Abstract
In recent decades, English has gained prominence in Indonesia. However, due to instructors' lack of English proficiency, English instruction at the secondary level shows a significant failure. Today, amid the COVID-19 epidemic, which has pushed remote education, the challenge of teaching English as a foreign language in Indonesian secondary schools becomes more severe. Due to in-service teachers' lack of English proficiency and ICT abilities, future Indonesian English teachers' pre-service education at the secondary level should be revisited. This qualitative study investigates the extent to which teacher education programs (PPG) equip prospective EFL instructors to use Technology, Pedagogy, and Content Knowledge (TPACK) in their classroom instruction. It also explores the viewpoints of pre-service EFL teachers (student teachers) and teacher educators on EFL pre-service teacher education programs at several Teacher Education Institutions (TEIs) in West Java, Indonesia. Results of surveys and semi-structured interviews as the primary data sources underline the importance of preparing future English teachers by utilising TPACK and providing teacher educators with all the skills and materials required to train their students properly. A key finding of this study is the insufficient English competencies of teacher educators and pre-service teachers. This research is vital for improving English teacher education in Indonesia.

Keywords: EFL pre-service education; Online education; PPG; TPACK

INTRODUCTION

English has been the first foreign language in Indonesian classes since 1945 when Indonesia gained independence from Dutch colonialism (Musthafa & Hamied, 2014). However, exposure to the English language is limited in Indonesia; it is not a day-to-day conversation and interaction language (Musthafa, B., Hamied, F.A., & Zein, S. 2018). Teaching and learning English in Indonesia are challenging for teachers and students. English is taught from the fourth grade of primary school, and it is a compulsory subject at the secondary level. However, teaching English in secondary schools is a failure (Sadatono, 2007). Although the 2013 curriculum excludes English from the secondary final year's exam (Sahiruddin, 2013), Indonesian students still need English proficiency skills that are widely perceived as primary essential skills (Zein, 2014). English is a global language used in science, education, business operations, and all living areas. Thus, the Indonesian population's mastery of the language is required for international competitiveness, similar to the ASEAN Economic Society (Muslim et al., 2020).

English has become Indonesia's most-used foreign language (Hamied, 2013). Indonesian students must sit for TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing System) and gain an excellent score to enroll at local or international universities. English is also a separate subject; it is developing for use as a language of instruction in most disciplines. Dearden stated that there appears to be a rapid change in English being taught
as a foreign language (EFL) to English being a medium of instruction (EMI) for academic disciplines in non-Anglophone nations (Dearden, 2014). Scoring low on English language proficiency tests hinders students from enrolling at their preferred universities. Thus, upgrading students' English abilities necessitate significant efforts.

Teaching foreign languages in Indonesia aims to develop students' productive multilingualism to facilitate their comprehensive access to global learning resources and develop international interaction for social and business purposes (Permendiknas, 2007). However, few students possess capabilities and qualities in foreign languages in Indonesian schools; teachers and stakeholders find that students' achievements and mastery of foreign languages, including English, are disappointing (Suherdi, 2017).

Among the reasons Indonesian students fail to adopt good English language skills is the low quality of employed teachers (Zein, 2014; Muslim et al., 2020). Teachers are the core of the teaching-learning process. Hence, employing unqualified teachers to teach English is a dilemma. Indonesian teachers' English proficiency and teaching qualifications are inadequate (Sukyadi, 2015, Zein, 2016); an assessment of school administrators and teachers around Indonesia between 2007 and 2008 revealed that 95% of them were assessed with the intermediate English proficiency level (Hamied, 2011). The assessment included more than 27000 teachers and administrators from 500 schools.

Most in-service teachers are unfamiliar with teaching English as a foreign or second language; some lack pedagogy knowledge and English proficiency (Zein, 2015). Many teachers have never received training in student teachers' institutions, and some, despite the training, are still unqualified to teach. With the urgent need to teach English in Indonesian schools, many schools lack qualified, trained teachers with high proficiency to teach English, thus employing those unqualified to fill the gap (Chodidjah, 2008; Suyanto, 2009). Moreover, amid COVID-19 and the sudden switch to remote education, many English teachers in Indonesia encountered various barriers to integrating ICT and delivering online courses, including lacking ICT skills.

