SECONDARY SCHOOL LANGUAGE TEACHERS' ONLINE LEARNING ENGAGEMENT DURING THE COVID-19 PANDEMIC IN INDONESIA

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ABSTRACT

Aim/Purpose: The purpose of this study was to explore language teachers' online engagement during the Covid-19 pandemic in Indonesia. Four questions guided the inquiry in this study: 1) To what extent did teachers engage in online learning during the Covid-19 pandemic? 2) What challenges did teachers encounter while engaging in online learning during the Covid-19 crisis? 3) How has the suspension of face-to-face classroom meetings changed teachers' practices? and 4) What were their hopes for the future of education in their respective regions?

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Secondary School Language Teachers' Online Learning Engagement During the Pandemic

Background	The sudden learn-from-home mode enacted since 24 March 2020 due to the Covid-19 pandemic has forced all schools to shift into online learning with no or little preparation in terms of internet access, teacher capacity, and student-parent readiness. All in all, the pandemic disruption has shed light on the widening digital divide that has serious implications for the human capital development in Indonesia
Methodology	This case study involved 18 teachers from four regions in Indonesia. Data were collected through an online survey, weekly reflections, and interviews with the teachers. A group interview with five students for each of the 18 teachers was used as triangulation. To probe more deeply into a representative sample for a variety of attributes, the researchers then focused on four teachers for a more in-depth analysis.
Contribution	Knowledge of the impacting factors on online learning engagement can aid in resolving the issues and providing equal opportunities for all students. This study highlighted that teachers in remote regions would need a more top-down intervention from education authorities and offered two recommendations to the government to overcome the widening digital divide as amplified by the current school suspension. This study presents interesting results pertaining to online learning engagement during the Covid-19 pandemic in Indonesia. Insights gained in this study would contribute to the perspective on the challenges and dilemmas faced by educators and students elsewhere while engaging in online learning.
Findings	This study found an interplay of five related factors of online learning processes against five levels of engagement. Those five factors are learners, teachers' prior exposure to online learning, technological knowledge, pedagogical knowledge, and the support system. Teachers in this study were still struggling to enhance the quality of online learning engagement. Nevertheless, given the rising awareness of the inadequacy of their online learning delivery and a renewed sense of commitment, these teachers had high hopes that they would be able to enhance their competence and improve their professional practices.
Recommendations for Practitioners	This study found most teacher participants have, within a short period, enhanced their technological knowledge (TK) regardless of their prior exposure to technology. Teachers can be encouraged to integrate their technological knowledge with pedagogical and content knowledge to develop their technological pedagogical content knowledge (TPACK) by participating in the government program for teacher professional development.
Recommendations for Researchers	This study involves only language teachers; therefore, future researchers are invited to involve non-language teachers so that more conclusive findings can be obtained.
Impact on Society	Knowledge of the impacting factors on online learning engagement can aid in resolving the issues and providing equal opportunities for all students. More importantly, the lessons learned should enlighten educators that technology integration into sound pedagogy would transform current practices into quality learning.
Future Research	Issues related to technology integration in education can still be unearthed especially because the budding insights of online learning will steadily be developing in post-pandemic realm, particularly in Indonesia.

Keywords online learning engagement, urban vs remote regions, language teaching, secondary school teachers, Indonesia

INTRODUCTION

At the beginning of its use, online learning was introduced as a less-preferred alternative to the traditional face-to-face classroom. In Indonesia, online learning was used in a very limited number of schools, and it was used minimally as a platform to provide extra exercises and to administer classroom management such as filing students' grades. Since late 2018, the Indonesian Ministry of Education has been using blended learning for the Teacher Certification program combining online courses and face-to-face workshops. Yet, the use of blended learning has been used by a very limited number of education stakeholders. With a total of 3,265,688 teachers in Indonesia, only 40.000 teachers graduated from the blended-learning program each year (Direktorat Guru dan Tenaga Kependidikan, 2019). Due to the pandemic crisis, starting in August 2020 the certification program has been conducted on a full online learning platform.

The sudden learn-from-home mode enacted since 24 March 2020 due to the Covid-19 pandemic has forced all schools to shift into online learning with no or little preparation in terms of internet access, teacher capacity, and student-parent readiness (Fachriansyah, 2020). During the sheltering in place period, online learning was implemented with varying levels of quality. At best, a few teachers managed to execute online learning by engaging students in different learning management systems (LMS). Such teachers had used LMS as part of their blended learning even before the pandemic started. Furthermore, they are used to designing project-based learning activities. Therefore, when the Covid-19 outbreak compelled schools to close and students to learn from home, they have had only minor adjustment issues. At worst, however, learning simply did not take place for many students. Their teachers lacked resources to engage in online learning, and many students do not have access to internet connections and the necessary gadgets (Lie, 2020). Forced remote learning encounters prevailing obstacles, particularly with uneven access to technology and inadequate online teaching methods; concern is now growing that remote learning could worsen inequalities in Indonesian education (SMERU, 2020).

In between those two points, the majority of teachers in Indonesia are still grappling with the challenges of facilitating learning for their students at home. Many of them resort to distributing weekly paper-based assignments to parents. On 10 April 2020 the Ministry of Education and Culture (MoEC) turned to use of the national television (TVRI) to deliver learning packages. This effort needs to be further expanded, as there are still concerns about availability of all the learning materials across the Kindergarten-Grade 12 curricula. Furthermore, some remote regions in Indonesia still do not even have access to electricity. All in all, the pandemic disruption has shed light on the widening digital divide that has serious implications for the human capital development in Indonesia. A 2018 Indonesian Internet Providers Association (APJII) survey showed that although 64.8 percent of the Indonesian population was connected to the internet, these numbers were centralized in Java ("Online learning may worsen," 2020). Consequently, a survey by the SMERU Research Institute (2020) indicated that, while teachers in major cities in Java had proper resources for online learning, teachers in villages, especially outside Java, had to visit their students' homes to give and collect homework because of a lack of access to the internet and digital devices.

While the few recent studies reported on the survey data of the occurrences of online learning during the pandemic, this study is one of the first in-depth attempts to understand the consequences of a sudden switch to an online platform and the nuances of the educators' struggle to adapt to the crisis and develop their online experiences. In this study, 18 teachers from four regions in Indonesia reflected on their online engagement, challenges, changed practices, and hopes for the future of education in their respective regions. This study aimed to investigate:

1. To what extent did teachers engage in online learning during the Covid-19 pandemic?
2. What challenges did teachers encounter while engaging in online learning during the Covid-19 crisis?
3. How has the suspension of face-to-face classroom meetings changed teachers' practices?
4. What are their hopes for the future of education in their respective regions?

In sum, this study investigates the ways in which the use or shortage of technology may engender challenges and impact changes in teachers' pedagogy during the suspension of traditional classroom processes. This study is thus framed in Figure 1:

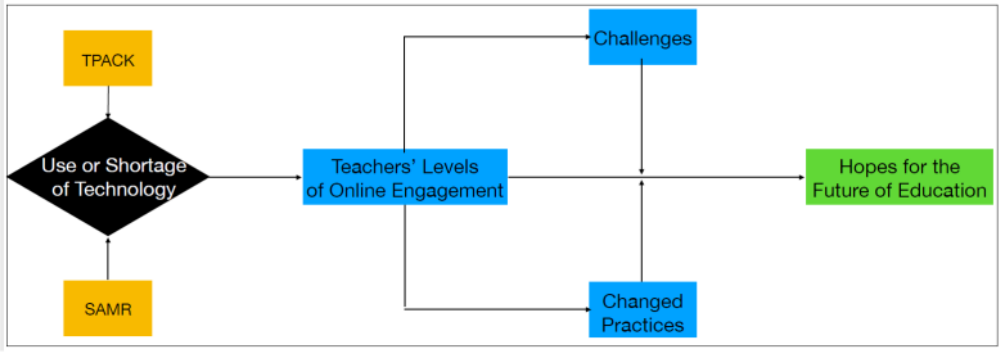

Figure 1. Conceptual Framework of the Study n Teachers' Online Learning Engagement

The use or shortage of technology refers to the access or lack of access to the internet connection and the device among teachers and students. The levels of online engagement calls attention to the extent of distant learning during the school suspension ranging from no learning processes guided by the teacher to various levels of online learning activities facilitated by the teacher. Challenges refer to constraints and issues encountered by teachers and students in regard of the affordances of digital technology resources and capabilities. Changed practices cover adaptation in pedagogical approaches, strategies and methods, classroom management, and assessment in response to the school closure. Hopes for the future of education refer to the teachers' expressed expectations in regard to the education situation in their region as well as their own professional practices.

