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EFL Preservice Teachers' Technology Integration in Managing and Teaching Speaking Skills During Emergency Remote Teaching

Integración de la tecnología por parte de docentes de inglés en formación en la gestión y enseñanza de habilidades orales durante la enseñanza remota de emergencia

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This study aimed at investigating the EFL preservice teachers' technology integration in managing and teaching speaking skills online during emergency remote teaching in Indonesia. This study employed a single case study approach by implementing an explanatory sequential mixed method design. The findings showed that even though the preservice teachers used various technology tools, they frequently implemented WhatsApp, YouTube, and Google Forms for classroom management and teaching speaking purposes. This study offers some implications to advance English language teacher education programs to prepare the future EFL preservice teachers in the post-pandemic era.

Keywords: COVID-19, English as a foreign language, preservice teachers, technology integration, teaching speaking online

En este estudio se investigó la integración de la tecnología por parte de futuros docentes de inglés como lengua extranjera en el manejo y enseñanza de las habilidades del habla en línea durante la enseñanza remota de emergencia en Indonesia. Se empleó un enfoque de estudio de caso único mediante la implementación de un diseño de método mixto secuencial explicativo. Los hallazgos mostraron que aunque los docentes en formación utilizaban diversas herramientas tecnológicas, con frecuencia implementaban WhatsApp, YouTube y Google Forms para la gestión del aula y la enseñanza de la conversación en inglés. Este estudio ofrece algunas implicaciones para el avance de los programas de formación de docentes de inglés en la era pospandémica.

Palabras clave: COVID-19, docentes en formación, enseñanza oral en línea, inglés como lengua extranjera, integración de la tecnología

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Introduction

COVID-19 has significantly altered education worldwide (Nisiforou et al., 2021), including English language teaching (Yi & Jang, 2020). Hundreds of countries discontinued school instruction because of this virus's rapid spread (Basilaia & Kvavadze, 2020; Viner et al., 2020). Thus, teachers had no choice but to provide emergency remote teaching (ERT) in online modes (Chang, 2021; Evans et al., 2020; Ferdiansyah et al., 2020; Moorhouse & Beaumont, 2020) as an alternative to prevent COVID-19 from spreading to pupils (Gerber & Leong, 2021; Murphy, 2020).

However, this quick shift to ERT is novel for educators, particularly for preservice teachers who may lack online teaching experiences but must still undertake online practice teaching. Although most of the current preservice teachers are considered digital natives very acquainted with technology (Park & Son, 2020; Thompson, 2013), implementing technology to manage online courses and teach English online during ERT might not be as simple as people assume. Moreover, previous studies show that English as a foreign language (EFL) preservice teachers inconsistently integrate technology in their teaching (Batane & Ngwako, 2017; Baz et al., 2018, 2019; Park & Son, 2020).

Moreover, in English language learning, speaking is considered the most difficult one to learn among the four language skills (Zhang, 2009), and it undoubtedly requires certain considerations to be taught. During the quick shift to ERT, technology integration certainly becomes one of such considerations. But, unfortunately, little is known regarding how EFL preservice teachers would integrate technology in managing and teaching speaking skills during ERT, especially pertaining to online instruction. Additionally, very little is known about which tools they intend to use and how they plan to use them. Considering these gaps, this study aimed at investigating a group of Indonesian preservice teachers' technology integration in managing and teaching speaking skills online during ERT. The research question that guided the study was: How did a group of EFL preservice teachers integrate technology in managing and teaching speaking skills online during ERT due to the COVID-19 pandemic?

Literature Review

Teaching Speaking Skills Using Technology

Effective communication necessitates the ability to do both monologues and dialogues (Burns & Joyce, 1997). Therefore, speaking is an essential part of language development (Naibaho, 2019) because it is both a necessity and a means of communicating ideas. Additionally, having good oral communication proficiency is viewed as an achievement in language learning (Piechurska-Kuciel, 2015) since people tend to judge the learners who are new to a foreign language on their ability to communicate using that language (McDonough et al., 2013). Thus, mastering English speaking skills is always one of the focuses of language learners (Kusuma, 2020).

