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Do MOOCs Help Indonesian EFL teachers Shape Their Professional Development Virtually?

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Abstract

This paper aims to explore the impact of an intensive online training course on teacher professional development. An exploratory study is conducted by inviting thirty-three English teachers across levels of education in Indonesia. The data were gathered through a questionnaire and interview to investigate the changing of their classroom practices and professional development after the program. The findings show the intensive online training course allows them to experiment with different technology tools in their classrooms, to get a new perspective on online learning, and to acquire new ideas and strategies for teaching. The implications of this research give directions and recommendations for future virtual teacher professional development (VTPD) and the need for integrating technological pedagogical content knowledge (TPACK) in the VTPD program.

1 Introduction

The rise of information technology allows teachers to have more options on professional development (PD) nowadays. Virtual teacher professional development (VTPD) becomes one of the gateways to scale up their teaching knowledge and skills. VTPD is more favorable than traditional PD because teachers can complete it in the non-teaching period, anywhere and everywhere (Keown, 2009). It is also easier as well as less expensive (Johnson, 2001). VTPD eliminates some potential barriers in traditional PD, such as time conflict, resource shortage, financial problems, and lack of employer support (Ji & Cao, 2016). Also, Indonesia is a big archipelago, which makes teachers who want to attend a face-to-face workshop of a PD will require them to travel long distances (Widodo & Riandi, 2013). Some of those workshops, sometimes, also do not specifically cover the teachers' needs (Patahuddin & Logan, 2019). VTPD, therefore, can be an alternative to help teachers cope up with some of those difficulties.

VTPD adopts various communication tools, such as video conference tools, video, discussion board, library laboratory, and live chat (Liu, 2012), Facebook (Patahuddin & Logan, 2019), Twitter and blogs (Prestridge, 2019) and Massive Open Online Course (Gameel & Wilkins, 2019; Mabuan et al., 2018; Wambugu, 2018). The latter tool is quite popular in today's education because of its positive contribution to professional development (Ji & Cao, 2016; Pickering & Swinnerton, 2017; Malita et al., 2018; Misra, 2018). The present research attempts to explore the impact of joining Massive Open Online Course (MOOC) in the Indonesian context. The program was called Indonesian Massive Open Online Course (IMOOC) for it was developed by Indonesian university teachers and professors in partnership with the U.S. Embassy's Regional English Language Officer

(RELO). It is specifically designed for Indonesian teachers with a focus on promoting autonomous learning through the use of digital media in the classroom. It is a nationwide program since the facilitators and the participants are from almost all provinces throughout Indonesia.

MOOCs facilitated by certain institution and targeted for specific participants have been researched in recent years. Mabuan et al. (2018) studied Filipinos teachers' memories, perspectives, and experiences after joining MOOCs via MOOC camps. The MOOC format was same with the present study since the participants were grouped and guided by one facilitator. They mentioned that MOOC camp could help to reduce the dropout rates of the participants. Wambugu (2018) investigated TESSA MOOC, a MOOC designed by Sub-Saharan Africa team. She pointed out that this kind of MOOC was an innovative approach which helped teachers to learn from each other as well as improved their pedagogical skills. In Indonesian context, the first Indonesian MOOC program was reported beneficial but the percentage of the participant who could be categorized autonomous learners were relatively small (only 32%) (Ginting et al., 2020). These studies mainly discuss on the participants' perspectives and perceived benefits, but the connection between the program and the participants' classroom practices are little known.

Therefore, this research will provide a salient information on how a specific MOOC for Indonesian teachers can affect the participants' professional development virtually and a picture of the connection between the VTPD and the teachers' classroom practices. The questions addressed in this study are (a) Does IMOOC have impacts on the participants' classroom practices? and (b) Does IMOOC have impacts on the participants' perspectives and insight for teaching strategies? It is expected that this study can provide a basis for developing future MOOC to be more meaningful and in line with the teachers' needs.

2   Literature review

2.1   Virtual teacher professional development

The emerging of virtual or online TPD becomes an alternative for teachers to elevate their knowledge and skills. Valiandes & Neophytou (2018) conclude that traditional TPD is not commensurable to support sustainable changes in the teachers' practice. Besides, Liu (2012) summarizes that existing models of teachers' development has some issues, such as it is not arranged to meet the teachers' needs, frequently crushes with the teachers' busy schedule, does not focuses on the organizational development, and sometimes is not developed by the right expert. The emerging of virtual or online TPD, then, becomes an alternative for teachers to elevate their knowledge and skills.

VTPD, such as MOOC, becomes a choice for today's teachers for some reasons. First, its massive coverage widens the opportunities for teachers to access TPD (Castaño-Muñoz et al., 2018; Ji & Cao, 2016). TPD is considered costly, especially in developing countries, because sometimes it requires teachers to allocate some budgets (Mabuan et al., 2018). In Indonesia, for instances, teachers need to travel to the training center for attending the TPD and it may make them leave their home and work for couple of days (Widodo & Riandi, 2013). Next, MOOC offers flexibility in learning because it can be accessed in according with the participants' convenience time, place and pace of learning (Donitsa-Schmidt & Topaz, 2018). This flexibility also related to the freedom of the participants to choose various topics offered in the MOOCs so they can select based on their needs. By joining a specific topic MOOC, the participants can meet others with similar interest, which eventually allow them for collaboration and exchange (Ji & Cao, 2016). Thus, MOOC is considered able to increase equal opportunities for teachers to improve their knowledge and skills.