Given the current constraints in executing the distant, online learning, analyses of these challenges and changed practices were necessary and aimed to yield a mapping of factors in teachers' online learning engagement. Furthermore, beneath these factors, these teachers' hopes for the future of education in their respective regions are worth highlighting for policy-makers to execute reform towards education equity and for practitioners to improve their pedagogy.

LITERATURE REVIEW

Apart from the suspension of schools due to the pandemic, there is an increasing interest in online learning. It brings many benefits to learners by expanding their learning opportunities and helping them develop their sense of autonomy over their own learning (Carrier, 2017). Furthermore, online learning can improve education equity by providing learning opportunities to a wider population at a lower cost.

Despite its promises, some studies conveyed caveats against ineffective use of technology in learning. Lafer (2014) reported that, although scores seem to improve initially, students' achievement may not be sustainable over a longer term. Another study reported gains in math and reading standardized tests but revealed that it is not possible to identify which instructional approach leads to student learning (Bill & Melinda Gates Foundation, 2014). By the same token, Carrier and Nye (2017)

investigated how digital learning changed the teacher's role. While many teachers were inhibited by their fears of technology, teachers do not have to be technology experts in digital learning. "… digital learning needs to be pedagogically led, and thus the key differentiators for success are the identification of digital competences that teachers need and the provision of training to help them acquire these competences" (Carrier & Nye, 2017, p. 209). What is more essential is that teachers should engage with the affordances and course design of the online learning to deliver learning that students can absorb.

The increasing prevalence of technology to support English language learning has led to questions about the role of teachers (Hockly & Dudeney, 2017). The prevailing concern is that software can easily replace the teacher. They compared the apparently diminished role of the teacher in blended learning practices and the social constructivist model of language learning where the teacher can still serve as a guide of learning in the mobile pedagogy. "As digital technologies redefine the role of the teacher, so too will they continue to redefine the role of the learner" (p. 239). Furthermore, they warned of the prevailing digital divide and suggested that mobile devices may work as springboards to support the English language learning in both developed and developing contexts.

Some theoretical models have been offered to help teachers build upon their technology-assisted teaching practices in theoretical underpinnings. Among those models are:

> TPACK, technological pedagogical content knowledge (Mishra & Koehler, 2006),
>
> SAMR, substitution, augmentation, modification, and redefinition (Puentedura, 2014).

TPACK was grounded in a model of pedagogical content knowledge which states that competent teachers should master the intersection of pedagogical and content knowledge (Shulman, 1986). As the use of technology became more prevalent in educational practices, Mishra and Koehler (2006) added technology knowledge to complement pedagogical content knowledge. Teachers should master three domains, namely technological knowledge (TK), pedagogical knowledge (PK), and content knowledge (CK). TK is knowledge of the technology used to enhance educational practices. PK refers to the knowledge of the pedagogical theories, approaches, strategies and methods, psychology of learning, classroom management, and assessment. CK refers to knowledge about the content of the lessons taught. TPACK lies at the intersection of those three knowledge domains. The TPACK framework focuses on the integration of technology with pedagogy and content knowledge which makes teachers' teaching processes more relevant to the demands of the 21st Century and more appealing to the learners.

Ever since its introduction in 2006, the TPACK framework has been widely researched (Voogt et al., 2013) and modified to cater to the different purposes and contexts (Chai et al., 2013). The framework has also been useful for educational researchers and teacher trainers to develop different kinds of measurement to assess teachers' competence in the integration of technology, namely survey or questionnaire, design tasks, and teaching observation (Brantley-Dias & Ertmer, 2013). Nevertheless, with its seven types of TPACK knowledge, critics deemed it to be rather unclear and intricate at the same time. In other words, the framework is seen to attempt to encompass too many things that render it ambiguous, while some of the constructs are too specific for a meaningful application (Graham et al., 2012). There is a need to undertake more research to see how the framework can be used to find, measure, and promote the knowledge base of teachers in terms of technology integration in different discipline (Brantley-Dia, & Ertmer, 2013).

While the TPACK model (Mishra & Koehler, 2006) centers on teacher knowledge related to technology integration, the SAMR (Substitution - Augmentation - Modification - Redefinition) model, which was introduced by Puentedura (2006), emphasizes technocentric outcomes. This model labels the levels of teachers' technology integration and has been popularly used by education practitioners to enhance the educational experience and outcomes for their students through technology use. Specifically, SAMR offers four levels of selecting, using, and evaluating technology in education. According

Puentedura's (2006) presentation materials shared via his website, the SAMR model encourages teachers to develop their uses of technology by moving from substituting technology to redefining their teaching and students' learning. At the *Substitution* level, tasks include the substitution of technology for part of a task that previously did not include technology, such as the substitution of digital handouts in place of hard copies. In this way, the goal or function is unchanged. At the *Augmentation* level, technology is substituted and the function of the task changes in some way, such as designing an English lesson to use a video demonstration of a particular discourse, rather than a textual representation of the discourse. At the *Modification* level, technology integration affords the redesign of a task, such as integrating a computer simulation of specific conversations, with variables that can be changed by students, instead of a digital or print representation of the conversations. Finally, at the *Redefinition* level, technology integration enables the design of new, unanticipated tasks, such as a technology that allows students to construct their own interactive simulations to model phenomena, instead of using an already-created simulation.

Despite its increasing use by practitioners, the SAMR model has been criticized for its emphasis on tasks, technocentric approach, and hierarchical representation (Hamilton et al., 2015). The main problem with an emphasis on tasks and technology use is that teachers often use technology to perpetuate pre-existing teacher-centered pedagogy rather than using technology to shift themselves and their teaching to student-centered learning. Furthermore, the design of the SAMR model as a ladder has led teachers to claim that they have climbed up that ladder instead of understanding and using technology to improve pedagogy (Inserra & Short, 2012; Lehmann & Livingston, 2011; Moroder; 2013, Zuber & Anderson, 2013). Nevertheless, a study comparing SAMR and TPACK pointed out that SAMR seems to promote more student-centered learning than the teacher-centered tendency of the TPACK model (Hilton, 2015).

For the purpose of this study, it was not possible to apply the two models to the teachers who were the subjects of this research, due to the context in which they were found, namely that online teaching was abruptly imposed on them without much preparation and intent. The TPACK framework assumes that teachers would reach their mastery at the intersection of the three domains on condition that adequate competence in each domain has been achieved while teachers in this study were still at the early stage of using online learning technology and adapting their prior pedagogical knowledge into online learning situations. By the same token, the SAMR model presupposes that teachers and students have ready access to technology infrastructure and devices. As Mahdum et al. (2019) revealed in their study of 616 senior high school teachers from four rural regions in Indonesia, teachers had a good level of perception and motivation toward ICT integration in learning activities. Unfortunately, they still encountered several issues related to facilities and technical expertise.