A study identified four key barriers to online learning of Teacher Profession Education (PPG) for in-service teacher programmes in Indonesia. The challenges varied from the participants' lack of ICT abilities to the professors' need to understand how to use the software, the quality of the offered information, and the excessive volume of assignments. The study also discovered four factors that may impact teachers' learning: the mentor component, the participant factor, the management element, and the facility factor. The findings show that additional enhancements to the online PPG programme for in-service instructors are required. (Utami, 2018).

A study conducted in Indonesian schools to investigate the quality of teacher training institutions revealed that the Primary School Teacher Education and English departments that produce English teachers at the elementary level are inadequate for preparing qualified and competent English professionals (Zein, 2014). In addition, the teaching of English in secondary schools has been reported to be disappointing (Sadtono, 2007).

As aforementioned, this study aims to investigate the delivery of pre-service teacher education programs in Java, Indonesia, in preparing future EFL teachers at the secondary level and explore the perspective of EFL student teachers and teacher educators towards the training. The findings of this study will contribute to understanding how in-service training is delivered, therefore making appropriate decisions to save the quality of English teaching at the secondary level in Indonesia.

**Teacher education programs in Indonesia**

The need for teachers in Indonesian schools urges the ministry of education and culture (Kemenikbud) to open a PPG program for graduate students from FKIP (Faculty of teacher training and education) and graduate students from other non-education disciplines. Program Pendidikan Profesi Guru (PPG), or Pre-service Teacher Professional Education program, is a higher education after undergraduate education program that provides education and pedagogical training for those interested in teaching. It is a replacement program for deed IV (AKTA 4), which has been no longer valid since 2005. This program aims to guarantee the competency and professionalism of future teachers.

All future teacher professionals must take 1-2 years of training which equals 36 to 40 credits offered by the PPG program after graduating from a bachelor's degree program in education or non-education programs. The open access to candidates from non-education disciplines can be seen from different angles. It is good to train future teachers rather than employ non-trained teachers. However, the number of credits non-educational graduates will benefit from is insufficient to produce qualified teachers ready to
teach generations. Sulistiyo, the Chairman of the Indonesian Teachers Association (PGRI), extended his concern regarding opening access to the PPG program to non-educational graduates. “The Ministry of Education and Culture must be able to bear the risk if it opens broad access to non-educational scholars to become professional teachers. Teaching is a unique profession, so the training duration should also be sufficient” (Sulistiyo, 2014).

Technological, Pedagogical, and Content Knowledge (TPACK)

Scholars agree that technology has been an integral component of education (Koehler & Mishra, 2009; Hauck & Guichon, 2001). Possessing content knowledge and understanding of teaching theories, philosophies, and practices is insufficient; technology knowledge is critical, thus the ability to integrate technology into the teaching-learning process to facilitate the latter and meet the demands of the twenty-first century. To meet this need, (Mishra & Koehler (2006) adapted Shulman's (1987) Pedagogical Content Knowledge into a conceptual framework recognised as Technological Pedagogical Content Knowledge (TPACK).

TPACK is an acronym for Technological Pedagogical and Content Knowledge. Technological Knowledge (TK) is a term that refers to a teacher’s ability to use technical equipment and technologies. Content Knowledge (CK) is a teacher’s knowledge of the topic they teach, such as English or Mathematics. It comprises all the facts, ideas, and theories associated with any discipline within the subject area teachers teach. Pedagogy Knowledge (PK) refers to the processes and techniques instructors use to plan lessons, administer classrooms, and evaluate students’ progress. Pedagogical Content Knowledge (PCK) refers to instructors’ knowledge of instructional methods for reflecting content, resolving learner problems, and enhancing student comprehension. The instructor’s grasp of adjusting educational procedures to fit technology affordances is called Technical Pedagogical Knowledge (TPK). Technological Content Knowledge (TCK) refers to instructors’ understanding of how subject matter is understood using different technologies. TPACK emphasises teachers’ comprehension of the deep, transactional links between the three knowledge components (Technology, Pedagogy, and Content).