However, previous research also revealed that MOOC has some challenges as a VTPD. MOOCs were reported having high dropout rates (Ginting, 2018; Mabuan et al., 2018). It is due to some reasons, including lack of time, conflict of commitment, lack of knowledge, lack of incentive, and inconsistency between lessons and test materials (Firmansyah & Timmis, 2016). MOOC requires the participants to have good time management and commitment to complete all the lessons. Firmansyah and Timmis (2016) also yielded that cultural challenges can cause a problem too regarding the

participants' expectation in learning. MOOC requires the participants to be more autonomous and self-paced in learning so it will be difficult for participants who expects to be guided by a teacher during the course. Last, infrastructure, such as limited bandwidth, and low level of digital literacy also become major challenges for the implementation of VTPD (Berliyanto & B. Santoso, 2016).

2.2   *Measuring the effectiveness of a TPD*

Professional development is a continuous action. An effective teacher professional development should have impact on teachers' practice, attitude, beliefs and students' learning outcome (Guskey, 2002). Guskey (2002) postulates a model of teacher change to guide a creation of a TPD program. A good TPD, according to him, should be able to promote positive changes in the teachers' classroom practices which resulted in the students better learning outcome. If this happens, it will lead to a change on their attitude towards the TPD, which eventually will help the teachers to continuously shape his/her professionalism. Another framework to assess a TPD is one proposed by Evans (2011). She explains that a good TPD covers the changing of these three categories: behavioural component, attitudinal component, and intellectual component. The behavioural component can be measured by the changing of classroom practice. The attitudinal component is indicated by the changing belief and the intellectual is measured based on some indicators such as the ability of the TPD to promote new teaching strategies, to improve methods and techniques, and to help building networking. The present study will rely on these two theories to discuss the changes experienced by the IMOOC participants after joining the program.

2.3   *Indonesian massive open online course (IMOOC)*

MOOC is promising, but it is still new in TPD (Ji & Cao, 2016). Its popularity has grown since 2012 and that year was called as 'The Year of the MOOC' (Pappano, 2012). We can find hundreds of MOOCs offered by top-rank universities in the internet; even some of them are free to access (Donitsa-Schmidt & Topaz, 2018). Berliyanto and Santoso (2016) recommend that it is a big opportunity to implement MOOCs immediately because the competition is still low. They argue that MOOC framework fitting with the Indonesian teachers' needs is still in search. Therefore, research on this topic is a hot issue to be addressed.

Indonesian Massive Open Online Course (IMOOC) is one of the initial MOOC programs in Indonesia proposed to help teachers develop their teaching skills and knowledge, especially related to the use of in-class educational technology. It was first introduced in 2017. This online program uses the free version of the Canvas as the learning platform. This course was created by RELO working with Indonesian professors and teachers. The theme of the course was technology for autonomous learning. The course was conducted in the form of group learning. There were 15 groups throughout Indonesia. Each group consisted of 35 participants, including pre-service teachers, in-service teachers, and lecturers. All participants are English teachers. One group was guided by one facilitator.

The content of the course focused on introducing autonomous learning and digital apps for teaching. The participants had to complete the IMOOC modules consisting of these five topics: 1) understanding autonomous learning, 2) digital literacy, 3) mobile devices for autonomous learning and teaching, 4) promoting autonomous learning using videos and 5) autonomy through video creation. The activities in each module were various. One module consists of materials and tasks, such as discussions, quizzes, and projects. Besides online activities, participants got once face-to-face meeting in the middle of course so that they could meet and share their problems during the course after taking the first and the second modules. The course took 11 weeks to complete. The participants' responses toward this program recorded in a study conducted by Hartono (2017). He reported that IMOOC was new to them and able to improve their ICT competence and career. However, it was also founded that the dropout rates of the participants joining this program relatively high (Ginting, 2018). The present research, then, focuses on the second iteration of this program in 2018.

3 Methodology

3.1 Participants

The participants of this research were those who participated in the second iteration of the IMOOC. It was started in February 15 until May 5, 2018. The researcher took the data after the program completed in May to June 2018. Among 15 groups of the IMOOC camps, which were distributed throughout Indonesia, the present research recruited the participants from two IMOOC camps only. Those two camps were based in Banjarmasin, South Kalimantan provinces, Indonesia. The facilitators were the researcher and his colleagues, so it was easier for him to collect the data and to ask the permission from the participants. The participants came from various backgrounds of education, job, age, gender, and teaching experiences. Table 1 describes their demographic data.

Table 1. Demographic information of the participants

	Frequency	Percentage
Job		
Elementary school teacher	3	9.1%
Junior high school teacher	3	9.1%
Senior high school teacher	3	9.1%
Lecturers	24	72.7%
Education		
Bachelor's degree	11	33.3%
Master's degree	22	66.7%
Age		
21-30 years old	16	48.5%
31-40 years old	12	36.4%
41-50 years old	5	15.2%
Gender		
Male	8	24.2%
Female	25	75.8%
Teaching Experiences		
Less than 5 years	11	33.3%
5-10 years	11	33.3%
11-15 years	8	24.2%
More than 15 years	3	9.1%

Table 1 shows that most of the IMOOC participants are lecturers (72%). Some of the participants are considered new in teaching since they have fewer than five years of work experience, and others have taught for 5-10 years. There are only 9.5% of senior teachers who took part in this program and research. Most participants identified themselves as females (75.8%) and most of them have a master's degree as the highest level of qualification.