Therefore, in order to find the extent of the teachers' online engagement during the pandemic, it was decided to create a hybrid rubric that integrates the application of TPACK and SAMR in a simple manner, taking into account the prevailing situation in which the teachers found themselves. A self-assessed questionnaire made by Chai et al. (2010, 2013) served as the basis for the rubric development in terms of TPACK. An assessment instrument created by Schimdt et al. (2010) and subsequently modified by Sahin (2011) and Ciptaningrum (2017) also provided valuable input. Since this study focuses more on the teachers' online teaching skills, the rubric builds upon the aspects of TPK and TPACK of the TPACK model. For the SAMR framework, questionnaires from Batiibwe et al. (2017) were adapted to suit the needs of this study. The resulting rubric is shown in detail in the subsequent Methods section.

Since the 2020 pandemic is such an unprecedented phenomenon in recent history, it is not easy to find past studies with similar contexts. Nevertheless, in terms of combining the TPACK and SAMR models, a study investigating the readiness of teacher trainees in Tanzania was done by Kihoza et al. (2016), who revealed the lack of technological infrastructures and readiness to change as some of the challenges faced by the future teachers there. Alivi (2019) provided useful suggestions on how language teachers can adopt technology grounded on the TPACK and SAMR principles. Tunjera and

Chigona (2020) based their studies on the constructivist principles that underlie the combined TPACK and SAMR model, in order to perform a case study on pre-service teachers in South Africa. They found that most teacher trainers have adopted technology in their teaching practice only at the Substitution level. Greater openness to embrace new technology, coupled with clear government policy and online technical supports from school, are needed to improve the situation.

In the Indonesian context, a comparative study of ICT usage between Indonesian and Malaysian teachers using the SAMR model was done by Rizal et al. (2019). They found that the teachers in both countries have integrated technology into their classroom with different media, depending on the teacher training program and the prevailing curriculum. Drajati et al. (2018) administered the TPACK questionnaire (Chai et al., 2013) to 100 in-service and pre-service English teachers in Indonesia and tabulated the kind of technology English teachers usually employ and the challenges when using that technological media. Through narrative inquiry, Taopan et al. (2020) identified the challenges and opportunities in integrating the TPACK framework in the EFL classrooms. They discovered that IT-literacy, internet connection, and inability to generate ideas for meaningful IT-integrated tasks were among the challenges narrated by the teacher being interviewed.

METHODS

Using a qualitative approach, this research is a case study of language teachers' online learning engagement during the Covid-19 pandemic in Indonesia. Initially 18 teachers of English and Indonesian at secondary school level (Year 7-12) in Palembang, Surabaya, Ruteng, and Ambon were contacted. These four regions were chosen to represent a growing provincial capital in the western part of Indonesia: Palembang, with a population of 1.8 million and Human Development Index of 75.44 in 2019, a large city in the most populated and developed island of Java; Surabaya with a population of 3.1 million and HDI of 82.22, a district capital in a rural province; Ruteng with a population of 50,000 and HDI of 64.55, and a provincial capital in the eastern part of Indonesia; Ambon with a population of 500,000 and HDI of 80.81 (Biro Pusat Statistik, 2020). Furthermore, Researchers 1-3 lived in Surabaya and had visited the other three towns to deliver teacher workshops and established collaboration links with local university lecturers (Researchers 4-6). The 18 teachers were among workshop participants who demonstrated interest in the study. They were also selected based on their years of service and subject taught. The inquiry process is represented in Figure 2.

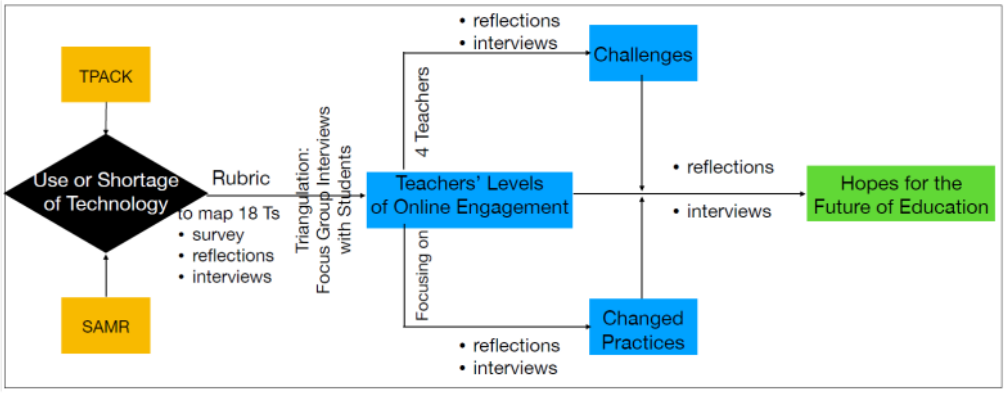

Figure 2. Inquiry Process

Initial contact with the teachers was established by the local researchers in each town and subsequent communications regarding the research was carried out through a WhatsApp group containing all the researchers, one research assistant, and the 18 teachers involved. After an introductory briefing on Zoom video-teleconferencing application, all 18 teachers signed an informed consent form and filled in the online survey. WhatsApp was used because it is widely used in Indonesia; 84% of Indonesian

internet users use WhatsApp (Muller, 2020). Furthermore, it is believed to offer a variety of user-friendly features and consume relatively lower bandwidth.

Table 1. Rubric to Map the Extent of Teachers' Online Engagement Based on TPACK and SAMR

Extent of Online Engagement	Characteristics of the Online Learning based on TPACK		Characteristics of the Online Learning based on SAMR	
	Teachers are able to…	Students are able to…	Level	Teachers/students use…
None/Almost None	Online learning does not happen or happens very minimally due to several factors which will be explained in a later section, *Challenges in Online Learning*, and particularly in Table 4.			
Rudimentary	teach lessons that combine technology and teaching approach (TPACK-2)	find information on their own with technology (TPK-2)	SUBSTITUTION	PowerPoint to teach, social media for communication, students use MS Word for assignment
Basic	use strategy to combine content, technology, and teaching approach (TPACK-3)	use technology to plan and monitor their learning (TPK-3)	AUGMENTATION	Search engine for content, editorial tools for spelling/vocabulary, basic video-conferencing tools, students use Google docs for assignments
Intermediate	select technology to use to enhance teaching (TPACK-4)	use technology to construct different form of knowledge representation (TPK-4)	MODIFICATION	E-learning platform, advanced video-conferencing tools, curate online resources for teaching, , students use Google Doc to comment and give feedback, use graphic design tools for posters
Advanced	show leadership to help others in the use of technology (TPACK-5)	collaborate with each other using technology (TPK-5)	REDEFINITION	Video/audio-editing software for teaching, use e-learning platform for group discussion and assessment, webinar with native speakers, students record video and upload for feedback

Responses from the survey were used as preliminary data to describe the context and challenges of online learning for the 18 teachers in this study. The challenges they faced during the imposed learn-from-home mode were further revealed through teachers' interviews. Interview data also unearthed

how the suspension of face-to-face classroom meetings has changed teachers' practices and perspectives and the lessons learned out of the crisis and their hopes for the future of education in their respective regions. To answer the first research question related to the extent of teachers' online learning engagement, the researchers developed the rubric based on the hybrid of TPACK and SAMR model as shown in Table 1.

To answer the next three research questions, the researchers employed Teachers' Weekly Reflections and In-Depth Interviews of Teachers. In addition, Focus Group Interviews with their students were used as triangulation.

The survey which was administered online on 10 April 2020 was adapted from Teaching and Learning International Survey (TALIS) by the Organization for Economic Co-operation and Development (OECD) and modified into the Indonesian context.

The instrument of weekly reflection was not pilot tested. However, each of the researchers contributed in reading the question formulated to check for ambiguity. Furthermore, in the WhatsApp Group, teacher participants were given the chance to ask for clarification and during the process, no issue in the reflection task was reported. Teachers wrote their reflections to respond to the prompts posted weekly in an application from 25 April 2020 through 30 May 2020 (there was a one-week Idul Fitri break in May).

To gather teacher reflections, the researchers developed a simple 7.7 MB mobile application which can be downloaded for free at Google Playstore. This bilingual app was also designed to provide a platform to develop a virtual community of practice for teachers from different regions. The name of the mobile application is *Pejuang Literasi* which literally means Literacy Warriors. The screenshots in Figure 3 provide some pages of the application.