Shulman believes that knowledge consists of seven components: Content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, learners and their characteristics knowledge, educational contexts knowledge, and educational ends knowledge (Shulman, 1987). In the era of 4.0 and Web 2.0, ICT is being integrated into all living areas, including education. The emerging technologies give birth to new teaching methods and techniques, including Artificial Intelligence, blended teaching models, online learning, corpus-based learning, Computer-Assisted Language Learning (CALL), multimodality of the learner, and big data.

METHODS

This study employs a qualitative approach. "A distinctive feature of qualitative research is that it allows researchers to identify issues from the perspective of participants and understand the meanings and interpretations that they give to behaviour, events or objects.” (Hamied, 2017). "Qualitative research studies people in their natural settings to identify how their experiences and behaviours are shaped by their context” (Henrikk et al., 2013).

Respondents

The current study deeply explores the perspectives of nine pre-service EFL teachers at the secondary level and three teacher educators from three different teacher training institutions in Jawa province, Indonesia. Also, the study aims to understand better the delivery of PPG (pre-service teacher training program) and explore to what extent the program prepares student teachers for future teaching in the digital era.

The researchers professionally approach the participants and inform them about the purpose of the research project with the insurance of
the anonymity of their information. In doing so, the participants are much more willing to share their experiences and information with the researcher (Hamied, F.A., 2017).

Instruments

This study uses two main instruments to collect data: a questionnaire for the pre-service English teachers and a semi-structured interview with pre-service English teachers (PSETs), and English teacher educators (ETEs).

Questionnaire: Questionnaires are the most used research methods, as they are quick and straightforward when collecting data (Cohen et al., 2011). An online questionnaire was administered to Indonesian pre-service EFL secondary school teachers in three teacher education institutions in the Java province of Indonesia. The questionnaire is divided into two parts; the first section includes demographic data such as gender. The second section of the survey includes the TPACK model developed by (Mishra and Koehler, 2006). The model concerns Pedagogical Knowledge, Pedagogical content knowledge, and Technological Pedagogical knowledge. This part of the questionnaire investigates EFL pre-service teachers’ knowledge of TPACK. The revised model consists of 32 items on 5 Likert scales; each response item is scored on the value of 1, assigned to disagree strongly, and 5 to strongly agree.

Semi-structured interview: The researchers conducted a semi-structured interview to investigate the participants’ responses. Woodfield (2008) stated that verbal reports or interviews enable participants to provide the researcher with the reasoning and perception behind their choices. Semi-structured interviews permit the researcher to ask follow-up questions and further probe the participants’ responses (Kvale, 2007). Semi-structured interviews have been scheduled with the participants; two pre-service English teachers and two English teacher educators to gain in-depth data. The pre-service teachers interviewed in our study have all completed their teacher education program. The interviews have been guided by two main questions: 1- What is your perspective on your institution’s pre-service English teacher training program? 2- Does the training prepare English pre-service teachers with 21st-century skills?

Procedures

The data of this study were collected in 2 phases: In the first stage, the researchers designed an online questionnaire for pre-service teachers in Google Docs and shared the link with pre-service teachers’ educators to distribute it to their trainees. Nine volunteer participants filled out the questionnaire. The researchers provided explanatory instructions and confidentiality information before data collection. The data collection took about four weeks. After collecting the questionnaires, the researchers scheduled interviews with two pre-service English teachers and three educators from three teacher education institutions in Jawa, Indonesia. The interviews were conducted to delve further into the participants’ responses and understand their experiences and perspectives toward Pre-service teacher training programs PPG in their institutions. The selection of interviewees was based on availability. Each interview lasted for about 30 to 45 minutes through social media platforms or in person and was audio-recorded to listen to multiple times if needed. The researchers also took notes during the interview to track the most important ideas and to base the follow-up questions. The researchers conducted all the interviews within three weeks. The interviews are digitally recorded and manually transcribed for accuracy. All the interviews are conducted in English. The interviews’ results are to cooperate with the findings from the questionnaires and explain the responses more explicitly.

