Facebook Groups for effective online teacher professional development

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Abstract

This paper explores the potential of Facebook Groups (FG) as a platform for formal teacher professional development (TPD) in disadvantaged community in Indonesia. As a social media, FG was a powerful tool in facilitating an effective online TPD regarding spatialising mathematics. The participants were thirteen primary school teachers (grade 3, 4, 5, and 6) located in North Maluku, Indonesia. The data were captured from the FG activities of 14 weeks online TPD, then systematically analysed using content analysis. The results showed that FG could facilitate online TPD to be ongoing, collaborative, student-oriented, take into consideration teacher contexts, and enhancing teacher pedagogical and content knowledge. The study suggested to utilize FG in areas that have better internet connection and educational resources to organize a formal online TPD.

Keywords: effective online teacher professional development, Facebook Groups.

INTRODUCTION

Because of the Covid-19 pandemic, Indonesia school teaching and learning has been carried out from home through online learning. The Ministry of Education and Culture (2020) pointed out that students must continue the meaningful learning without being burdened by completing all of the curriculum achievements. In this Covid-19 pandemic, students, teachers, and all school members' physical and mental health has been the priority. Therefore, the teaching and learning process has been carried out online. Nevertheless, teacher professional learning should be continued. Thus, TPD has been expected to be developed online.

This paper focuses on research concerning the potential of FG as a media delivery for effective teachers' professional learning and development. Facebook has been widely used as an online learning medium for almost two decades (Patahuddin & Logan, 2019). Facebook as social media has many features that support interactive synchronous or asynchronous learning (Todorovic et al., 2021). FG allows users to attach documents or media (videos, photos) and link to multimedia resources (YouTube, web page links, and online documents). Facebook provides a comment box and reaction tool to support participants' communication and interactions, such as sharing ideas, explanations, questions, and answers. Facebook could organize content by Topic using hashtags or put the content into Guides. Guides work as a module in education and are a great tool to help users find related posts. FG also allows the instructors to stream live from Zoom meetings. During the live streaming, the instructors can ask questions and engage with participants in the FG via the comment box. Because of these features, FG could support collaborative online teaching and learning.

Access to online platforms is challenging in some areas of Indonesia, especially the eastern part of Indonesia, such as North Maluku. North Maluku has experienced poor electricity and internet connection. In North Maluku, it usually happened power outage for two hours a day that affected the internet connection. Facebook could be one of the solutions for learning platform to

be used in the poor internet connection areas, because Facebook does not require high-speed internet connection.

The present study used Five characteristics of Effective Professional Development (5cEPD) framework used to examine the potential of utilizing Facebook as a medium of effective teacher professional development (TPD). The 5cEPD was adapted from (Patahuddin, 2013). An effective PD should be: ongoing professional development (enable the teacher to connect with the TPD anytime and anywhere), collaborative (creates a space for teachers to share ideas and learn together), student-orientated focus (the content of PD is focused on what students should learn and how to support students learning), consider teacher's contexts (identifying each teacher as an individual whom has different characteristics such as experience and background), and enhance teachers' content knowledge for teaching (to build teacher pedagogical and content knowledge).

RESEARCH METHOD

This study is part of the design research study of developing effective online TPD regarding mathematical and pedagogical knowledge. However, this paper will investigate the potential of FG as a medium to deliver an effective online TPD.

Participants

The participants were thirteen primary school teachers (three males and ten females) from North Maluku who teach grades 3, 4, 5, and 6. The participants joined the formal online TPD via FG for twelve weeks. All participants were active Facebook users. Participants were willing to join the TPD online FG. Because of ethical considerations, the TPD FG was set as a private group. Private group means only the participants can see the members of the group and what they post.