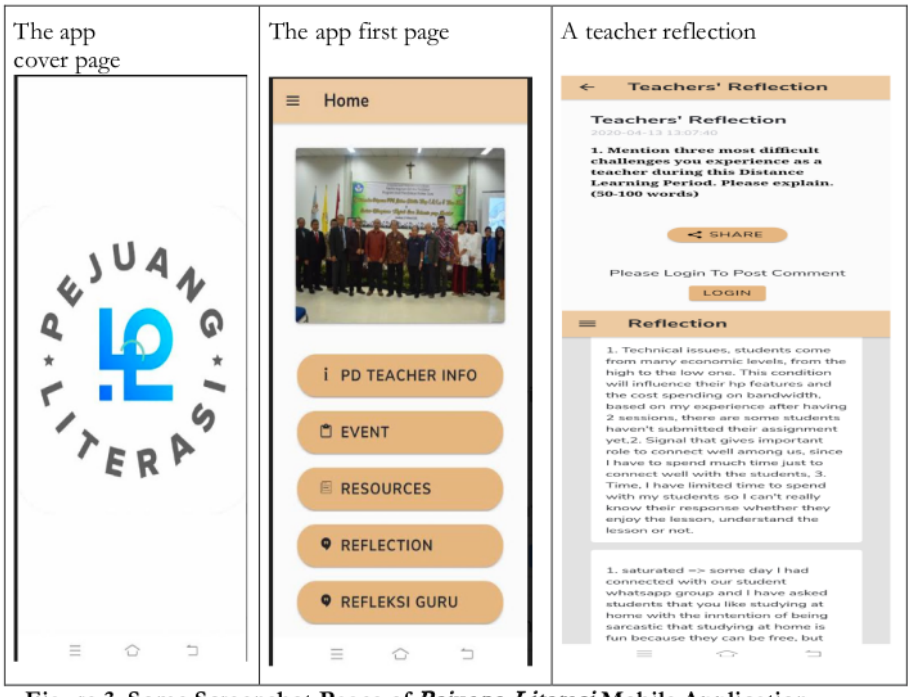

Figure 3. Some Screenshot Pages of *Pejuang Literasi* Mobile Application

The research team developed this mobile application specifically instead of using pre-existing applications or social media so that the features could be customized to meet the specific needs of the group

members. Other than the Teachers' Reflection, the application also provides information on teacher professional development, relevant events, and links to resources. The research team also hopes that this application may be further used beyond this study to benefit teachers and help shape a virtual community of teachers.

The interviews of the teacher participants and the students were semi-structured conducted and recorded in either Zoom or WhatsApp video-audio call.

Group interviews with their students were used as triangulation. Each teacher participant chose five students who had easy access to the device and internet. Teachers obtained parental consent and each gave five students' contacts. The researchers interviewed these students in one group per teacher via audio/video-conferencing tools in the presence of their non-participating parents; the teacher was not present during the interview. Recordings of all interviews were on file and kept confidential.

Survey questions, reflection prompts, and interview questions are attached in the Appendix.

As this study was intended to portray a case study of online learning happening during an abrupt pandemic in a developing country, the researchers initially noted patterns and themes from the data collected in the form of both the collected reflections and the transcribed teacher interviews. First the written data were reviewed to explore the recurring themes in their reflection. The reflection data were initially coded for four themes as they were used to address four research questions. Four coded clusters were obtained for 'engagement', 'challenge', 'changed practice', and 'hopes'. The teacher interview transcripts were coded similarly for four themes as they were used to address all four research questions. At least two coders from the research team worked on the same data set. When a disagreement happened, a third coder was called upon to resolve it. When the three coders were unable to reach accord, the fourth one interceded.

The data were also referred back to note the pattern and reanalyzed for further coding to locate relevant and supporting quotes for each of the respective research questions. The back-and-forth interaction among the authors occurred during data analysis. Miles et al. (2014, p.158) argue it as *"reanalysis* to ensure a more robust set of findings and/or to build on the first cycle of interim findings for future research."

The authors obtained further supporting data or confirmation from the participants by WhatsApp contact and also from the students of the respective teachers by reading the transcribed student interviews. Transcripts of teachers' interviews and reflections were clustered around coded themes and analyzed in relation to the conceptual framework to address the four research questions.

FINDINGS AND DISCUSSION

TEACHERS' ONLINE LEARNING ENGAGEMENT

Responses from the survey and teacher interviews as well as the first two weekly reflections were used to explore the extent of teachers' online learning engagement during the pandemic. Teachers' responses and reflections were triangulated with results of Focus Group Interviews with students.

Almost all 18 teachers responded affirmatively to the first two survey questions indicating that their formal college education and certification program included the use of ICT (information and communication technology) for teaching. The inclusion of ICT in their pre-service education also led to affirmative responses to the third survey question on their preparedness in using ICT in their teaching. In brief, the survey data show that the majority of teachers in this study felt they were prepared to use ICT in their teaching. This optimistic perception was put to the test during the school closure.

Based on the data gathered and the rubric shown in Table 1, this study categorizes the extent of online engagement into the different levels and maps the 18 language teachers in their regions as presented in Table 2.

Table 2. Participants by Their Levels of Online Engagement, Regions, and Subject

	Cities/Towns				
Levels of Online Engagement	**Palembang**	**Surabaya**	**Ruteng**	**Ambon**	**Total**
Teachers of Indonesian					
None/Almost None	Pretty-Ind				1
Rudimentary				Andy-Ind Ana-Ind	2
Basic	Penny-Ind	Sofia-Ind			2
Intermediate		Sinta-Ind			1
Advanced					0
Total					6
Teachers of English					
None/Almost None		Sonny-Eng	Rosa-Eng Rina-Eng	Aaron-Eng	4
Rudimentary			Rachel-Eng		1
Basic				Alisa-Eng Aria-Eng	2
Intermediate	Paula-Eng Pedro-Eng	Sarah-Eng Salma-Eng		Aurora-Eng	5
Advanced					
Total					12
Total Teachers of Indonesian and English					18

Notes for the teachers' pseudonyms:
1. The initial denotes city/town. P: Palembang, S: Surabaya, R: Ruteng, A: Ambon.
2. Ind: Teacher of Indonesian; Eng: Teacher of English

The levels of online learning engagement are described as follows:

1. None: no or some attempts at online learning engagement including letting students simply study on their own at home with the teachers sending assignments through WhatsApp.
2. Rudimentary: Chat lines (WhatsApp and Line) were used to connect with students. Due to the nature of the tool, learning was asynchronous. Occasionally the teacher used video-conferencing tool to engage students in synchronous sessions.
3. Basic: Teacher used some form of learning management system (LMS) in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in synchronous sessions. LMS mostly used were Edmodo, Schoology, Google Classroom, and Microsoft Teams.
4. Intermediate: Teacher used LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in online sessions. Furthermore, the teacher also used other learning materials from a variety of sources such as online quizzes, YouTube and podcasts.
5. Advanced: Teacher used LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in online sessions. In addition, teacher used learning materials from other sources as well as created their own digital materials.

It is interesting that WhatsApp became particularly handy during the school suspension as this channel of communication enabled teachers to reach out to their students efficiently. In this study, WhatsApp was widely used across the four levels of online learning engagement. Even within the level of "No or some attempt made at online learning engagement," one teacher in this study expressed:

> *Somehow, I do not employ the recent applications such as zoom or google classroom or alike. I use two simplest ways: WhatsApp and Line. I sent the PPTs material through WAG [WhatsApp Group] telling the students to study the material. Later, I texted the group to tell them to have a Line group chat. Unfortunately, only few students responded. (Aaron-Eng, Reflection Week 2)*

Those teachers in the higher levels also used WhatsApp to complement their preferred LMS as a channel to communicate with their students, e.g., to send the video-conferencing invitations, to resume contact when the LMS or vid-con broke down, to give assignments, and to engage in conferences. This finding is in line with Hershkovitz et al.'s study (2019) that found WhatsApp's unique role in promoting good student-teacher relationship and positive classroom environment.