3.2 Data collection and analysis

The present research used exploratory study by employing questionnaire and interview as the data collection instruments. The questionnaire was given to all participants to observe their classroom practices and professional development, but it is in the form of close-ended questions. The questionnaire consisted of twenty-three questions, and it was created using Google Form. Seven questions focused on asking the participants personal identities such as name, age, job, education, gender, and teaching experience. Seven questions measured the impact of IMOOC on teachers' teaching practice, and the remaining questions investigate their professional development after embarking on IMOOC.

The questions were constructed from the TPD framework proposed by Evans (2002, 2011). This framework allows us to examine effective professional development program by identifying three factors: a) the changing of classroom practices after joining the IMOOC, b) the changing belief of the participants on online professional development, and c) the ability of the program to promote new teaching strategies, to improve methods and techniques, and to help in building networking. Each questionnaire item used four-point Likert scale. The scale ranged from 1=strongly disagree to 4=strongly agree. The result of the questionnaire was then analyzed quantitatively. The questionnaire was handed out to participants through the two WhatsApp groups. The researcher was one of the facilitators of the IMOOC, so he had access to share the questionnaire to every participant in his IMOOC camp and his colleague's camp. There were actually 44 participants from the two IMOOC camps, but only 33 people who gave responses.

The interview is intended to gather the data from successful participants, those who completed the IMOOC program. The program required that the participants should do all the assignments and get at least 70% as the minimum score for passing the course. Eleven out of thirty-three participants were willing to do both filling the questionnaire and joining the interview, and the others chose the questionnaire only. Those eleven participants were Rama (male), Ayu (female), Retno (female), Umar (male), Yuyun (female), Reza (male), Wina (female), Wahidah (female), Fattah (male), Hani (female), and Tika (female). Table 2 shows the interviewee's pseudonyms, teaching experience, school level.

Table 2. The data of participants who voluntarily joined the interview

Pseudonym	Teaching experience (years)	School level
Rama	12	University
Ayu	20	Junior high school
Retno	5	University
Umar	15	Junior high school
Yuyun	7	University
Reza	5	University
Wina	12	University
Wahidah	5	Senior high school
Fattah	6	University
Hani	7	University
Tika	12	University

The interview was conducted by phone. Before the interview, they were asked to give their consent that the conversation would be recorded to make the transcription process easier.   They were asked to tell what changes they made in their classroom practices during and after joining the IMOOC. The researcher also explored what educational technologies from the course were applied and how they used it. The next questions focused on asking whether the program affected their skills and knowledge of teaching and their willingness to integrate technology in their classroom. At the end of the interview, they were asked whether they shared what they got from the program to their community or colleagues and whether they wanted to join other online professional development programs.

The interview was conducted in Bahasa Indonesia to make the participants express their ideas clearly. The data gathered from the interview were transcribed and translated into English. Transcribing data plays pivotal role for data organization and analysis (Widodo, 2014). Then, the data was coded and identified based on the TPD framework proposed by Evans (2002, 2011). List of the questions is displayed in Table 3.

Table 3. List of Interview Questions

Factors	Questions
The changing of classroom practices after joining the IMOOC	1. Do you change your classroom practices after joining the IMOOC? 2. If yes, could you please tell me one of the examples? 3. Did you think the use of technology tools help the stu-dents to get better learning outcome? 4. In the questionnaire, you mentioned that you use these apps (mention the apps selected). Would you please tell me the detail how you used it in your classroom? 5. How did your students' respond to the changing of your classroom practices?
The changing belief of the participants on online professional development	6. Seeing your students' responses, did it change your opinion about the use of technology for teaching? 7. Did you use educational technology in your classroom more frequent than before you joined the IMOOC? Why? 8. Did it also change your opinion about virtual teacher professional development? 9. After joining the IMOOC, did you look for another VTPD?
The ability of the program to promote new teaching strategies, to improve methods and techniques, and to help in building networking	10. Do you think IMOOC help you to improve your teach-ing strategies in the classroom? Can you explain more please! 11. Did you share what you got from IMOOC to your col-leagues or community? What were their responses? 12. Did you still discuss with other IMOOC participants in your camps after the program finished? What did you usually discuss?

4 Findings and discussions

4.1 The impact of IMOOC on teachers' classroom practices

This part investigates the changing of the participants' teaching practices by identifying several aspects such as confidence in teaching, the use of digital apps in the classroom, classroom management, willingness to integrate technology into lessons and the teaching outcome. The result of the questionnaire is displayed in Table 4.