Recent technological advancements have had a profound impact on teaching speaking skills. For instance, the personal computer, internet-accessible devices, and computer programs have provided foreign language learners with opportunities to obtain more authentic materials and learning experiences (Bowles et al., 2015; Golonka et al., 2014; Kern, 2006). With all features and benefits, technology supports English language learning (Bowles et al., 2015; Chun et al., 2016; Golonka et al., 2014).

A growing number of studies have also revealed that technology disruptions—a current term representing technological innovations in education using technology tools that are not initially designed for teaching and learning purposes—are being implemented to facilitate speaking activities (Amiryousefi, 2019; Cepik & Yastibas, 2013; H.-C. Hsu, 2016; Huang & Hung, 2010; Hung & Huang, 2015a, 2015b; Sun & Yang, 2015). For example, Watkins and Wilkins (2011) utilized YouTube to improve

students' learning exposure to languages, linguistic knowledge, and cultures. Several studies have also adapted YouTube for teaching and classroom management purposes. For instance, YouTube has been adapted as a means of submitting speaking videos where the students upload their videos on YouTube instead of sending them via email to the teacher (Cepik & Yastibas, 2013; Sun & Yang, 2015). Additionally, Lin and Hwang (2018) implemented the commenting feature on Facebook for students' discussions. Furthermore, Amiryousefi (2019) and Ferdiansyah et al. (2020) adapted social network services—such as Telegram and WhatsApp—and used them to support students' learning by posting instructions, text, audio, and videos. The above studies have shown that the implementation of technology tools has facilitated technology disruptions in English language teaching and could exert better speaking activities and performances. Thus, technology disruptions improve the technology-enhanced language learning paradigm.

EFL Preservice Teachers' Practice Teaching Using Technology

Increasing the quality of teachers could improve the quality of schools and boost the students' education (Opfer & Pedder, 2011). Teacher education programs (TEPs) are therefore necessary to generate well-trained teachers. TEPs are responsible for providing teachers with knowledge and teaching experiences. To date, many TEPs around the globe have provided their preservice teachers with technological pedagogical content knowledge (TPACK; Yüksel & Kavanoz, 2011), a framework that helps teachers to understand how to teach a subject matter using technology (Koehler & Mishra, 2005, 2009; Mishra & Koehler, 2006). According to Koehler and Mishra (2005, 2009), TPACK consists of seven domains: technology knowledge, content knowledge, pedagogy knowledge, technological pedagogical knowledge, technological content knowledge, pedagogical content knowledge, and TPACK. This framework is often inserted into the curriculum through technology courses, content-specific courses, pedagogy courses, and teaching experiences (Hofer & Grandgenett, 2012). Related to technology courses, Kusuma (2021) reported that Indonesian English language TEPs provided technology and educational technology courses to their EFL preservice teachers. Moreover, the instructors also implemented various technology tools to give examples and meaningful learning experiences to their EFL preservice teachers. Technology courses, content-specific courses, and pedagogy courses are expected to provide the preservice teachers with technology knowledge, content knowledge, and pedagogy knowledge. These three knowledge domains are necessary to create balanced interplays (Zyad, 2016) to yield other knowledge, such as technological pedagogical knowledge, technological content knowledge, pedagogical content knowledge, and TPACK. Thus, preservice teachers will have the knowledge and skills to manage and teach English using technology. Recent studies have demonstrated that TPACK has affected how much someone prefers using technology and their willingness to integrate new technology into their teaching (Habibi et al., 2020; L. Hsu, 2016; Incik & Akay, 2017; Joo et al., 2018; Yildiz-Durak, 2019). Thus, the knowledge of using technology gained by preservice teachers from TEPs that introduce the TPACK framework is expected to influence their technology integration in their teaching.

While having a solid understanding is necessary for becoming a skilled teacher, EFL preservice teachers also require field experience through teaching practicum or practice teaching. The teaching practicum is a means for learning how to teach, and it offers preservice teachers the chance to strengthen their identities, both as individuals and as teachers, by using what they have learned from TEPs (Altalhab et al., 2021; Safari, 2020). Furthermore, it makes the preservice teachers feel more prepared before their induction phase, which is the phase of their first year as teachers (Haim et al., 2020).

