2), 1–6.
- Nguyen, H. T. (2011). *Renovating education decentralization in upper secondary education* (Issues B2007-37–37). Vietnam National Institute of Education Sciences.
- Nguyen, T. H. (2017). *Novice English language teachers in Vietnamese secondary schools: Resources and identity development*. The University of New South Wales.
- Nguyen, T. Q. T. (2015). The influence of traditional beliefs on Vietnamese college lecturers' perceptions of face. *Journal of Education for Teaching*, 41(2), 203–214. <https://doi.org/10.1080/02607476.2015.1031542>
- Nguyen, V. H., Nguyen, V. B. H., Vu, T. M. H., Hoang, T. K. H., Nguyen, T. M. N. (2020). Vietnamese Education System and Teacher Training: Focusing on Science Education. *Asia Pacific Science Education*, 6, 179-206. doi:10.1163/23641177-bja10001
- Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Sage.
- Phan, T. T. N., & Locke, T. (2016). Vietnamese teachers' self-efficacy in teaching English as a Foreign Language. *English Teaching: Practice & Critique*, 15(1), 105–128. <https://doi.org/10.1108/ETPC-04-2015-0033>
- Prestridge, S. (2017). Conceptualizing self-generating online teacher professional development. *Technology, Pedagogy and Education*, 26(1), 85-104. <https://doi.org/10.1080/1475939X.2016.1167113>.
- Rahman, M. S. (2019). Teachers' peer support: difference between perception and

- practice. *Teacher Development*, 23(1), 121–138. <https://doi.org/10.1080/13664530.2018.1488765>
- Rhodes, C., & Beneicke, S. (2002) Coaching, mentoring and peer-networking: challenges for the management of teacher professional development in schools, *Journal of In-service Education*, 28(2), 297-310, <https://doi.org/10.1080/13674580200200184>
- Robbins, P. 1995. Peer Coaching: Quality through Collaborative Work. *School Improvement Programs*, 12, 205–228.
- Saito, E., & Tsukui, A. (2008). Challenging common sense: Cases of school reform for the learning community under an international cooperation project in Bac Giang Province, Vietnam. *International Journal of Educational Development*, 28, 571–584. <https://doi.org/10.1016/j.ijedudev.2007.12.006>
- Saito, E., Tsukui, A., & Tanaka, Y. (2008). Problems on primary school-based in-service training in Vietnam: A case study of Bac Giang province. *International Journal of Educational Development*, 28(1), 89–103. <https://doi.org/https://doi.org/10.1016/j.ijedudev.2007.08.001>
- Slegers, P., Thoonen, E., Oort, F., & Peetsma, T. (2014). Changing classroom practices: The role of school-wide capacity for sustainable improvement. *Journal of Educational Administration*, 52(5), 617–652. <https://doi.org/10.1108/JEA-11-2013-0126>
- Stake, R. E. (2010). *Qualitative Research: Studying How Things Work*. New York, NY: Guilford Press
- Tang, H. (2021). Teaching teachers to use technology through a massive open online course: Perspectives of interaction equivalency. *Computers & Education*, 174, 104307. <https://doi.org/10.1016/J.COMPEDU.2021.104307>
- Tawfik, A. A., Reeves, T. D., Stich, A. E., Gill, A., Hong, C., McDade, J., & Giabbanelli, P. J. (2017). The nature and level of learner–learner interaction in a chemistry massive open online course (MOOC). *Journal of Computing in Higher Education*. <https://doi.org/10.1007/s12528-017-9135-3>
- Tran, N. H., Ha, V. X., Le, A. V., Nguyen, N. A., & Pham, T. K. (2021). Principal leadership and teacher professional development in a Vietnamese high school for gifted students: Perspectives into practice. *European Journal of Educational Research*, 10(4), 1839-1851. <https://doi.org/10.12973/eu-jer.10.4.1839>
- Tran, N. H., Hallinger, P., & Truong, D. T. (2018). The heart of school improvement: a multi-site case study of leadership for teacher learning in Vietnam. *School Leadership & Management*, 38(1), 80–101. <https://doi.org/10.1080/13632434.2017.1371690>
- Tran, N. H., Nguyen, D. C., Nguyen, G. V., Ho, T. N., Bui, T. Q. T., & Hoang, N. H. (2020a). Workplace conditions created by principals for their teachers' professional development in Vietnam. *International Journal of Leadership in Education*, 25(2), 238–257. <https://doi.org/10.1080/13603124.2019.1708472>
- Tran, N. H., Truong, D. T., Dinh, T. H. Van, Do, T. L. H., Tran, T. T. A., & Phan, T. M. H.

- (2020b). Significance of teacher professional development in response to the current general education reforms in Vietnam: Perceptions of school principals and teachers. *Problems of Education in the 21st Century*, 78(3), 449–464. <https://doi.org/10.33225/pec/20.78.449>
- Truong, D. T., Dinh, T. H. V., Nguyen, T. Q. A., Tran, N. H. (2021). The current status of teacher professional learning in the context of educational reform in Vietnam. *VNIES Journal of Educational Sciences*, 37, 48-57.
- Truong, D. T., Hallinger, P., & Sanga, K. (2017). Confucian values and school leadership in Vietnam: exploring the influence of culture on principal decision making. *Education Management, Administration, and Leadership*, 45(1), 77-100. <https://doi.org/10.1177/1741143215607877>
- Tsukui, A., Saito, E., Sato, M., Michiyama, M., & Murase, M. (2017). The classroom observations of Vietnamese teachers: mediating underlying values to understand student learning. *Teachers and Teaching: Theory and Practice*, 23(6), 689–703. <https://doi.org/10.1080/13540602.2017.1284055>
- Vrasidas, C., & Zembylas, M. (2004). Online professional development: lessons from the field. *Education and Training*, 46(7), 326-334. <https://doi.org/10.1108/00400910410555231>
- Vygotsky, L.S. (1978). *Mind in Society*. Harvard University Press. Cambridge: MA.
- Wenger, E. (1999). *Communities of Practice: Learning, Meaning and Identity*. Cambridge University Press, Cambridge: MA
- Wenger, E., McDermott, R., & Snyder, W.M. (2002). *Cultivating Communities of Practice: A Guide to Managing Knowledge*. Harvard Business School Press. Cambridge: MA.
- Westbrook, J., Durrani, N., Brown, R., Orr, D., Pryor, J., Boddy, J., and Salvi, F. (2013). "Pedagogy, Curriculum, Teaching Practices and Teacher Education in Developing Countries". *Education Rigorous Literature Review*. London: DFID.
- Xie, K., Kim, M., Cheng, S.-L., & Luthy, N. (2017). Teacher professional development through digital content evaluation. *Association for Educational Communications & Technology*, 65(4), 1067-1103. <https://doi.org/10.1007/s11423-017-9519-0>.
- Yurkofsky, M. M., Blum-Smith, S., & Brennan, K. (2019). Expanding outcomes: Exploring varied conceptions of teacher learning in an online professional development experience. *Teaching and Teacher Education*, 82, 1–13. <https://doi.org/10.1016/j.tate.2019.03.002>