Table 4. *The Impact of IMOOC on Teachers' Classroom Practices*

		Freq.	Percent
Increasing Confidence in Teaching	Agree	13	39.4
	Strongly Agree	20	60.6
Helping to Reach Better Teaching Outcome	Agree	25	75.8
	Strongly Agree	8	24.2
Improving Classroom Management	Agree	14	42.4
	Strongly Agree	19	57.6
Willingness to Integrate Technology into Lessons	Agree	12	36.4
	Strongly Agree	21	63.6

The result shows that IMOOC has a positive impact on the participants' classroom practices. Most of the participants (60.6%) strongly agree that IMOOC boosts their confidence in teaching. None of the participants chose strongly disagree or disagree so it was not reported.

The increase in participants' confidence in teaching is supported from the interview data. Yuyun explained her reason that before joining this program, she had a lack of confidence in using technology for her classroom. It was because she did not know that there were some free and helpful apps for teaching. Hani also gave the same reason that after taking part in this program, she could make her own educational games and additional materials for students. She made Quizlet for teaching vocabu-lary. Before, she taught that creating technology-integrated materials will require her to have skills like a programmer. She, previously, taught it would be complicated and would not know what to do if her students got technical matters. Now, she said that she could asked her friends in IMOOC if she got such troubles.

Next, the participants' willingness to integrate technology was explained by Rama during the interview. He identified himself as a digitally literate teacher but consider that the program still benefitted him by widening his perspective about the various use of technology for classroom practices. Rama's statement is in line with Yurkofsky et al. (2019) and Kennedy's (2016) findings that an engaging online professional development should facilitate the teachers to get new ideas for teaching. Rama's opinion is captured in the following data excerpt.

> I can say that I am good at technology. I love to explore some apps, but IMOOC opened my eyes that technology offer benefits for instructional purposes. I know that there are some useful apps for learning a language, but I was unaware that I could benefit from them to help me teach my students. IMOOC helps me to know some variations in using the apps in the classroom. (Rama, Interview data)

Most participants agreed that the use of technology affected students' motivation and engagement in the classroom. It was driven by their curiosity for the new teaching media introduced by the teachers. In addition, according to Bustamante (2020), technology can promote a better students' engagement in learning because it provides ownership for their learning. In other words, the participants' knowledge and experience during the IMOOC did facilitate them to achieve better learning outcome. Umar and Tika expressed their thoughts regarding this finding as the followings.

> It gives impact on the teaching and learning process. Before, I did not use technology a lot in my classroom, just LCD and PowerPoint. But after the training, I use various kinds of apps in my classroom and I can see my students feel more motivated in using the apps for learning. (Umar, Interview data).

> Before joining the IMOOC, my students were less active in my class. When I asked them to do a role play, it seemed that they were not really enthusiastic about it because they did not know what to do or they did not know much about the content we were discussing. After joining this program, I introduced some apps, such as English Central and Canva, they became more active and have more ideas to discuss. They frequently asked questions and interested in using the apps for their own learning. At that time, I was teaching English for Travel and Guide. (Tika, Interview data)

Regarding classroom management, we can notice that 57.6% of the participants strongly agree that IMOOC helps them to improve it. Wahidah, for example, said that most of the students love to learn by using technology. Before, she did not allow the students to use smartphones in her classroom, but they sometimes played with it. Today, it is not a problem at all. When the students get bored, she can invite them to play Kahoot. Fattah also stated that now he tried to use Canvas as a medium for teaching so the students could do the assignment at home. As a result, he could optimize his time in the classroom to provide feedback to students' works.

Related to teachers' classroom practice, most of the participants (63.6%) also strongly agree that they had experimented using the apps learnt in the IMOOC in their lessons. Among several apps, EdPuzzle became the most favorite one. Twenty participants (60.6%) chose EdPuzzle as it is shown in the Figure 1.
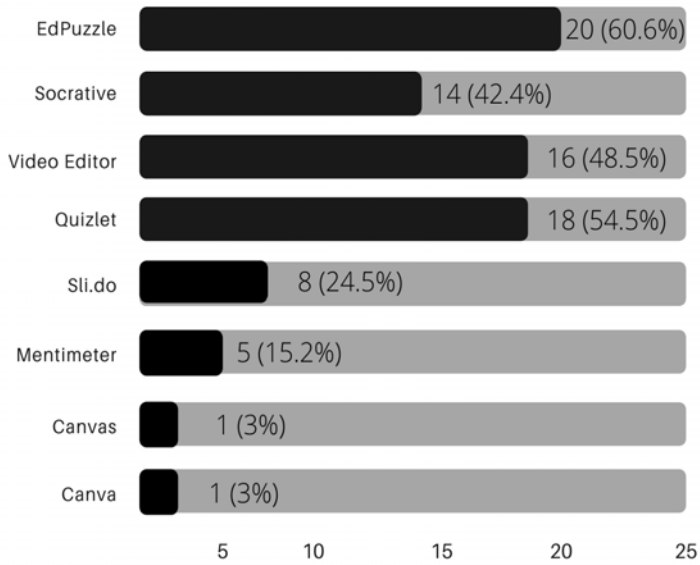
Figure 1. Apps used by the participants in their classroom

Figure 1 displays that EdPuzzle is the most favorite apps used by the teachers in their classrooms. EdPuzzle is a video platform, which enables the users to edit a video and add some questions. This finding confirms that video still being a favorite multimedia tool for teachers, since it is effective in delivering their content (Jung et al., 2019). EdPuzzle's video trimming feature makes the teachers can adjust appropriate content and duration. Its feature to add questions facilitates them to check the stu-dents' understanding while watching. Hani and Yuyun told their reasons for choosing this app:

> I like to use this app because I can trim the video and add questions to measure students' compre-hension. I think this is a good app since students love to watch videos and while doing this activity, they also can assess their listening skill. (Hani, Interview data).