Interestingly, regarding technology integration during practice teaching, some recent studies have found

that preservice teachers in their practice teaching tend not to utilize technology in their induction teaching phase—even if they were well acquainted with it—mainly because of unfamiliarity with the tools used in schools and the lack of supporting infrastructures. For instance, Merç (2015) recruited 86 EFL preservice teachers in Turkey to explore their use of technology in their practice teaching and found that schools lacked the necessary technology tools to enable these preservice teachers to use technology in their practice. Merç also found that these preservice teachers did not implement technology because they were unfamiliar with the tools implemented by the schools. Similarly, Baz et al. (2019) conducted a study with 22 Turkish EFL preservice teachers, following their training on the Voicethread program. The authors found that the participants had no intention of implementing this platform due to the lack of facilities available in most schools.

Conversely, other studies have found the opposite, that is, a great interest on the part of EFL preservice teachers in using technology during their induction phase. For instance, Baz et al. (2018) reported that 36 Turkish EFL preservice teachers incorporated numerous technology tools—such as Instagram, Skype, Twitter, and PowerPoint—to enhance their teaching further. In addition, Park and Son's (2020) longitudinal study with six EFL preservice teachers in Hong Kong showed that they implemented several types of software and web resources—such as digital audio editors, recording programs, online quiz applications, learning management systems, and video sharing websites. Furthermore, Akayoglu et al. (2020) conducted a study and found that 113 Turkish preservice teachers implemented technology tools, such as social media tools, learning management tools, quiz maker platforms, material design applications, presentation tools, and online storage applications. Finally, Fathi and Ebadi (2020) researched how six Iranian EFL preservice teachers used numerous technology tools to teach English after training. Unfortunately, the above studies did not report on how those tools were implemented when managing and teaching speaking skills, especially in fully online learning modes.

Emergency Remote Teaching During the COVID-19 Pandemic

Several recent studies have documented how rapid ERT was undertaken during this pandemic period. For instance, in a study by Evans et al. (2020), Google Meet and Google Classroom were extensively used. Evans et al., in implementing Google Meet, would start the class using poems, vocabulary, or images. Then, they asked the students to talk about the language used in the text. The researchers also instructed the students to create tasks and submitted them to Google Classroom. This study showed that Google Meet and Google Classroom could be used as technology tools for conducting ERT.

Another example is Moorhouse and Beaumont (2020), who developed an online English course for an English language teacher in Hong Kong. This development was initiated by the disappointment toward the synchronous mode provided by a school where this teacher taught during ERT. Moorhouse and Beaumont designed live lessons via Zoom for this teacher. Additionally, the teacher also implemented various innovative technology tools throughout the live classes, including Mentimeter and Kahoot for quizzes and games. Thus, combining Zoom and other platforms seemed to help this English language teacher to conduct online teaching even though it remains unclear whether this combination is effective or not. Apparently, using Zoom as a means to perform synchronous modes is very popular in Hong Kong. Chang (2021) also described his teaching experience during this pandemic time using Zoom and Moodle to teach English literature to his students, where he would explain the materials using Zoom and often ended the course with a discussion on Moodle.

In addition, using online literature circles and WhatsApp to give instruction, Ferdiansyah et al. (2020) had their pupils follow their lead. During ERT, the pupils

were instructed to read several chapters of books and discuss via the voice message feature in WhatsApp. Then, the students wrote summaries of what they had read and could use digital writing assistants, online dictionaries, or other platforms to support writing their summaries. Thus, Ferdiansyah et al. have shown the possible implementation of WhatsApp for education, conversation, and group work.

The above studies have shed some light on the preservice teachers' technology integration in teaching English and how ERT was conducted. However, the studies reviewed above have shown several important gaps, especially during the sudden online teaching due to the COVID-19 pandemic. The above studies did not investigate how preservice teachers used ERT to manage and teach speaking skills during this pandemic. The information of which technology tools and how they are implemented for ERT will add to the literature of teaching English using technology.

Method

Design, Setting, and Context of Research

To have a complete understanding of the participants' varied experiences, I employed a case study approach through detailed data collection (Creswell & Poth, 2018; Merriam & Tisdell, 2016; Stake, 1995). Particularly, I employed a single case study approach to explore a unique case (Stake, 1995). Therefore, even though the participants were from different universities, the single case study allows them to come from various groups (see Schoch, 2019; Yin, 2018) as long as one case is investigated. Furthermore, the case investigated in this study was the Indonesian EFL preservice teachers' technology integration, and it was bounded in teaching speaking skills online during ERT due to the COVID-19 pandemic.