Another study revealed that university students had a special preference for WhatsApp owing to the immediacy and practicality for coordination and communication with the teacher (Robles et al., 2019). Similarly, our study found that students also liked to use WhatsApp as expressed by students of Sarah-Eng:

> *I'm happy when Ms. [Sarah-Eng] told us we can ask her anytime through WhatsApp (WA) when I have a question. The Zoom connection is not always clear. So when I find difficulty, I consult her through WA. (Student of Sarah-Eng. Focus Group Interview. 9 May 2020)*

Challenges Of Online Learning

The survey reveals that before the pandemic all teachers in this study had received some previous training in the use of ICT for teaching and had let their students use ICT for class projects to some extent. Yet, the in-depth interviews with each teacher and the group interviews with the students disclosed that teachers were struggling with the challenges of delivering learning assignments to their students at home.

To probe more deeply into the challenges, changed practices, and hopes, the researchers selected and focused on four of the 18 teachers based on the region, prior exposure to the use of ICT in teaching, and their levels of online learning engagement (see Table 3).

Table 3. Profiles of Four Teacher Participants

Level of Online Learning Engagement	Teachers	Region	Prior Exposure
None or some attempts made	**Rosa-Eng** a senior English teacher in a private school with an undergraduate degree.	Ruteng	Never had any training on the use of ICT in teaching. Used WhatsApp Groups to communicate with students and fellow teachers. When the research team briefed the teachers about the research procedures on Zoom, she was not present. However, she managed to write her reflections and be interviewed through WhatsApp audio call.
Rudimentary	**Ana-Ind** a novice Bahasa Indonesia teacher in a private school with an undergraduate degree. No teacher certification yet.	Ambon	No prior training and experience in using ICT in teaching. Only learned about Zoom video conferencing tool because of this research, and the teacher attempted to use it in her teaching.
Basic	**Penny-Ind** a senior Indonesian teacher in a private school who completed the older version, offline Teacher Certification Program	Palembang	learned Google Classroom and Schoology through PD sessions. Used Google Classroom and Zoom during the pandemic.
Intermediate	**Salma-Eng** a mid-career English teacher in a state school who completed a Teacher Certification Program on a hybrid learning platform in 2019 and then her Master's program shortly afterwards.	Surabaya	had used Schoology and Office 365 before the pandemic. The certification program included 12 modules of online sessions and 256 hours of face-to-face meetings.
Advanced	(No case found in this study)		

Transcripts of teachers' interviews and reflections about the challenges they encountered during the pandemic were clustered around coded themes. These challenges were then grouped into five factors that affect the extent of each teacher's online engagement: the learners, the teacher's prior exposure to online learning, the teacher's technological knowledge, the teacher's pedagogical knowledge, and support system.

The learners' factor may be a real impediment to the delivery of online learning. Four teachers in this study attributed the absence of online learning during the pandemic mostly to the learners' lack of internet and connecting device access. They said that in their context, online learning was not possible at all. Most students did not have access to the internet and/or the adequate device. Some could not even access television. In Palembang, for instance, the execution of online learning was challenging. At a private senior high school, one teacher of English delivered synchronous online learning to several classes simultaneously. The big number of students impeded the flow of communication. The teacher attempted to overcome this issue by opening forum discussions on Edmodo and video-conferencing on Zoom. However, the unstable internet connection and parents' tight financial situation hindered the smooth implementation of this mode of learning.

The second factor was teachers' prior exposure to online learning. Teachers who had never engaged in any form of online learning before the sudden instruction of school suspension felt hopeless and had difficulty to deliver any online learning to their students. On the last day before the school closure, they gave their students take-home assignments. Occasionally, they attempted to contact the few students who had access to smart phones. At the end of the semester, they knew that most of their students did not do their assignments. Teacher Rosa-Eng said:

> *PJJ di sekolahku tidak dapat terlaksana sebagaimana mestinya. Ada upaya sekolah untuk melaksanakan pembelajaran daring melalui aplikasi E-learning…. Sayangnya aplikasi ini belum dapat digunakan secara optimal karena sebagian guru maupun siswa belum mengenal aplikasi ini. Baru muncul setelah guru dan siswa dirumahkan sebagai bentuk tanggapan sekolah atas situasi darurat ini.*
>
> *[Translation: Online learning in my school is not happening as it should. The school attempted to deliver online learning through E-learning application…. Unfortunately, this application is not functioning optimally because some teachers and students have not mastered it. It was just introduced after we had been instructed to deliver Learning from Home as my school's response towards this emergency situation]. (Rosa-Eng. Interview. 18 May 2020)*

The next two teacher factors are technological knowledge and pedagogical knowledge. Teachers' technological knowledge relates with their prior exposure to online learning. When they had never used any online learning before, their technological knowledge tended to be less adequate. Yet, some teachers who claimed they had never before engaged in any online learning managed to deliver some forms of online learning during the school disruption. These teachers went out of their way to acquire their technological knowledge and use it because they felt compelled to deliver learning to their students during the dire situation.

Teacher Andy-Ind, who was grouped under 'Rudimentary' in the mapping (Table 2), has taught Indonesian for only two years in a private junior high school in Ambon. She said:

> *The competency area that I find lacking in me is in the use of information and communication technology. With this distant learning, I initially didn't know about the use of ICT like Google Hangout, Zoom, etc. Consequently, I have to find out how to use it through YouTube and by consulting my colleagues. This is very new in this distant learning for me. (Andy-Ind in the Reflection Week 4)*

The last factor, the support system, includes any backing from schools, Communities of Practice, and local education authorities. A few teachers received a little extra money from their schools to cover for the expense of internet services. The local education authority recommended a commercial learning platform for teachers in Surabaya and the two schools in Ruteng set up an E-learning platform.

This support system, however, was not a determining factor in the level of online learning engagement. In spite of the support, one teacher in Surabaya did not execute the online learning optimally and mentioned the learners' lack of access as the cause. On the other hand, not all teachers who delivered online learning received any support from their school.

The five related factors of online learning processes can be mapped into an interplay with the five categories of engagement: no learning process, rudimentary, basic, intermediate, and advanced, resulting in the framework presented in Table 4.

Table 4. Framework of Interplay Between Online Learning Factors and Levels of Engagement

	No Learning Process	Rudimentary	Basic	Intermediate	Advanced
The Learners	Learners do not have access to the internet and the digital device. Some cannot even access television because they live in areas where there is no access to electricity	About half of the learners have internet access, some with unstable connection. The other half do not have access to the internet and the digital device.	Most students have internet access but have never engaged in any online learning before.	All students have internet access and have engaged in some form of blended learning.	All students have internet access and have engaged in some form of blended learning. They have high expectations of their teachers' technological knowledge.
Teachers' Prior Exposure to Online Learning	Teacher has never engaged in any form of online learning or blended learning before.	Teacher was somewhat acquainted with online learning or blended learning before.	Teacher has engaged in some form of online learning or blended learning before.	Teacher is very familiar with some form of online learning or blended learning before.	Teacher has engaged frequently in some form of online learning or blended learning before.

	No Learning Process	Rudimentary	Basic	Intermediate	Advanced
Teachers' Technological Knowledge	None	Chat lines (WhatsApp and Line) are used to connect with students. Due to the nature of the tool, learning is asynchronous. Occasionally uses video-conferencing tool to engage students in synchronous sessions.	Teacher uses LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in synchronous sessions	Teacher uses LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in online sessions. Teacher also uses online resources	Teacher uses LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in online sessions. Teacher creates online teaching resources
Teachers' Pedagogical Practices	No established correlation between teachers' Pedagogical Knowledge and Online Engage-ment			Teacher has the competence to write an online instructional design. Teacher selects and curates learning materials from a variety of sources	Teacher has the competence to write an online instructional design and to make him/herself as a learning resource. Teacher selects and curates learning materials from a variety of sources. Teacher also creates and uses learning materials in online sessions with their students.