> I uploaded my teaching materials in the Google Classroom. Then, for the exercise, I used EdPuz-zle. My students loved it because it was a new experience for them. I also could easily get the score after the students finished doing the assignment using that app. (Yuyun, Interview data).

Referring to the model of teacher change (Guskey, 2002), we can identify that the participants' par-ticipation in the IMOOC affects their classroom practices, which eventually improve the students' learning outcomes. Seeing the improvement in students' motivation and engagement, the teachers feel that online professional development also contribute to their PD. This kind of attitude encourages them to have a better perspective of VTPD. Besides, the content of the IMOOC also can be directly applied in their classroom. This benefit triggers the participants to complete the program. A PD pro-gram should be tailored to the participants' classroom needs because it is related to their enthusiasm, which finally affect their active participation during the program (Utami et al., 2019).

However, not all teachers have the same opportunity to use the apps learned in the program to be applied in their classroom. Ayu mentioned that her school did not allow students to bring a smartphone. Her statement helps us to understand the importance of institutional support in the TPD program.

I like to use this app because I can trim the video and add questions to measure students' compre-hension. I think this is a good app since students love to watch videos and while doing this activity, they also can assess their listening skill. (Hani, Interview data).

Actually, I want to apply various educational technologies learnt in the IMOOC in my classroom. Sometimes I think that I can use certain apps for teaching vocabulary, or other apps for playing language games in the classroom. Nevertheless, I cannot do it because of the regulations in my school. Besides, not all my students can afford a smartphone or buy internet data. (Ayu, Interview data)

Although technology can benefit instruction (O'Bannon et al., 2017), it is a fact that some schools in Indonesia do not permit students to use cell phones in classrooms. In this kind of situation, what Ayu had done for her students could be a solution. She used the technology to help her in the follow-up activity. Through a WhatsApp group, she explained to the students on how to use Canva for making a procedural text poster at home. Since the task were in groups, so the students who could not afford to buy data plan could work with their friends. This finding points out that the use of technology should be followed with the teacher creativity to deal with certain barriers.

4.2   *The impact of IMOOC on the teachers' perspectives and insight for teaching strategies.*

The findings for the first part showcase that IMOOC has a major impact on the teachers' teaching practices. According to Evans (2011), professional development is related to the changing of these three categories: behavioral component, attitudinal component, and intellectual component. The first component was measured by the changing of classroom practices after joining the IMOOC. The atti-tudinal component was measured by the changing belief on the participants on online professional development. Last, the intellectual component was measured based on some indicators such as the ability of this program to promote new teaching strategies, to improve the participants' methods and techniques in teaching, and to help them broaden their networking. Table 5 shows the impact of the IMOOC on the two latter aspects.

Table 5. The Impact of IMOOC on the Participants' PD

		Freq.	Percent
Improving Methods and Techniques	Agree	10	30.3
	Strongly Agree	23	69.7
Giving Ideas for New Teaching Strategies	Agree	15	45.5
	Strongly Agree	18	57.6
	Disagree	1	3
Keeping updated with the latest ELT Issues	Agree	12	36.4
	Strongly Agree	21	63.6
Helping to Have Better Networking	Disagree	1	3
	Agree	15	45.5
	Strongly Agree	17	51.5
Encouraging to join other online PD	Agree	12	36.4
	Strongly Agree	21	63.6

Table 5 summarizes that most of the participants gain benefits from joining this program. It helped them to enhance their professional development. Most of the participants strongly agree with all the statements and, in some items, none of the participants chose strongly disagree or disagree so the result was not reported. Related to participants' beliefs, Yuyun answered that this course brought her ideas that professional development could be done through an online course. Before, she preferred traditional professional development such as training or workshop. Today, she said that both online and offline TPD gave teachers benefits, especially the online one is more cost-saving and flexible. An interview with Retno showcases that her participation in the IMOOC changed her perspective about the source of learning and how she assessed her students. The changing of Retno's belief in the use of digital tool for assessment is described in the excerpt below.

> For me, it changes my perspective. Before, I think that websites and online journals were the only technological sources for online learning. Using the apps introduced in the IMOOC was my first and a new experience for me. It changes the choice of media I choose for my classroom. Now, I use various media such as Youtube, Instagram, and other apps to help me deliver my lesson. I used to use paper and pencil test for assessment. However, after trying Socrative, I found that assessment by using technology is also effective and makes the scoring process easier. Although it needs efforts for me to create the test, but I think it was really helpful. (Retno, Interview data)

The participants agreed (45.5%) and strongly agreed (57.6%) that the online intensive training gives them new insight for teaching strategies. Fattah told that IMOOC gave him ideas to make a flipped classroom. He taught writing, so it must be time-consuming to do the writing process in the classroom. After taking part in this program, he got an idea that he could use Canvas as a learning tool so the students could post their writing there. The feedback could be shared between students-teacher and students-students. Hani mentioned that this course made her aware that online professional de-velopment was an excellent tool for learning because of its flexibility in time and place. Besides, because it was online, she could manage her time to do the tasks in her free time. Therefore, 63.6% of the participants said that they were waiting for other online professional development programs.