Moreover, a single case study allows the implementation of mixed methods (Yin, 2018). Therefore, to get profound data to explain the case, this study employed an explanatory sequential mixed methods design that started by collecting quantitative data and used them to plan the qualitative phase (Creswell & Creswell, 2018). In this study, I collected the quantitative data through a survey, and I also used semi-structured interviews based on the data gathered from the survey.

This study was conducted in Indonesia since I am an Indonesian lecturer and a faculty member at a state education university in Indonesia, enabling easy access to contact the research sites. I then contacted potential education universities with English language TEPs and preservice teachers who had finished conducting online practice teaching. In the end, out of six universities contacted, only three education universities (two state and one private) gave access to conduct this study with their preservice teachers. These three universities have long histories in Indonesian education and are very well known for their quality of English language TEPs. Furthermore, these three universities offered four-year programs with the TPACK framework in which the curriculum provided the EFL preservice teachers with content, pedagogy, and technology knowledge through relevant courses.

Participants

Prior to contacting the participants, I sought IRB approval. Once the proposal was approved, I invited approximately 400 Indonesian EFL preservice teachers from three education universities in Indonesia through an email that described the present study, including the risks, benefits of joining this study, and the link to the survey. A month later, 301 Indonesian EFL preservice teachers (203 women and 98 men) completed the questionnaires with a 75.25% return rate. To support the data gathered from the survey, I also recruited 18 male ($n = 9$) and female ($n = 9$) preservice teachers who had completed the questionnaires for the interviews using the purposive sampling technique (Ary et al., 2019; Mertens, 2015). These Indonesian EFL preservice teachers had conducted online practice teaching for 3–4 months in 2020. For confidentiality purposes, the

participants in this study are labelled with numbers from 1 to 18. On average, the 18 participants who were interviewed were 21 years old and were assigned to teach in junior ($n = 10$) and senior high schools ($n = 8$).

Methods of Data Collection and Instrument

In this study, I employed data/source triangulation (Farmer et al., 2006; Farquhar et al., 2020) to ensure the validity of the research results (Farmer et al., 2006; Stake, 1995) through collecting data from various sources, such as questionnaires, online interviews with EFL preservice teachers, researchers' notes, and lesson plans from the 18 participants. Furthermore, I developed a questionnaire that used Likert scales ranging from 1–5 (*never*, *rarely*, *sometimes*, *often*, and *very often*), which measured offline and online technology tools in teaching speaking skills (see Appendix). In developing the questionnaire, I sent the questionnaires to second language acquisition experts for evaluation and a small group try-out. Then, I conducted content and face validity through employing an inter-rater agreement model proposed by Gregory (2015). Finally, I employed empirical validity using the Pearson product moment analysis technique where all items were above 0.01 and 0.05, and all items were therefore valid. However, only the data about online technology tools are presented in this study. To complete the data gathered from the survey, I also developed an interview protocol that contained four questions (see Appendix). The interviews were conducted in the Indonesian language to reduce the anxiety of the participants. Then, the interviews were transcribed into the Indonesian language and were sent back to the participants to ensure the trustworthiness of the data before proceeding to the coding analysis.

Data Analysis Methods

Regarding data analysis methods, I employed descriptive statistics to identify the usage of online technology tools implemented by 301 Indonesian EFL preservice teachers in teaching speaking skills during the COVID-19 pandemic. Then, it was continued by analyzing the interview results of 18 participants. The transcriptions were carefully analyzed to generate potential codes. The data were coded using the in-vivo technique. Then, all codes were analyzed using the thematic analysis technique to identify themes based on theoretical or analytic interest in the area (Braun & Clarke, 2006). I also implemented the bracketing method by writing memos during interviews and analysis to support the interview analysis (Tufford & Newman, 2012). The memos were used to examine and reflect upon the researcher's engagement with the data. The analysis generated two themes, six sub-themes, and 13 codes, and 109 excerpts were found. The codes created were about how the participants implemented WhatsApp, YouTube, and Google Forms to manage and teach speaking skills. Therefore, the themes and sub-themes that emerged from the analysis centered around managing and teaching speaking skills using those platforms.