Design

The online TPD model uses blending of synchronous and asynchronous learning (see Fig. 1). In this study, synchronous learning means real-time communication via Zoom virtual meetings between participants and instructor and among participants themselves. The Zoom meetings activity was streamed on the FG wall. The asynchronous sessions are a learning mode that participants can access the material anytime and anywhere via the online platform, and students can work at their own pace and time (Oztok, Zingaro, Brett, & Hewitt, 2013; Perveen, 2016). In this study, asynchronous mode gave opportunities to participants to access TPD sources via FG anytime.
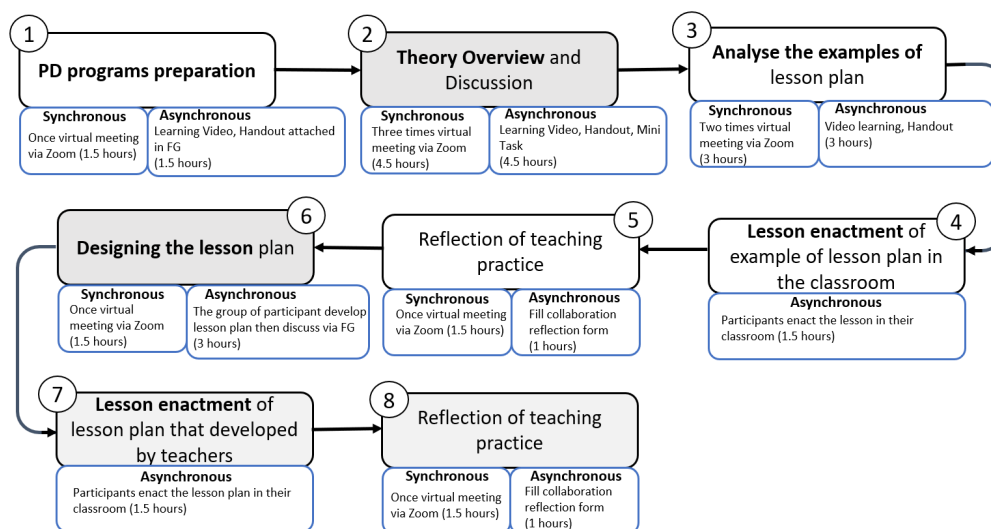

Figure 1. Online teacher professional development model

Data Analysis

Content analysis was employed to identify themes of participants' activities in the FG. The participants' activities included posts, comments and reactions. The themes categories were based on the 5cEPD. The teachers' activities were classified into 5cEPD framework. Cohen, Manion, and Morrison (2007) explained that content analysis is a careful way to "identify appropriate categories and units of analysis, both of which will reflect the nature of the document being analysed and the purpose of the research" (p. 164). The procedure of content analysis involved reading and judgement with several steps: (1) briefing: understanding the phenomena and its context in detail; (2) immersion: in the collected data, to pick up all the clues; (3) categorising: in which the categories and their labels must reflect the purpose of the research, be exhaustive and be mutually exclusive; (4) incubation: reflecting on data and developing interpretations and meanings; (5) synthesis: involving a review of the rationale for coding and an identification of the emerging patterns and themes; (6) culling: condensing, excising and even reinterpreting the data so that they can be written up intelligibly and (7) interpretation: making meaning of the data (Cohen et al., 2007).

RESULTS

The 5cEPD framework was used as a lens to examine how FG has facilitated effective online teachers' professional development as follows.

Ongoing professional development

Many literatures (Guskey, 2003; Hunzicker, 2011; Patahuddin & Logan, 2019) suggested that effective TPD should be an ongoing process. Ongoing PD is a combination of high number of contact hours over some period of time and many opportunities to interact with the material of TPD (Hunzicker, 2011). The online TPD was designed for a duration of total thirty hours for twelve weeks. The asynchronous mode in this TPD gave teachers many opportunities to interact with the materials anywhere and anytime, via FG that is easy to access by participants. Table 1 presents the activities (e.g. post, comment, reaction, seen) of online TPD via FG that show the massive number of activities that happen during the TPD via FG.

Table 1. The number of activities of online TPD via FG

Week	Post	Comment	Like	Seen
1	15	267	475	264
2	18	199	295	304
3	18	226	302	288
4	19	147	201	333
5	24	327	304	440
6	18	224	214	348
7	3	156	86	55
8	2	56	21	39
9	2	21	23	37
10	2	31	17	32
11	2	12	28	41
12	7	101	109	119
Total	130	1767	2075	2300