Data analysis

A summary of responses from the nine pre-service teachers was derived from Google forms. The data was organised into graphs and charts in Google Spreadsheets to present better the data obtained. An audio recording approach was used to gain detailed insights into the explored phenomenon and generate the transcript of the in-depth interview. After the interviews, the researchers conducted a comparative analysis of audio-recorded transcriptions and interview scripts from notes taken during interviews to ensure the exact words spoken by the interviewees.

RESULT AND DISCUSSION

Our study answers two main questions. The first question investigates the technology, pedagogy, and content knowledge (TPACK) of Indonesian pre-service EFL teachers at the secondary level and how TPACK is implemented in teacher education programs. Our study adopted the TPACK model by Mishra and Koehler to investigate the participants’ responses. The primary findings from the survey revealed that 4 out of 9 pre-service teachers could solve their technical problems when it comes to using technology to
teach English. Five respondents strongly agree that they could quickly learn how to use technology. On the other hand, most participants agreed or strongly agreed with being updated on the new technologies. Six out of nine respondents expressed their knowledge of different technologies, and seven of nine possess the technical skills needed to use technology.

In investigating the respondents’ TPACK, the first six questions are related to technology knowledge (TK). As revealed, pre-service EFL teachers are familiar with technology and can fix their technical problems when encountered. In examining pre-service teachers’ content knowledge (CK). 6 out of 9 respondents possess English language skills, and the majority expressed their ability to employ a variety of methods and strategies to acquire and comprehend English. The TPACK survey included various questions designed to investigate respondents’ pedagogical knowledge (PK). The results show that most pre-service English teachers can employ a variety of approaches and strategies to instruct their secondary school pupils.

To inspect the respondents’ understanding of utilizing technology to teach English, also known as technology content knowledge (TCK) in the TPACK model, the respondents stated their capacity to use technology to teach English (see figure 2). Furthermore, most participants can successfully blend technology and pedagogy in English instruction. In other words, prospective instructors are familiar with TPACK (figure 3).

Figure 2. The knowledge of using technology in teaching English

Figure 4 illustrates teacher educators’ knowledge of using technology, pedagogy, and content (TPACK) in training pre-service EFL teachers in teacher education programs. Most respondents demonstrated that 76% to 100% of trainers could provide an effective model of incorporating TPACK into their training (figure 5).

According to preliminary survey data, the majority of pre-service EFL teachers at the secondary level in Java province teacher education institutions possess the English skills required to teach secondary school students, as well as the ability to use technology appropriately and solve all technical problems encountered in order to deliver their lessons effectively. Furthermore, the responders understand the approaches and strategies for teaching English. Being familiar with technology provides responders with a range of options to use in their English language teaching, allowing them to integrate the TPACK model into their instruction. It is made more accessible by their exposure to 21st-century technology and
their professors’ use of such technologies in teacher education programmes. However, the results revealed discontent when more in-depth interviews were conducted to explore pre-service teachers’ grasp of TPACK and how it is implemented in the PPG programme.

PSET1 revealed her disappointment about the disconnection between the content knowledge acquired in the training and the field practice. “To some extent, yes, I do feel that I get more and more knowledge about content knowledge about what level or the theories or methods of teaching, but in another perspective, I guess (thinking). In my period, when we were given a task and action research to do, and then we did the action research, and when we created the research result and everything, it was completely different from what we were given in the first semester. So, the theory and the practical were different, and we were starting from scratch again. When we had those theories, they gave us content knowledge in general. At the same time, when we did the action research, we faced the actual situation, which is what happens at school, like it is a whole situation that we could not imagine when we learned. Though we need to learn everything again, as I said before, we start from scratch again to find the theories, to find the problems, and how we should solve the problems.”