The questionnaire also addressed some questions regarding which teaching skills are significantly affected by IMOOC. The result is presented in the Figure 2
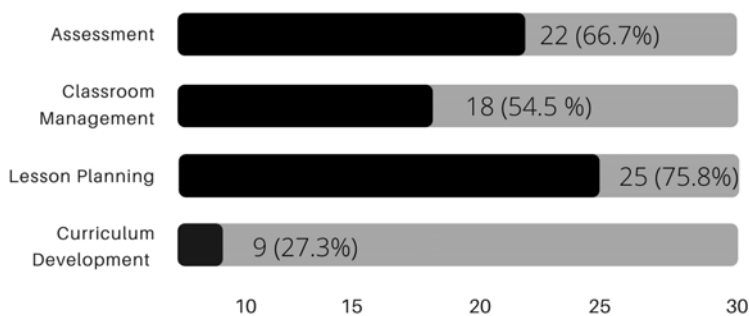

Figure 2. Participants' Language Teaching Skills Polished after Joining the IMOOC

Most of the participants said that IMOOC had significant impact on their skill in planning a lesson. Riza said that some assignments in the IMOOC instructed him to make a lesson plan by integrating the new apps. This task made him learnt how to carefully and creatively arrange classroom activities with the insertion of educational technology. Therefore, he thought that this course assisted him in having better lesson planning skill. Ayu told how this program helped her to design her lesson plan in the following interview data.

> The first time I experimented with the apps was with the ninth graders. Because I taught that class just after taking the program, so I designed a lesson for teaching procedural text. I asked them to make a poster by using Canva. They wrote the procedure, the materials, and the steps in that poster. Some of them even attached the photo of their product too. They were very creative. I guided them to use the apps in the WhatsApp group. Next semester, I will teach eight graders and I think I will use Canva again for asking them to make a greeting card. I had made the plan. (Ayu, Interview data)

In regard to the participant's networking, some participants still kept in touch with the others even though the program had finished. When they were asked whether they still communicate with other participants and whether they share the knowledge they got from the program to their community or colleagues, their answers vary as depicted in the following excerpts.

Unfortunately, no. I didn't share what I got to my colleagues since I think they are not inter-ested in it. Although they know that I use technology for teaching, they never ask me about it. I only share it to one of my friends from different faculty, because she asks me. However, I do share it to my students because I think they are the future of our education. They should know this knowledge. (Retno, Interview data)

Yes, I share it to my colleagues and my community, a teacher local forum in Tenggarong, East Kalimantan. Although the forum is not very active, when we have meeting I will share what kinds of training I joined and knowledge I got, including the IMOOC. But, I think not all of them fully under-stand what I shared. Because we need to experience so we can apply the knowledge into our practice (Umar, Interview data)

Those excerpts tell us that the participants share their knowledge when they feel that it will give benefits for others. Wina also said that this course helped her have better networking because it used social media as a means of communication. Since the participants were across Indonesia, she got new colleagues to share teaching ideas and talk about current issues in that chat group. The chat group has significant role in helping participants to complete the program. Some participants felt more comfortable to contact the facilitator though the WhatsApp group instead of using the inbox feature provided by Canvas. In line with the previous research suggestion (Ginting, 2018; Mabuan et al., 2018; Widodo & Riandi, 2013), VTPD could be more effective when it is accompanied with offline mode or a facilitator. In the present research, the facilitator actively guided the participants by social media use. WhatsApp became the most effective social media to help the teachers com-plete the course since some still needed to get help from the facilitator or other participants. When dealing with technical issues, such as how to submit assignments or to use new apps, asking the facilitator or friends through chat group was the fastest solution. It means that the participants can-not be entirely left by the instructor to work independently.

The present finding supports the previous research reports (John, 2012; Ji & Cao, 2016; Picker-ing & Swinnerton, 2017; Misra, 2018) that online courses can contribute to shaping teacher profes-sional development. According to Evans (2002), there are two constituent elements of professional development: attitudinal and functional. The attitudinal element relates to teachers' attitudes to their work. A good professional development is expected to be able to drive teachers to improve their intellect and motivation in teaching continuously. Meanwhile, the functional element refers to abil-ity of the PD program to improve of teachers' teaching performance. Based on the result of the in-terview and questionnaire, it can be identified that IMOOC can cover both elements as a virtual teacher professional development program.

5   Conclusion and implications for teacher professional development

A TPD program is considered effective when it promotes a change in the teachers' classroom practices, students' learning outcomes, and teachers' attitudes and beliefs (Guskey, 2002). The present research findings extend the discussion that MOOC is a promising VTPD which can meet that model and Evan's TPD framework (Evans, 2002, 2011). IMOOC, which was explicitly de-signed to cater to Indonesian teachers' needs, promoted teachers to experiment with different technology tools for their classrooms. The study confirms that a good teacher professional devel-opment should be alienated with practical content, which the teacher can apply in their classroom after the program. The findings also imply that VTPD through MOOC enables the possibility of a nationwide TPD. A nationwide TPD is considered challenging for an archipelagic country, like Indonesia, because it requires the teachers to travel and needs a lot of cost too (Keown, 2009; A. Widodo & Riandi, 2013). MOOC makes teachers can join the TPD without leaving their home and work. It enables the participant to manage their time between doing the TPD tasks and their other works (Ginting et al., 2020).