Collaboration

High-quality TPD creates an opportunity for teachers to share ideas and learn together. In the FG, teachers shared their ideas through posts and comments. FG facilitated teachers to learn collaboratively. Figure 2 show the example of teachers' collaboration in TPD via FG.
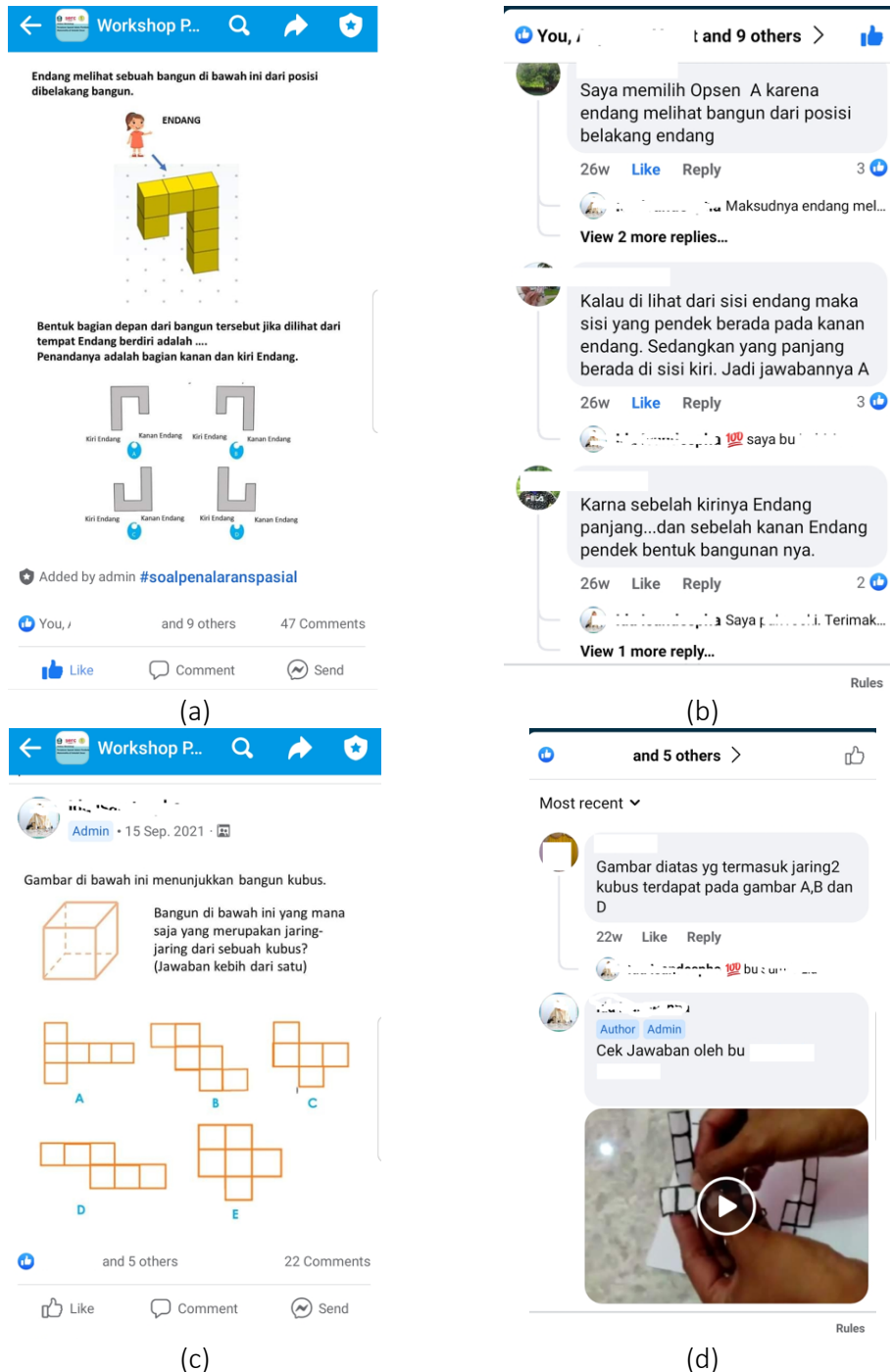

Figure 2. example of spatial reasoning item posted in FG (a), teachers shared their idea (b), mathematics item was posted in FG (c), teacher shared her idea through video and uploaded it in the comment box (d).

Figure 2 show collaborative learning in the online TPD via FG. For example, spatial reasoning item (a) had 22 comments. Teachers answered the item in the comment box; therefore, other teachers

could learn from their peers. The instructor encouraged teachers to explain their thinking in more detail. In figure d, a teacher explained her answer via video then uploaded it in the comment box. In this way, teachers had opportunities to learn from peers and shared their ideas.