Our interviews showed that teacher educators are familiar with TPACK. ETE2 stressed that the PPG program trains future teachers on TPACK. “Based on my experience, it was one of the modules to introduce to PPG participants, how they prepare themselves for different terminologies like communication, critical thinking collaboration, and similar things. All the things that they learned are related to the four competencies and TPACK.” However, some student teachers are not acquainted. PSET1 argued that she did not study TPACK in her program. “TPACK? hum, how to spell it? I am not sure I have heard of it.” PSET1. She added, “When I was in the program, as far as I remember, I was not taught any of the technology. But I was taught that there are many technologies that we can use for teaching. But, the technical steps of how to use technology in teaching were not greatly taught. We learned by ourselves how to make use of the technologies. Our educators did not really use technology in training. They gave us a range of choices to use in teaching when we are teaching in the future, but they did not teach us to be skilled at any of them.”. Along the same line, ETE1 emphasised that few in-service teachers understand TPACK. “I am sorry to say that from 30 teachers, only five teachers understand the TPACK very well.”

To investigate the EFL pre-service teachers’ and teacher educators’ perspectives toward teacher education programs (PPG), we interviewed two pre-service English teachers and two English teacher educators for a deeper understanding of the data. The data from the interviews conclude that graduating from the English language department with a bachelor’s degree does not allow graduates to teach at Indonesian public schools. The graduates need to take a one-year training at a teacher education program called Program Profesi Guru (PPG). PPG programs in Indonesia consist of two spheres. ETE1 stated that “There are two kinds of PPG programs, the first is the Prajabatan program which is for those who are not teachers yet but are about to be teachers that is why they join the program, and they must pay by themselves. The second program is Dalam Jabatan or the in-service teachers’ program. It is for teachers teaching for more than five years. They need to get a certification. Therefore, they join the PPG. The government pays all fees, it is independent payment.”. ETE2 confirmed that by saying: “There are two kinds of PPG, pre-service teachers, and in-service teachers. The pre-service teachers’ program is for fresh graduates with little experience in teaching, 1 or 2 years of experience, and they have not been recorded as permanent teachers.”

Our study focused on English pre-service teachers and how the PPG program prepares them for teaching. The interviewees acknowledged that PPG is vital in training fresh graduates as they benefit from six months of theory and six months of practice at Indonesian secondary schools. “I think the PPG program is essential. The university graduates are prepared to understand TPACK and how to implement it. The length of the training is one year including six months of studying at the campus, and six months of teaching practicum.” stated ETE2, the teacher educator and PPG coordinator. However, PSET1, the new PPG graduate, argues that the program’s implementation should be modified and reconsidered. “In general, I believe that PPG would help future teachers to be able to master the skills they need and to improve their skills in teaching only if the government sets the program very well. Because now, as far as I know, they separated the program into Prajabatan (pre-service) and Dalam Jabatan (in-service). For the in-service teachers, they must follow the program while they are having the workload as teachers in their current school. Pre-service is for those who have not got any schools yet. I guess it would be better
if the in-service teachers were given more practical learning, like involving them directly on how to use technologies rather than just giving them theories because in my period, one semester is about theories and one semester is about practice in some schools in Semarang. I think a one-year program is sufficient, but the portion of practice and theory should be made differently.” PSET1 said unequivocally that the stakeholders should design the program carefully to assist in learning the abilities future teachers require and enhance their teaching. Moreover, the prospective teachers require additional practice and hands-on experience to implement what they have learned and immerse directly in technology use.

ETE1 added that “The students get teaching practice called Praktik Pengalaman Lapanangan at a school. Before they start the training, they should do many tasks, it is between five to six months of training, but it does not guarantee that they will be teachers because the selection is very tight. There are many assessments not only from instructors but also from the government. The training does not guarantee that students pass the selection. In the past, they only needed nine days. Now, they need a longer time. The students complain about the time length.”. On the other hand, PSET1 highlighted that PPG programs do not guarantee its alumni a place at a public school. “In my perspective, all in all, PPG was a great program, but, however, the program and the title we get from the program itself do not really help us in having a good job, especially for private schools. I remember I struggled to find public schools where I want to teach. At that time the government some sort of said that after you graduate from the PPG program, you will have greater chances to be accepted in public schools and what more be accepted as civil servants, but in reality, they did not give us that chance. We still have to find our school by ourselves and apply just like anyone else who wants to teach in that school. But I guess it is becoming better now. After graduation, they promise to put them in the civil servants’ area, I guess. So, they are promised to be valid teachers admitted by the government. This change came from, I believe, there must be some feedback from the people who graduated first. It is also in line with the needs of teachers that is because day by day or even in the next few years, there will be so many people having the intention to be teachers. I think there is something to do with that. Or, in other words, the demands for teachers because the government cannot fulfill the demands anymore. They promised to be better.”