	No Learning Process	Rudimentary	Basic	Intermediate	Advanced
Support System for Teachers (from School, Community of Practice, the Education Authority)	None	None	Online learning is one of the listed topics in professional development sessions but no hands-on trainings and mentoring.	Online learning is a recurring professional development topic with hands-on trainings and technical support. School provides subsidy for internet connection cost.	LMS is provided by the system along with a database of learning resources and technical support. Internet connection cost is fully funded. There is a virtual sharing platform within the Community of Practice.

The results of our data analysis as summarized in Table 4 show that teacher participants in this study have not reached the Modification and Redefinition levels in the SAMR Model (Puentedura, 2006). In other words, the use of technology has not transformed education practices. Online learning practices documented in this study can be categorized into five levels: none, rudimentary, basic, intermediate, and advanced.

The five levels of online learning engagement relate to five factors. The first one is the learners factor while the last one is support system for teachers. The other three factors relate to teachers: prior exposure, technological knowledge, and pedagogical knowledge. All five factors interrelate and reinforce one another either positively or negatively. The learners' factor, for instance, hindered the delivery of online learning for teachers who were lacking in the three teacher factors as they attributed the absence of online learning to students' lack of access. On the other hand, lack of access among the majority of students did not prevent other teachers from delivering online learning although only about half of their students attended their online sessions. By the same token, support systems did not motivate the uncommitted teachers but were appreciated by those who were committed to online learning engagement. Within the existing constraints, the majority of teachers in this study persevered and even gained a renewed sense of commitment to enhancing their capacity and improving their practices while keeping their hopes for more support for their students and themselves.

This study did not find any correlation between teachers' Pedagogical Knowledge (PK) and online engagement in the lower three levels of online learning engagement. The five teachers who did not deliver their online learning during this pandemic may have been very engaging in traditional classroom interactions. Unfortunately, their capacity was hamstrung by their lack of Technological Knowledge or their fear of technology.

Changed Practices and Perspectives

All the teachers in this study except those five teachers who had no or little online engagement reported changes in professional practice style. The researchers could claim that changes in practices

and perspectives were a direct result of engagement with online learning. Within the TPACK framework (Mishra & Koehler, 2006), this study reveals that in a short period, most teacher participants enhanced their technological knowledge (TK) regardless of their prior exposure to technology while their pedagogical knowledge (PK) and content knowledge (CK) presumably remained unchanged at the time of this study. Given the rising awareness of the inadequacy of their online learning delivery, should the school disruption be extended and proper support be provided, these teachers may in due time also relearn their knowledge of the pedagogical approaches, strategies and methods, classroom management, and assessment and readapt their PK in attempts to integrate technology with pedagogy and content knowledge which makes teachers' teaching process more relevant and appealing to the learners.

Table 5 maps 18 teacher participants by their online engagement and changed practice and later the researchers focus the discussion on the four bold teacher pseudonyms:

Table 5. Teachers' Contexts, Online Engagement, and Changed Practices

Type	Context	Online Engagement	Changed Practices
0 No process Pretty-Ind Sonny-Eng **Rosa-Eng** Rina-Eng Aaron-Eng	Online learning was not possible at all. Most students did not have access to the internet. Some could not even access television	none or hardly any.	—
1 Rudimentary Andy-Ind **Ana-Ind** Rachel-Eng	Many students had internet access. Teacher had never engaged in any form of online learning or blended learning before the pandemic started.	Teacher used virtual channel of communication such as WhatsApp and Line to connect with their students. Due to the nature of the tool, learning was asynchronous. Teacher occasionally used videoconferencing tool to engage students in synchronous sessions.	Took more time for preparation and consultation by students after class hours. Renewed sense of commitment to learn the technology and pedagogy so they could teach better.
2 Basic **Penny-Ind** Sofia-Ind Alisa-Eng Aria-Eng	Most students had internet access. Teacher had engaged in some form of online learning or blended learning before the pandemic started.	Teacher used LMS in addition to virtual channel of communication such as WhatsApp and Line as well as videoconferencing tool to engage students in synchronous sessions.	Teachers were excited to learn new technology and were not afraid to try them out in their online classes. Teachers learnt more in terms of IT learning especially ZOOM and expected more students could join the online learning via ZOOM. Teachers learnt to be more patient as students did not have high motivation. Teachers expected to get more training for IT.

Type	Context	Online Engagement	Changed Practices
3 Intermediate Paula.Eng Pedro-Eng Sinta-Ind Sarah-Eng **Salma-Eng** Aurora-Eng	All or almost all students had internet access. Teacher had engaged in some form of online learning or blended learning before the pandemic started. Teacher had the competence to write an online instructional design.	Teacher used LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in online sessions. Teacher selected and curated learning materials from a variety of sources.	Delivering online learning through LMS such as Edmodo and Schoology that they had learned during the pre-service education and in-service certification program. In addition, they learned and used Zoom for video/audio conferencing sessions. Online learning seemed harder because they could not make sure students understand the lesson. They resorted to giving more assignments. Some had become 24/7 teachers, accommodating lesson time to their students' availability and/or answering their questions even at night.
4 Advanced None in this study	All students had internet access. Teacher had engaged in some form of online learning or blended learning before the pandemic started. Teacher had the competence to write an online instructional design and to make him/herself as a learning resource.	Teacher used LMS in addition to virtual channel of communication such as WhatsApp and Line as well as video-conferencing tool to engage students in online sessions. Teacher selected and curated learning materials from a variety of sources. Teacher also created and used learning materials in online sessions with their students.	Teacher became the source of information in terms of technology integration for both the older teachers in her school, as well as parents who were more diligent in monitoring their children's online learning progress.

The four teachers whom the researchers focused on in this study expressed some discomfort in their online learning delivery. Penny-Ind, a junior high school teacher of Indonesian was concerned that students became lazier when studying online. Most teachers doubted the effectiveness of online learning and thought that students' absorption may have just been below 50%. Teacher Salma-Eng, in an interview she granted on 8 May 2020, said that she found difficulties in monitoring the students; whether they really read all the materials given, and whether or not they were following the lessons online. In her opinion, many students did not think that this was learning from home, but holiday with some school subjects. Since parents were also involved in their children's learning, sometimes there was doubt whether the assignments were done by the students themselves or with help from the parents.

Teachers' concerns about the effectiveness of online learning were mirrored by students. In traditional classroom practices, teachers predominantly guide students or explain directions face-to-face,

and students get direct and clear elaboration of any doubts. The following script obtained from the group interview on 15 May 2020 with the students of Penny-Ind shall clarify more:

> *Beda ya bu, kalau misalnya kita bertemu secara langsung dan Zoom. Zoom itu kan ada waktunya ya bu ya? Kita ingin mm… cara menjelaskannya pun itu pasti memerlukan waktu juga, memperhatikan waktu kalau lewat Zoom. Tapi, secara di kelas, itu bisa lebih menjabar, lebih bebas. Seperti biasanya, Penny-Ind memberi sebuah cerita, gitu bu.*
>
> *[Translation: It is different, Ma'am, if we meet by ZOOM it is limited by time. More time is needed to explain more. If we are in class, Penny-Ind can be more patient and can be more expressive. Usually Penny-Ind tells a story to illustrate more].*

Another group interview on 2 May 2020 with the students of Ana-Ind might substantiate this particular finding. A student stated openly: *Kalau PJJ 50%, kalau di kelas 90* [Translation: In online class, my lesson mastery is 50% while in class, I can reach 90%] indicating that learners got difficulty in absorbing online learning.