Findings

Kinds of Online Technology Tools Implemented in Teaching Speaking Skills During the COVID-19 Pandemic

The first analysis conducted was on the data gathered from the questionnaires completed by 301 participants. The descriptive statistic results in Table 1 show that the most frequent online technology employed by most participants in teaching speaking skills during ERT was WhatsApp ($M = 4.32$, $Mdn = 5$, mode = 5, $SD = 1.01$), followed by YouTube ($M = 3.16$, $Mdn = 3$, mode = 3, $SD = 1.15$), and by Google Forms ($M = 3.03$, $Mdn = 3$, mode = 2, $SD = 1.36$). Moreover, the analysis on the lesson plans submitted by the 18 participants also showed extensive usage of WhatsApp, YouTube, and Google Forms to support online teaching, including teaching speaking skills during their online practice teaching.

Table 1. Kinds of Online Technology Used in Teaching Speaking Skills During Emergency Remote Teaching (*N* = 301)

Items	Variability			
	M	***Mdn***	***Mode***	***SD***
Social network services/instant messaging				
A. WhatsApp	4.32	5	5	1.01
B. Telegram	1.61	1	1	1.04
C. Line	1.42	1	1	0.95
D. SMS	1.24	1	1	0.62
E. Facebook messenger	1.33	1	1	0.83
F. Email	2.44	2	1	1.34
G. Other	1.38	1	1	0.86
Web 2.0 platforms				
A. Facebook	1.45	1	1	0.90
B. Instagram	1.63	1	1	1.04
C. YouTube	3.16	3	3	1.15
D. Twitter	1.25	1	1	0.72
E. TikTok	1.30	1	1	0.81
F. Ted-Ed	1.19	1	1	0.56
G. Blogs	1.41	1	1	0.78
H. Flipgrid	1.15	1	1	0.50
I. Duolingo	1.27	1	1	0.64
J. Other	1.25	1	1	0.69
Online quiz maker platforms				
A. Google Forms	3.03	3	2	1.36
B. Quizizz	1.65	1	1	1.02
C. Kahoot	1.57	1	1	1
D. Other	1.19	1	1	0.62

Purposes of Implementing Online Technology Tools in Managing and Teaching Speaking Skills

The statistical results showed that the participants frequently implemented WhatsApp, YouTube, and Google Forms, and, during the interviews, they talked about how they implemented those tools to teach speaking skills. The profound analysis from interview results about the purposes of implementing online technology tools in teaching speaking skills yielded two themes, six sub-themes, 13 codes, and 109 excerpts (see Table 2).

Table 2. The Purposes of Implementing Online Technology Tools in Managing and Teaching Speaking Skills

Themes	Sub-themes	Codes	Sample excerpts
Managing speaking courses	Implementing WhatsApp for managing speaking courses	For checking students' attendance	"I often used WhatsApp to confirm my students' presence." (Participant 10)
		For speaking material sharing purposes	"When the online teaching started, I would inform the students via WhatsApp group and sent the materials to the group." (Participant 6)
		For speaking task submission purposes	"I used WhatsApp for sending materials and task submission only." (Participant 4)
	Implementing YouTube for managing speaking courses	For speaking material sharing purposes	"I employed YouTube to give additional materials other than the ones I created." (Participant 17)
		For speaking task submission purposes	"My students used YouTube as a means to upload their speaking videos where they spoke in English." (Participant 15)
	Implementing Google Forms for managing speaking courses	For checking students' attendance	"When I taught, I used Google Form to check my students' presence." (Participant 18)
		For speaking task submission purposes	"The students uploaded the link of their video projects on Google Form. It also became the proof that they did the assignment." (Participant 2)
Teaching speaking skills	Implementing WhatsApp for teaching speaking courses	For speaking practices purposes	"When it came to the discussion, my students and I discussed using the voice message feature in WhatsApp. For example, if I am not mistaken, the topic was asking opinion, and I asked the students to record their voices asking and giving opinions using the voice message feature." (Participant 5)
		For explaining speaking materials	"During the practice teaching, I used WhatsApp to explain the speaking materials to my students." (Participant 2)
	Implementing YouTube for teaching speaking courses	For explaining speaking materials	"I used YouTube videos to explain to my students about some oral communication skills visually." (Participant 6)
		For testing students' speaking performance	"I used YouTube once to ask my students to create YouTube videos talking about the procedures of making something. After that, I watched them and gave them scores." (Participant 1)
	Implementing Google Forms for teaching speaking courses	For testing students' linguistic features	"Besides sending materials and having the discussion, I also asked the students to complete the quizzes on Google Forms." (Participant 5)
		For receiving students' feedback	"I employed this Google Form to get feedback from my students. It was like reflections. I asked my students to give feedback about the topics or materials that they still could not understand." (Participant 1)