PPG program provides training in different skills and teaching areas, including professional, pedagogical, social, and personal competencies. ETE2 emphasised that “There are four competencies that must be mastered by teachers including pre-service or in-service teachers. The first are professional competencies, pedagogical competencies, social competencies, and personal competencies. So, professional competencies are related to content technology and TPACK. Pedagogical competence is related to how teachers teach and deliver the lesson inside the classroom. The social competencies are how the teachers interact with the students and the parents. The personality involves how the teachers should behave like being kind. It is personality traits, the character. It has been declared nationally in our curriculum that the teachers must possess those competencies.”

21st century-skills and PPG program development amid the COVID-19 pandemic

We raised the question of to what extent the PPG programs prepare future teachers for 21st-century demands. The interviewees shared their perspectives, thoughts, and recommendations. “If you ask me about the perspective, there are many aspects I should consider. Related to 21st-century skills, it is a blessing that we have the pandemic. Both teacher educators, as well as pre-service teachers, can improve our skills in technology. There are four core components: Communication, collaboration, creativity, and critical thinking. For critical thinking, as teacher educators, we need to work hard to give more stimulation to the students, how we can provide appropriate materials not only spoon feeding but give the students work and try to discover the information, ideas, and many more. That can lead the students to do critical thinking. Regarding collaboration, it is hard to develop if it is done online. Communication and creativity also need to work hard for this. It probably happens to my students; we, as teachers and educators, need to work hard and give our best efforts to build those components; we cannot expect too much in a short time; we need more time, and it should be continuous.” Said ETE1. She added, “When we talk about 21st-century skills, it is back to the teachers, how they do self-explorations and self-development. We cannot depend on other people; we must struggle ourselves. Again, it is back to the teachers whether they like their students to reach 21st-century skills. If yes, they should work hard and give their best to the students. The teachers can give good influence and positive vibes,
then the students will follow.”

Not only does ETE1 see COVID-19 as a blessing for English teaching, but so does ETE2. “I think the strategies will change. So, it is a blessing in disguise. The lesson learned in the pandemic is that we can use technologies in flexible times. We can use Zoom, hybrid or blended. For this year, I have not got information yet about whether we will get pre-service PPG teachers, but I think the program will be in the form of blended, hybrid, or something like that. A combination between online and offline.”

The emphasis is on the PPG training enhancement during the covid-19 epidemic. However, there is cause for concern regarding English status in Indonesia. “Yeah, there are many developments and much progress, but I do not know why starting from the last five years, there are not too many students interested in taking the English Education program. At the faculty where I teach the number of students is decreasing, especially amidst the COVID-19 pandemic, I also heard this morning that English subject is going to be deleted from Indonesian schools, which is sad and shocking. Let us pray it is not going to happen. If it happens, I believe future teachers would not be interested in taking English Education anymore, but, hopefully, it will not happen.” ETE1.

**English teachers’ proficiency**

Investigating teachers’ English proficiency, ETE1 expressed her dissatisfaction with the English proficiency of teachers in Indonesia. “English proficiency? Hahahaha, ok now in the global trend about the teachers’ proficiency especially English proficiency we use CEFR. So, in the past, TOEFL was used to assess English proficiency but now the trend is using CEFR. So, we have the level from A1 to C2 if I am not mistaken. In my opinion, generally, hahaha, the English teachers, I do not know in which part but even in the cities, not only in rural areas teachers’ proficiency only reaches around B2 probably, generally, as English teachers we must reach at least C1. That is why if English subject is removed from the secondary level, how can English teachers then develop themselves to reach the highest proficiency? I believe that probably they do not care anymore to reach their English proficiency, right? I am sorry to say, it does not mean that I judge that English teachers in Indonesia are bad, there are still many teachers who are good at English. Their English proficiency is EXCELLENT. It depends on the school and the teachers themselves.” ETE2, on the other hand, argued for the non-qualification of English language instructors in Indonesia, underlining that data are not generalisable. “Although I have not seen the paper including evidence indicating that English teachers in Indonesia are unqualified, we cannot generalise. Perhaps the participants are from certain provinces, and 50 or 60 percent of them are not qualified based on these indicators.” ETE2.