Online learning comes with benefits and drawbacks. Among its perceived merits are that teachers do not need to deal with students' disruptive behaviors as they do not appear on the screen. Yet, if they are given the choice, teachers in our study would choose to be back in their classroom. Salma-Eng, a junior high school teacher of English in Surabaya expressed her concern during an interview:

> *When using Zoom, I feel weird. When I teach and ask question, feel like talking to the wall. I don't like dominating the talk. They can ask thru Zoom. the second zoom meeting is getting better. I prepared the materials better. Still, I felt more effective during regular class meetings. I wish to teach them face to face. Even though they make me stressed.*
>
> *During online learning, I actually feel less stressed. A different stress now, although I deliver my lessons in a synchronous mode, my work spans 24 hours because students ask me through WhatsApp. I feel that I have to respond to them. I have spent more time in front of my laptop and my phone is in my hands. (Interview through Zoom. 5 May 2020)*

13

The lack of interaction during the video-conferencing session coincided with the teachers' sense of losing control of their students as they had no way of knowing whether their students were on task or not. In the video conferences, many students opted to turn off their video due to either privacy reason or the unstable internet connection. Teachers attempted to compensate for this loss of control by giving more assignments. Students complained about the overwhelming number of assignments during the school suspension. When asked about this issue, Sarah-Eng admitted giving a total of 16 assignments while normally she gave 8-9 assignments in a semester. She defended this action by explaining that she needed to take students' daily scores. In a normal classroom setting, some of the scores were normally taken through in-class learning processes.

On the brighter side, what the teachers were losing during the suspension awakened a renewed sense of commitment as expressed by Rosa-Eng:

> *The way I use my method. First, we usually teach students by giving materials. We do lot of things by face to face. It is very difficult to use the online method. I learn a lot of things. In my reflection, as a teacher, I should give the lessons. To teach them appropriately,*
>
> *Before the pandemic, I sometimes came late to school, forgot things important to students (lesson plan), skipped material because I taught too many classes. When it becomes normal again, I will teach my students the best way I can. (Interview through WhatsApp Audio-Call. 13 May 2020)*

In terms of their technology use in education based on the SAMR Model (Puentedura, 2006), teacher participants in this study may have reached only the Substitution level as they used the various technology tools as a substitute of their classroom sessions. A few of these teachers seemed to be striving to make some functional improvement at the Augmentation level.

HOPES FOR THE FUTURE OF EDUCATION

In regard of the pandemic, the saying that "we are in the same storm, but not in the same boat" also applies among our participants. Not all learners are created equal and neither do they have equal access to technology. And neither do the teachers have equal resources to overcome the consequences of the pandemic. As Hockly and Dudeney (2017) indicated, the digital divide "rests not on lack of access to technology alone but corresponds to wider socioeconomic factors" (p. 244).

Nonetheless, the four teachers expressed high hopes regardless of the level they were in. Rosa-Eng who admitted failing to deliver any online learning expressed her concerns that Ruteng (located in a province with a lower human development index) would be even more left behind. She reflected:

> *Melihat kenyataan ini saya sangat berharap agar pemerintah membuat suatu kebijakan yang dapat menolong masyarakat terutama guru, siswa dan orangtua agar dapat mengatasi ketidaknyamanan ini melalui: 1) Pembelajaran yang disesuaikan dengan kondisi kami. 2) Memberikan waktu khusus bila pandemi berakhir untuk dapat menuntaskan materi ajar. 3) Memfasilitasi guru dan siswa untuk dapat menjalankan proses pembelajaran.*
>
> *[Translation: Considering this reality, I very much hope the government can make a policy to help our society particularly teachers, students, and parents to overcome this discomfort through: 1) Learning adjusted to our conditions. 2) Allocating extra time when the pandemic is over to complete the learning materials. 3) Facilitating teachers and students to engage in learning]. (Rosa-Eng. Reflection Week 2)*

Expressing hopes for her own growth in enhancing and integrating her pedagogical and technological knowledge through self-study and PD sessions facilitated by the local teacher organization, an Indonesian teacher in Palembang who was delivering online learning at the Basic level also aspired to contribute to help others:

> *Saya harap mengintegrasikan HOTS dalam PJJ dengan belajar dari tutorial youtube dan mengikuti pelatihan-pelatihan IGI Sumsel…. Saya mempunyai rencana untuk berkontribusi kepada teman-teman guru terutama guru sesama pelajaran Bahasa Indonesia.*
>
> *[Translation: I hope to integrate HOTS in my online learning after I learn from YouTube tutorials and trainings on online learning facilitated by teacher organizations in South Sumatera. I also plan to contribute to my fellow teachers, especially teachers of Indonesian through PD sessions]. (Penny-Ind, Reflection Week 5)*

On a similar note, Salma-Eng who was at the Intermediate Level of online learning engagement wrote specific plans to enhance her pedagogical competence while engaging in distance learning:

> *1) I have a plan to improve my professional development by continuing education if it still possible, doing research in education, learning to write articles and national and international journals. 2) I have a plan to contribute to the MGMP [subject teacher council) of the city's English teacher while I am still an administrator by running MGMP programs. And if I am no longer an administrator, I still want to contribute by making modules, HOTS integrated learning tools both online and offline and PTK [classroom action research] for the example of English teachers in Surabaya. To develop the ability of junior high school teachers in the city of Surabaya, it is necessary to develop modules and learning media for the teacher's own work based on the experience of each teacher. (Salma-Eng Reflection Week 5)*

Salma-Eng was an English teacher in Surabaya. She completed her certification program in 2019 and then her Masters degree in January 2020. She implied continuing into her doctorate. Surabaya and Palembang are relatively more developed than the two other towns in Eastern Indonesia. Like Penny-Ind, this English teacher who was actively involved in the local teacher professional organization, conveyed specific plans to enhance her pedagogical competences and contribute to other teachers through the community of practice in her city. While Penny-Ind and Salma-Eng were able to connect their aspiration with concrete plans to enhance their professional development and the local

community of practice, their counterpart in Ruteng Rosa-Eng expressed hopes that required the government intervention to help her region catch up with the development.

No teacher in this study has indicated practices at the advanced level. Online learning practices documented in this study happened with little preparation. Amazingly, within a short period, most teacher participants have enhanced their technological knowledge (TK) regardless of their prior exposure to technology. The progression into the advanced level would further require that teachers integrate their technological knowledge with pedagogical and content knowledge to develop their technological pedagogical content knowledge (TPACK). Given the rising awareness of the inadequacy of their online learning delivery and a renewed sense of commitment, these teachers had high hopes that they would be able to enhance their competence and improve their professional practices. Those in Palembang and Surabaya have already had the support system of professional development programs facilitated by local teacher professional organizations and the local education authorities. On the other hand, teachers in remote regions would need a more top-down intervention from education authorities. To respond to this need, the Indonesian Ministry of Education and Culture just launched a Mobilizers-Teachers Program which aims to develop teachers as drivers for change in the education ecosystem in their own regions through online PD sessions (Direktorat Guru dan Tenaga Kependidikan, 2020)

As digital learning technologies become more widespread and learners have more choices for language learning outside the classrooms through various software and applications, teacher PD programs need to take into account of and assimilate the trends so as to be relevant to teachers' needs and learners' expectations (Hockly & Dudeney, 2017).

At the implementation level, any professional development initiatives should heed the unique cultural and contextual dynamics of each region. In their comparative study of seven education systems, Harris and Jones (2018) found that teachers who worked in more hierarchical structures such as Indonesia were less inclined to take risks and depart from rules and regulations. Hence, any ideas for innovative pedagogy derived from professional development should be supported with structural reform.