Implementing WhatsApp for Managing Speaking Courses

Even though instructions were delivered online during ERT, the preservice teachers still regularly checked their students' attendance. The interviews revealed that three participants frequently utilized WhatsApp to check whether students were following the online instructions. For example, Participant 1 said, "I employed WhatsApp to know who read and did not read my messages. There is a feature on WhatsApp that allows me to see who has or has not read the messages."

The only way to deliver the speaking materials during this ERT was via internet technology. The interviews revealed that the participants used the learning management system rarely, especially for material sharing purposes. However, the participants confessed that they implemented WhatsApp as an alternative since the students often used this tool. Thus, 14 preservice teachers admitted to routinely using WhatsApp to deliver speaking materials, such as language expressions, dialogs or monologs, and speaking videos. For instance, Participant 7 said, "I employed WhatsApp in my practice teaching to send information, including the speaking materials and assignments. Before the class started, I sent the materials to the WhatsApp group."

Interestingly, five interviewees admitted to using WhatsApp for speaking assignment submissions. The students submitted their written dialogs or monologs, voice messages, speaking clips, or the links of the speaking clips if they uploaded them on YouTube. For instance, Participant 18 said, "during my online practice teaching, I asked my students to use WhatsApp to submit their speaking assignments. I also used this platform to send speaking prompts or instructions about the speaking assignments."

Implementing YouTube for Managing Speaking Courses

The interviewees stated that, during the COVID-19 pandemic, they frequently adapted YouTube as a means of sharing speaking materials. For instance, Participant 3 said, "to give further explanation and speaking examples to my students, I shared YouTube videos and asked them to watch."

Apart from providing examples for the students, the participants also used YouTube for speaking task submissions. Four participants indicated that they frequently requested students to create their own speaking clips and upload them on YouTube because they were already familiar with the process. For instance, Participant 10 instructed students to create and publish speaking clips on YouTube:

> If I gave speaking assignments to my students, I would ask them to record their performance using smartphones and upload the clips on YouTube because it was easy to access if they uploaded them on YouTube rather than using Google Drive.

Implementing Google Forms for Managing Speaking Courses

Google Forms made it possible for five participants to use the service to track their students' attendance. Either their teacher supervisor requested they utilize it, or they had this idea and implemented it independently. For instance, Participant 3 said, "I mostly employed Google Forms to record my students' attendance. Besides, my teaching supervisor also suggested using this platform."

Participant 2 admitted that she used Google Forms for speaking assignment submission, which is unusual. She said, "the students uploaded the link of their video projects on Google Forms. It also became the proof that they did the assignment."

Implementing WhatsApp for Teaching Speaking Courses

As most participants stated, developing speaking skills requires practice in areas such as pronunciation and conversation. Even while they admitted that designing

online speaking exercises was frustrating, 10 participants indicated that they used WhatsApp, particularly the voice message feature, to facilitate pronunciation and dialog practices. These participants often asked their students to practice their pronunciation by sending their voices to their WhatsApp group. For instance, Participant 15 said, "my students used WhatsApp for speaking practices. So, they would say what picture A said, and their peers would say what picture B said. That was how I used WhatsApp for speaking practice."

The interview results revealed that 14 participants used WhatsApp to explain the speaking materials. They would send the materials and explain them through chats or voice messages. For instance, Participant 13 said, "I sent the speaking materials to my students. I used the voice messages to explain those materials as well as the examples of how to say some language expressions in English."