Future IMOOC is expected to concentrate on some practical teaching methodology or media, which can be directly used by the teachers in the classroom. They get more benefits when the training focuses on practical things they can directly apply to their teaching practice. The use of social media, such as WhatsApp, is helpful since some teachers prefer to directly ask

the facili-tator or other participants when they deal with technical troubles. Drawing from Communities of Practice theory (Wenger, 1998), "learning is not an individual practice" so we should treat the participants as active learners (Mitchell, 2013). The communication between the VTPD facilita-tor-participant and participant-participant is important to keep the participants' engagement dur-ing the online training. The feeling of not being ignored by the facilitator or other participants can develop their sense of belonging toward the group during the program.

Teacher professional development that focuses on promoting educational technology is ad-vised to consider the integration of technological pedagogical content knowledge (TPACK). Technology is just a tool so the most important thing is how teachers can adapt it appropriately into their teaching (Koehler & Mishra, 2005, 2006). The findings reveal that the program facili-tates the participants to learn the integration of technology, pedagogy, and content aspects, which was implicitly described in the process of designing their lesson plan. However, in the present IMOOC, it should be admitted that the promotion of pedagogical aspects needs some improve-ments. Some of the participants had successfully connected the materials in the IMOOC into their classroom practices, but some admitted that they could not make sure whether or not they have successfully promoted autonomous learning. Most of the participants still consider technology to trigger students' motivation in learning and to provide various media in teaching. Bustamante (2020) suggests that a PD program, which focuses on the ICT use, should facilitate the partici-pants to learn on how to apply the technology tools in a meaningful language context. Therefore, a good VTPD on technology should not only introduce teachers to some digital tools for teaching, but also should enable them to explore the pedagogical and the contents aspects (Misra, 2018).

Future studies are expected to investigate a MOOC which has participants from various coun-tries and cultural background because the program in the present study only cover a single coun-try. Doing a direct observation in the participants' classroom is recommended for it will provide a real picture of the impact of the program on teachers' practices. Studying MOOC through different research methodology lenses, for instance narrative inquiry, would also enrich findings on this topic based on the participants' interpretation of their own experiences.

References

Berliyanto, & B. Santoso, H. (2016). Indonesian perspective on Massive Open Online Courses: Opportunities and challenges. *Journal of Educators Online, 15*(1). https://files.eric.ed.gov/fulltext/EJ1168947.pdf

Bustamante, C. (2020). TPACK-based professional development on web 2.0 for Spanish teachers: a case study. *Computer Assisted Language Learning, 33*(4), 327–352. https://doi.org/10.1080/09588221.2018.1564333

Castaño-Muñoz, J., Kalz, M., Kreijns, K., & Punie, Y. (2018). Who is taking MOOCs for teachers' professional development on the use of ICT? A cross-sectional study from Spain. *Technology, Pedagogy and Education, 27*(5), 607–624. https://doi.org/10.1080/1475939X.2018.1528997

Donitsa-Schmidt, S., & Topaz, B. (2018). Massive open online courses as a knowledge base for teachers. *Journal of Education for Teaching, 44*(5), 608–620. https://doi.org/10.1080/02607476.2018.1516350

Evans, L. (2002). What is teacher development? *Oxford Review of Education, 28*(1), 123–137. https://doi.org/10.1080/03054980120113670

Evans, L. (2011). The "shape" of teacher professionalism in England: Professional standards, performance man-agement, professional development and the changes proposed in the 2010 white paper. *British Educational Research Journal, 37*(5), 851–870. https://doi.org/10.1080/01411926.2011.607231

Firmansyah, M., & Timmis, S. (2016). Making MOOCs meaningful and locally relevant? Investigating ID-Courserians—an independent, collaborative, community hub in Indonesia. *Research and Practice in Technol-ogy Enhanced Learning, 11*(1), 1–23. https://doi.org/10.1186/s41039-016-0032-6

Gameel, B. G., & Wilkins, K. G. (2019). When it comes to MOOCs, where you are from makes a difference. *Computers and Education, 136*(February), 49–60. https://doi.org/10.1016/j.compedu.2019.02.014

Ginting, D. (2018). The analysis of the drop rate of the Indonesian Massive Open Online Course. In C. I. Rumimpunu, D. Setiawan, I. S. K. Tehuayo, M. Patricia, N. KristivaUtomo, & N. E. Alamsyah (Eds.), *Language in the Online & Offline World 6*: The Fortitude (pp. 52–61). Petra Press.

Ginting, D., Djiwandono, P. I., Woods, R., & Lee, D. (2020). Is autonomous learning possible for asian students? The story of a mooc from Indonesia. *Teaching English with Technology, 20*(1), 60–79.