Student-oriented focus

The Contents of the TPD focused on what students need to learn and how to support students' learning. TPD was connected to and derived from teachers' work with their students. Teachers implemented their knowledge obtained in the online TPD to their class. Participants gave tasks to students, then took a photo or video of the students' work and shared it in the FG. From the results of this implementation, the teacher gained experience on how to promote students to think spatially in learning mathematics. Figure 3 shows how teachers shared students' works, photos, and videos. Teachers enacted the subject from online TPD in the classroom, and they shared their experience in the FG. This activity shows that the online TPD focused on student interests and collaborative learning.

(a)   (b)
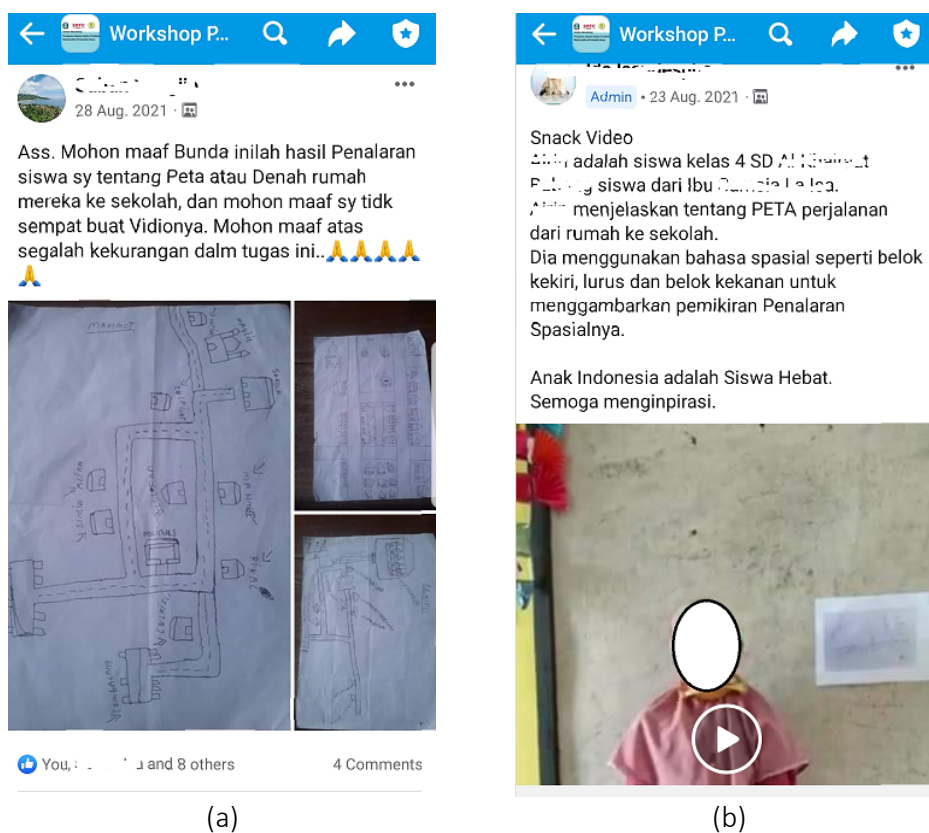
Figure 3. photos of students' work (a), video of student when explaining her work (b)

Consider teacher's contexts

In considering teachers' contexts, this study has utilized FG as a medium delivery for the TPD. Teachers were located in a remote area of Indonesia. They lacked educational resources such as internet connection, while mobile data is expensive there. All teachers were active users of Facebook, so they were very familiar with Facebook. Based on the participants' answers on the open-ended questionnaire, it was stated that the online PD was effective in terms of time effectiveness because participants could join the online PD anytime, no need to consider any travel and accommodation, so they could still carry out their daily activities at school. It is reflected in a participant's answer below.

T1: I prefer PD carried out online because of its flexibility in term of time and place. Therefore, in one day, we could do several activities besides workshops and were not tied to one place. Furthermore, we did not need to be troubled by preparations and costs. We only need a gadget and good internet connection [Post-questionnaire T1 no 3].

T2: Online PD was more effective in term of time, because each participant has different duties in his/her school. Therefore, online PD was more flexible [Post-questionnaire T2 no 3].