Implementing YouTube for Teaching Speaking Skills

The interview results revealed that 12 participants used YouTube videos to explain speaking skills to their students. For example, they would record themselves talking about language expressions and upload them on YouTube to be watched by their students. They would also send some relevant videos and use voice messages to explain them. For instance, Participant 10 said:

> If I taught new speaking topics, I would give some example videos and explain to my students using voice messages. I sometimes recorded my explanations and uploaded them on YouTube. So, my students could watch my recordings at their convenient time.

Interestingly, four participants mentioned that they adapted YouTube for assessing their students' speaking performance. The participants would ask their students to record themselves talking in English in either monologs or dialogs with their partners. Then, the participants would watch and score the students' performances. For example, Participant 2 said,

> I remember when I taught a topic about giving opinions, I asked my students to create a project with their peers. They had to give their opinions in English, record their speeches, and upload them on YouTube. Then, I asked them to share the links on WhatsApp groups. So, other students and I could watch the videos.

Implementing Google Forms for Teaching Speaking Skills

The preservice teachers recognized that, to increase students' speaking abilities, they needed to provide them with opportunities to practice linguistic features. As a result, almost all participants reported that they used Google Forms to generate quizzes or mid-term assessments to aid in practicing linguistic features such as grammar, vocabulary, and language expressions used in the monologs or dialogs learned by the students. For example, Participant 4 said, "when I did my online practice teaching after I gave materials in the first week, I would give quizzes to the students in the second week. So, I would give quizzes every two weeks using Google Forms."

The preservice teachers claimed that Google Forms' various features allowed them to collect data during the interviews. For example, two participants utilized this platform to receive feedback from the students about their speaking skills development:

> I used Google Forms to know my students' speaking development. I received feedback from my students about their strengths and weaknesses in oral communication. Also, I asked them to answer some reflective questions to identify what they needed to improve related to a speaking topic. (Participant 1)

Discussion

This study aimed at investigating the Indonesian EFL preservice teachers' technology integration in teaching speaking skills online during ERT due to the COVID-19 pandemic. The statistical results in this

study showed that the preservice teachers (N = 301) implemented various online technology tools during online teaching. The findings therefore echoed previous studies (Akayoglu et al., 2020; Baz et al., 2018; Fathi & Ebadi, 2020; Park & Son, 2020) that reported preservice teachers implemented various online technology tools. On the other hand, these findings also contradicted the previous studies (Baz et al., 2019; Merç, 2015) that reported that preservice teachers did not implement technology because they did not know how to use some tools for teaching purposes. Furthermore, the findings in this study even indicated that these Indonesian EFL preservice teachers knew how to utilize online technology tools effectively to support their online instruction, especially when teaching speaking skills.

Nonetheless, the study's quantitative results suggested that Indonesian EFL preservice teachers did not frequently use all online technology tools during ERT, preferring WhatsApp, YouTube, and Google Forms when teaching speaking courses. Nevertheless, the interview results indicated that they could design engaging and appropriate speaking activities through implementing those platforms. As TPACK is pivotal to creating proper instruction with technology (Koehler & Mishra, 2009), the preservice teachers' knowledge of teaching using technology seemed to guide them to select which tools could facilitate appropriate speaking activities for the students during ERT. Moreover, it is also surmised that the selection of those tools was also inspired by the preservice teachers' considerations to use the tools that could work best with their students. For example, interviews with those who had installed a learning management system showed that, despite having implemented a platform like this, the interviewees preferred to utilize WhatsApp since most students were using it and frequently checking their notifications. As technology integration into the classroom relies on teacher beliefs in this regard (Prestridge, 2012), it is thus presumed that, despite the participants in this study used a variety of online teaching and learning tools, they only used the ones that they perceived beneficial and that could work best for teaching speaking skills.

According to the Indonesian EFL preservice teachers' interviews, they had frequently implemented online platforms—particularly WhatsApp, YouTube, and Google Forms—for classroom management and teaching purposes. In addition, the interviews showed that those platforms could be adapted to facilitate exciting classroom management as well as teaching and learning activities. In addition, when merely using WhatsApp, YouTube, and Google Forms, the preservice teachers could facilitate both synchronous and asynchronous speaking activities. These findings indicate that technological disruptions, which were being used in the classroom before the pandemic—as demonstrated in earlier studies (Amiryousefi, 2019; Cepik & Yastibas, 2013; H.-C. Hsu, 2016; Lin & Hwang, 2018; Sun & Yang, 2015)—, continue to be present during pandemic times. As a result, technological disruptions are projected to continue, and more new technology tools are likely to be adapted if they possess qualities that could aid education.