Guskey, T. R. (2002). Professional development and teacher change. Teachers and Teaching: *Theory and Practice, 8*(3), 381–391. https://doi.org/http://dx.doi.org/10.1080/135406002100000512

Hartono, R. (2017). English teachers' responses on the Indonesian MOOC: Technology for autonomous learning (A qualitative survey at Central Java Province, Indonesia). Language Circle - *Journal of Language and Literature, 12*(1), 31–40. https://doi.org/10.15294/lc.v12i1.11468

Ji, Z., & Cao, Y. (2016). A prospective study on the application of MOOC in teacher professional development in China. *Universal Journal of Educational Research, 4*(9), 2061–2067. https://doi.org/10.13189/ujer.2016.040917

Johnson, C. M. (2001). A survey of current research on online communities of practice. *Internet and Higher Education, 4(*1), 45–60. https://doi.org/10.1016/S1096-7516(01)00047-1

Jung, S., Son, M., Kim, C. il, Rew, J., & Hwang, E. (2019). Video-based learning assistant scheme for sustainable education. *New Review of Hypermedia and Multimedia, 25*(3), 161–181. https://doi.org/10.1080/13614568.2019.1678682

Kennedy, M. M. (2016). How does professional development improve teaching? *Review of Educational Research, 86*(4), 945–980. https://doi.org/10.3102/0034654315626800

Keown, P. (2009). The tale of two virtual teacher professional development modules. *International Research in Geographical and Environmental Education, 18*(4), 295–303. https://doi.org/10.1080/10382040903251166

Koehler, M. J., & Mishra, P. (2005). What happens when teachers design educational technology? *Journal of Educational Computing Research Environmental Science and Technology, 32*(2), 131–152. https://doi.org/10.1021/acs.est.6b04302

Koehler, M. J., & Mishra, P. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record, 108*(6), 1017–1054.

Liu, K. Y. (2012). A Design Framework for Online Teacher Professional Development Communities. *Asia Pacific Education Review, 13(*4), 701–711. https://doi.org/10.1007/s12564-012-9230-0

Mabuan, R. A., Ramos, A. A., Matala, C. C., Navarra, A. M., & Ebron. Jr, G. P. (2018). MOOC Camps for Teacher Professional Development: The Philippine Experience. *Asian EFL Journal, 20*(12.3), 194–215.

Malita, L., Tiru, L. G., & Grosseck, G. (2018). MOOCs for Teachers Professional Development — A University Challenge? International *Journal of Information and Education Technology, 8(*3), 235–239. https://doi.org/10.18178/ijiet.2018.8.3.1040

Misra, P. K. (2018). MOOCs for Teacher Professional Development: Reflections, and Suggested Actions. *Open Praxis, 10*(1), 67–77. https://doi.org/10.5944/openpraxis.10.1.780

Mitchell, R. (2013). What is professional development, how does it occur in individuals, and how may it be used by educational leaders and managers for the purpose of school improvement? *Professional Development in Education, 39*(3), 387–400. https://doi.org/10.1080/19415257.2012.762721

O'Bannon, B. W., Waters, S., Lubke, J., Cady, J., & Rearden, K. (2017). Teachers and students poised to use mobile phones in the classroom. *Computers in the Schools, 34*(3), 125–141. https://doi.org/10.1080/07380569.2017.1347454

Pappano, L. (2012). The Year of the MOOC NY Times. *The New York Times*, 1–7. https://doi.org/10.1038/nmeth1154

Patahuddin, S. M., & Logan, T. (2019). Facebook as a mechanism for informal teacher professional learning in Indonesia. *Teacher Development, 23*(1), 101–120. https://doi.org/10.1080/13664530.2018.1524787

Pickering, J. D., & Swinnerton, B. J. (2017). An anatomy Massive Open Online Course as a continuing professional development tool for healthcare professionals. *Medical Science Educator, 27*(2), 243–252. https://doi.org/10.1007/s40670-017-0383-7

Prestridge, S. (2019). Categorising teachers' use of social media for their professional learning: A self-generating professional learning paradigm. *Computers and Education, 129*, 143–158. https://doi.org/10.1016/j.compedu.2018.11.003

Utami, I. G. A. L. P., Prestridge, S., Saukah, A., & Hamied, F. A. (2019). Continuing professional development and teachers' perceptions and practices - A tenable relationship. *Indonesian Journal of Applied Linguistics, 9*(1), 108–118. https://doi.org/10.17509/ijal.v9i1.12463

Valiandes, S., & Neophytou, L. (2018). Teachers' professional development for differentiated instruction in mixed-ability classrooms: investigating the impact of a development program on teachers' professional learning and on students' achievement. *Teacher Development, 22*(1), 123–138. https://doi.org/10.1080/13664530.2017.1338196

Wambugu, P. W. (2018). Massive open online courses (MOOCs) for professional teacher and teacher educator development: A case of TESSA MOOC in Kenya. *Universal Journal of Educational Research, 6*(6), 1153–1157. https://doi.org/10.13189/ujer.2018.060604

Wenger, E. (1998). Communities of practice: learning, meaning, and identity. Cambridge University Press.

Widodo, A., & Riandi. (2013). Dual-mode teacher professional development: challenges and re-visioning future TPD in Indonesia. *Teacher Development, 17*(3), 380–392. https://doi.org/10.1080/13664530.2013.813757

Widodo, H. P. (2014). Methodological considerations in interview data transcription. International Journal of Innovation in English Language Teaching and Research. *Nova Publisher, 3*(1), 102–107.

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