One key issue in the quality disparity in Indonesian education is the distribution of qualified teachers (Harjanto et al., 2018). Despite the government effort to build road infrastructure, it would take more years for development particularly outside Java to catch up. In spite of the open application and selection, most teachers are reluctant to be assigned in underdeveloped regions and so those regions tend to recruit teachers graduating from the local teacher education institutes which still indicate quality issues. A study by Lie et al. (2019) reported that the onset of teachers' education background affected the professional turmoil of surviving the day-to-day tasks in school. Those who had graduated from some higher institutions that did not actually meet the minimal standards of education felt less prepared to carry out their professional practices. Moreover, supervision and development of teachers as professionals in such regions are still lagging (for more detail see Kurniawati et al., 2018; Suryahadi & Sambodho, 2013; Toyamah et al., 2010). Hence, the vicious cycle prevails. It would be less expensive and more feasible to install technology infrastructure than to find committed teachers to be placed in remote areas.

CONCLUSION AND RECOMMENDATIONS

At this time of pandemic, using technology to facilitate learning during isolation is a pre-requisite. Despite all the proposed models on the predicted pandemic duration, no authorities in Indonesia or internationally have expressed any certainty when the virus can be contained. The Ministry of Education and Culture decided to extend the online learning in the new academic year starting in mid-July until December 2020. Thus, schooling practices need to be reimagined and reshaped differently to overcome the widening digital divide among regions in the country. Knowledge of the impacting factors on online learning engagement can aid in resolving the issues and providing equal opportunities

for all students. More importantly, the lessons learned should enlighten educators that technology integration into sound pedagogy would transform current practices into quality learning.

For countries like Indonesia, the pandemic has provided rare momentum to initiate strategic change and opened doors to jumpstarting technology access for students in impoverished schools particularly in remote regions. This study offers two recommendations. First, it is imperative that the Indonesian government ensure the provision of infrastructure comprising devices for the students and for teachers to interact with each other over a digital content and connectivity network which also allows students and teachers to connect to the wider world. Second, it also entails continuing improvement of teachers' capacity and changed professional practice. As a tool, technology can easily be used to perpetuate pre-existing teacher-centered pedagogy if teachers do not integrate their technological knowledge with pedagogical and content knowledge. Therefore, teacher professional development should include student-centered pedagogy by using technology to shift their roles into learning designer and facilitator.

When the Covid-19 crisis is over, hopefully the enforced leapfrog into technology integration can be sustained and extended to sustainable strategies for equitable quality education for all Indonesian students. The shortage of competent teachers in remote regions can be overcome with community-based education utilizing technology to deliver distance learning and engaging trained local tutors. This crisis may also be an opportunity to gather the home learning best practices and develop a home-school learning partnership model.

As this study was intended to portray a case study of online learning happening during an abrupt pandemic in a developing country, the study may have fallen short of a robust procedure of data collection and analysis as Miles et al. (2014) suggested. Interviews conducted over video-conferencing tools were certainly not able to obtain as rich data as through school visits and face-to-face meetings, which had been planned but cancelled due to all flights suspension. Nevertheless, despite the limitations in the data collection and analysis as described, the researchers hoped to have highlighted the impending issues on the widening digital divide amplified by the pandemic and to prompt the government's intervention actions for the provision and affordance of technology infrastructure and community-based initiatives for teacher professional development.

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APPENDIX

1) SURVEY

Nine items related to the implementation of online learning engagement and adapted from TALIS by OECD to answer the first research question covered:

1. Was the use of ICT (information and communication technology) for teaching included in your formal college education?
2. If applicable, was the use of ICT for teaching included in your certification program?
3. To what extent did you feel prepared for the use of ICT for teaching by the education that you obtain through your college education and certification program?
4. When you began work at this school, were online courses/seminars part of your induction?
5. When you began work at this school, were online activities (e.g. virtual communities) part of your induction?
6. During the last 12 months, were any online courses/seminars included in your professional development activities?
7. During the last 12 months, did you participate in any online courses/seminars as part of your professional development?
8. In regard of ICT skills for teaching, please indicate the extent to which you currently need professional development.
9. Thinking about your teaching in the school, how often did you let students use ICT for project or class work before the pandemic?

2) REFLECTION PROMPTS

1	Mention three most difficult challenges you experience as a teacher during this online learning period. Please explain.
2	Choose one of the points that applies to you (50-150 words) A. If learning simply does not take place in your school during this period, please explain the reasons and the conditions at your town. How do you feel honestly about this absence of learning? What are your expectations? B. If you are engaged in online learning with your students, do you think the learning is optimal? How do you conduct your online teaching currently? Do you use any learning platform? Please describe
3	What areas of competence do you feel still lacking in yourself? (Choose any of the following and explain in one paragraph for each option) a. Content of English b. Pedagogy c. Teaching Method d. Use of ICT in teaching e. Online teaching management f. Monitoring and assessing student learning g. Administrative Work h. others (please mention)
4	Can you still integrate HOTS during your online teaching? What are the challenges and constraints? Please explain, for example in terms of lesson planning, questioning, test construction etc.
5	I. What support do you receive that enables you to integrate HOTS in your online teaching? (Choose any of the following and explain in paragraphs) a. Dinas Pendidikan* b. external trainers c. the principal d. fellow teachers in my school e. fellow teachers from my previous school/PPG* f. fellow teachers from MGMP* g. none h. others (please mention) * Dinas Pendidikan = Local Education Authority MGMP = Subject Teachers Council PPG = Teacher Professional Education Program II. Your Professional Development a. Do you have any plan to enhance your own professional development? How? b. Do you have any plan to contribute to your teachers' community in your area (e.g., school, MGMP etc.) to enable other teachers develop their competence? How?

3) SEMI-STRUCTURED INTERVIEW QUESTIONS FOR TEACHERS

For teachers who do the online learning during this pandemic:
(you can do it in any language the teacher is most comfortable with):

1. What platform(s) do you use for your online learning?
2. Do you write a lesson plan? Do you follow it?
3. What methods do you use?
4. Do you conclude each learning session with assessment and assignment? How do you deliver it?
5. Do you provide feedback to your students? How?
6. How do your students respond to online learning?
7. Are your students able to use your online learning platform? What's the percentage of their attendance and participation? How do you monitor it?
8. What are the advantages and disadvantages of online learning to you? To your students?
9. How are your teaching practices different from before?
10. How effective is your online learning? How do you assess it?
11. When the pandemic is over and we're back to classroom teaching, does this online learning provide new insights into your classroom teaching? Anything that you want to change as a teacher?
12. Please describe your contributions to the community of practice before, during and after the school suspension.
13. Any lessons learned out of this school suspension situation?
14. Do you have hopes or expectations?

For teachers who are not able to do the online learning during this pandemic:
(you can do it in any language the teacher is most comfortable with):

1. What platforms/LMS have you ever used?
2. Do you have any contacts with your students during this pandemic? How do you contact them? (WA, phone call, text, etc.)?
3. How about with other teachers and/or principal in your school?
4. Why is online learning not possible in your case? Please describe your situation and the students. (ask more specifics: how many classes they teach, how many students in one class, how many students have gadgets and internet access)
5. How do you feel about that?
6. Is there any role or effort from others (school, MGMP, students' families) to support you during this pandemic? In what ways?
7. How do you feel about this situation? (Please explore further and dig deeper for this question). Any regret? Disappointment? Why?
8. What are your hopes for the future of education in your region?
9. When the pandemic is over and we're back to classroom teaching, are you going to change as a teacher? In what ways?
10. Does the situation (that online learning is not happening in your context) provide new insights into your classroom teaching? Anything that you want to change there?
11. Any lessons learned out of this school suspension situation?
15. Do you have hopes or expectations?

4) GROUP INTERVIEW QUESTIONS FOR STUDENTS

1. What platform(s) did your teacher use for online learning?
2. What methods did he/she use?
3. Did you get assignment and assessment?
4. Did you get feedback? How?
5. Were you able to use online learning platform?
6. What were the advantages and disadvantages of online learning to you?
7. How effective was your online learning? How did you assess it?
8. Did you learn more when it was online learning or offline in class?
9. How well did your teacher do in teaching online?
10. Do you prefer online learning to the usual class-meetings? Explain.

BIOGRAPHIES

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