Enhancing teachers' content knowledge for teaching

Teachers expressed their understanding of the material learned in the online TPD by answering the spatial reasoning items and explaining how they get the answer in the comments box. Furthermore, teachers shared their understanding of the material content that they learned from the learning video. This shows that teachers learned new knowledge from the online TPD.

Teachers enacted the knowledge gained from online TPD into their classrooms. Therefore, teachers gained experience on how their knowledge was applied in the classroom. The implementation results were shared in the FG as a joint evaluation material. The teacher learned from his/her own teaching practice and also learned from the other teacher (see Figure 4). This activity encouraged the teacher to gain pedagogical knowledge.
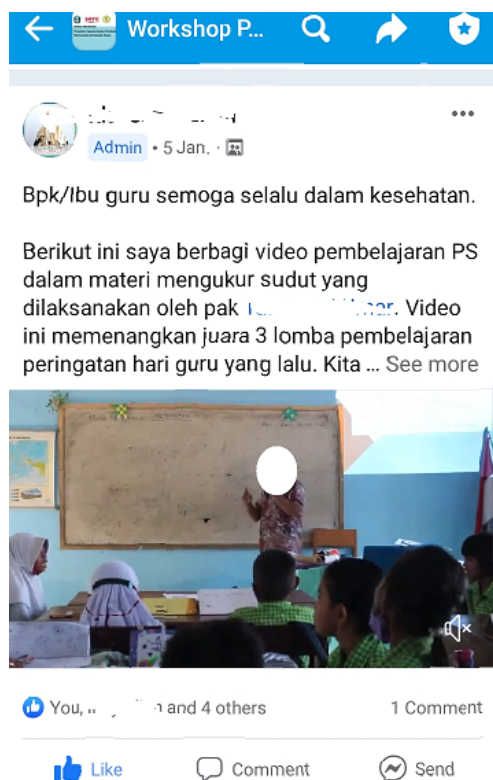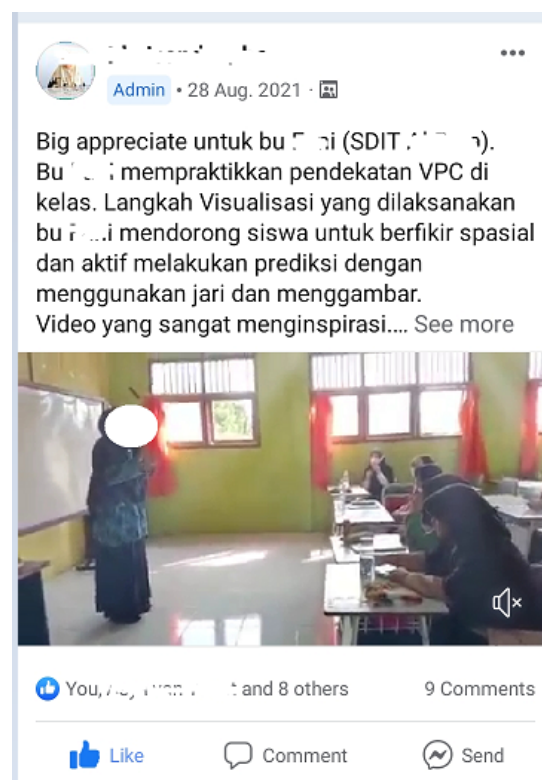
(a)   (b)

Figure 4. video of teaching practice by T1 (a), video of teaching practice by T2 (b)

DISCUSSION AND CONCLUSION

The present work explores the affordances of FG as a medium for effective online TPD. The 5cEPD framework was used as a lens to examine the effectiveness of the TPD. Thus, a discussion has emerged from the study. The finding suggests that FG is effective in facilitating online learning in the disadvantaged areas. This is because the character of FG as a social media that is easy to use

and easy to access, even where the internet network is not good. Also, FB issued a FB light application that can be accessed on low bandwidth. These findings support the previous research on FG (Niu, 2019; Patahuddin & Logan, 2019; Yang, Wang, Woo, & Quek, 2011). The affordances of FG supported the effective online TPD.

The finding recommendation is to use FG as a platform to organize formal TPD in the other areas that have better facilities and internet access. FG could facilitate TPD to be ongoing, collaborative, student-oriented, take into consideration teacher contexts, and enhance teacher pedagogical and content knowledge.

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