The findings in this study offer three implications to advance English language TEPs, especially to prepare the future EFL preservice teachers who might migrate from conducting practice teaching in fully online forms to blended learning in the post-COVID scenario. First, as also claimed by several previous studies (Habibi et al., 2020; L. Hsu, 2016; Incik & Akay, 2017; Joo et al., 2018; Yildiz-Durak, 2019), the findings showed that preservice teachers, especially those who study in English language TEPs that provide the TPACK framework, will likely implement online technology tools, including doing technology disruptions, in their teaching practices. Therefore, the English language TEPs must continue to provide TPACK for preservice teachers as their knowledge will significantly influence their future actual technology integration in the classroom (Fathi & Ebadi, 2020). Thus, the EFL preservice teachers will

still implement technology in their teaching, especially when teaching speaking skills. Second, as shown in this study, the participants frequently adapted WhatsApp, YouTube, and Google Forms for classroom management and teaching speaking purposes. Thus, it is suggested that English language TEPs should identify other possible online technology tools for effective online classroom management and teaching speaking purposes in the post-pandemic era so that implementations are not limited to WhatsApp, YouTube, and Google Forms. Third, as digital technology is common during this pandemic, there is an urgent need to update pedagogy with online resources and appropriate teaching methods to adapt to the change (Jie & Sunze, 2021). The English language TEPs could use this study's information to consider providing their EFL preservice teachers with the knowledge that would allow them to use technology in teaching. Therefore, future EFL preservice teachers could have sufficient knowledge of managing and teaching speaking skills using technology when conducting fully online or blended learning in the post-pandemic era.

Conclusion

This study revealed that EFL preservice teachers employed various technology tools during ERT even though not all of them were implemented frequently. Moreover, they often implemented WhatsApp, YouTube, and Google Forms as the primary online technology tools for classroom management and teaching speaking skills in fully online instruction during the COVID-19 pandemic. In addition, they also adapted those technology tools to facilitate some appropriate online speaking activities for their students.

However, this study has several shortcomings that future studies should cover. This study did not explore the reasons for adapting several online technology tools profoundly. An in-depth exploration of why preservice teachers adapted technology tools that are not designed for teaching speaking skills is necessary to advance our understanding of their decisions. This study also did not explore the challenges the preservice teachers face during their induction phase as they are not fully prepared for online teaching. Analyzing these challenges would help the English language TEPs prepare the upcoming preservice teachers to conduct online practice teaching. Therefore, future studies should address these limitations to enhance the literature of English language TEPs and preservice teachers' technology integration.

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Appendix: Research Instruments

Likert Questionnaire

	Statements	Never	Rarely	Sometimes	Often	Very often
1	How often do (or did) you use the following Google Platforms in your teaching?					
	A. Google Slides					
	B. Google Drive					
	C. Google Docs					
	D. Google Sheets					
2	How often do (or did) you use the following Learning Management System platforms in your teaching?					
	A. Schoology					
	B. Edmodo					
	C. Google Classroom					
	D. Moodle					
3	How often do (or did) you use the following social network services/instant messaging in your teaching?					
	A. WhatsApp					
	B. Telegram					
	C. Line					
	D. SMS					
	E. Facebook messenger					
	F. Email					
4	How often do (or did) you use the following web 2.0 platforms in your teaching?					
	A. Facebook					
	B. Instagram					
	C. YouTube					
	D. Twitter					
	E. TikTok					
	F. Ted-Ed					
	G. Blogs					
	H. Flipgrid					
	I. Duolingo					
5	How often do (or did) you use the following online quiz maker platforms in your teaching?					
	A. Google Forms					
	B. Quizizz					
	C. Kahoot					

Interview Questions

Note. Here, Questions 2, 3, and 4 have been merged into one.

1. Please mention the technology tools that you implemented in teaching speaking skills.
2. In my record, you mostly implemented WhatsApp/YouTube/Google Forms. How did you use WhatsApp/YouTube/Google Forms in teaching speaking skills?