**Teacher educators’ training**

Despite the government’s training and professional development workshops, ETE1 found that some teacher educators are hesitant to update the skills required to instruct their students’ teachers. “Especially during the pandemic, the government provided a lot of pieces of training to the teacher educators regarding the TPACK and what we should do in online learning. Those teachers who really want to develop their students’ skills, I believe they will always join any kind of training, they will read a lot, they will explore a lot of information because now we can find everything on the internet. I found that many teacher educators do not care about that, Therefore, students also complain especially when the learning was done online. The students complain about teacher educators who could not provide them with more interactive and qualified learning. The teacher educators did not care about how to develop and explore themselves to become better and more qualified teacher educators.” Furthermore, PSET2 confirmed that teacher educators must devote more time and effort to class planning, preparation, and delivery.

ETE1 noted that teacher educators are reluctant to improve their skills, and so are in-service teachers who use traditional teaching approaches. “The training programs, workshops, seminars, and conferences are everywhere. There are a lot of events regarding how to build teachers’ capabilities in teaching, but again, it is back to the teachers. I am an instructor for PPG programs for in-service teachers. Can you imagine, they have been teaching for more than five years, but I am always shocked to find out that even it is hard for them to design effective lesson planning. So, they keep using the old methods, the traditional methods like explaining the grammar. Now, the trend in English language teaching is using discovering learning, inquiry learning, problem-based learning, and project-based learning. I mean, we just provide the stimulus for the students and let them find themselves. I found out that the in-service teachers keep explaining and explaining and giving the students exercises without giving the students more opportunities to discover themselves and to build that critical thinking, which is one of the
components of 21st-century skills. Too bad, I am sorry to say.” ETE1. In other words, the teachers’ dedication to staying current on changes and developments is displayed.

The study’s findings showed that most pre-service English teachers could use technology in teaching English. However, it is of great concern to consider that not every teacher can. Preparing pre-service teachers to cope with rapid changes in the 21st century is essential. Student teachers should think analytically about their teaching to recognize the potential of ICT in enhancing the teaching and learning process. Such analytical thinking should include the efficiency of ICT in providing new, more effective, and flexible ways of teaching and learning (McNair & Galanouli, 2002).

Teaching with ICT opposes traditional teaching practices (Wang, 2002, p. 2). Computer-based education is learner-centered; thus, teachers reluctant to change their beliefs will be less likely to perceive technology as an integral learning tool. Some studies concluded that teacher education courses that adopted different approaches to ICT integration in teaching and learning succeeded. Moreover, pre-service teachers accessing a range of ICT applications in their subject area units were more successful than the standalone ICT units. When ICT is introduced into the curriculum, students struggle to link ICT skills and ICT as a learning tool (Reid, S., 2002). Therefore, when students are trained to integrate ICT into their practicum experiences, they become more equipped to integrate it into their classroom (Steketee, C. 2005).

The education systems worldwide recognize the importance of ICT and the need for students to gain skills, confidence, and creativity in using ICT (Brush et al., 2001; Richards & Voogt, 2002). Now more than ever before, digital literacy among teachers and students is a must. Students must master this literacy to succeed and contribute to a technology-shrewd future workforce (Wheelwright, 1999). Training pre-service teachers to use ICT will transfer this knowledge and skills to their classrooms. For this reason, many teacher education institutions integrated ICT skills units into their course structure. Integrating ICTs in training will increase student teachers’ ICT skills and competencies (Brush et al., 2001). Pre-service teachers teach as they have learned (Yildrm, 2000).

Today, pre-service teachers are more skillful regarding ICT use than their predecessors (Richards & Albion, 2003). However, teacher education institutions should not assume that all student teachers possess sufficient skills. Therefore, providing, developing, and reinforcing training must be necessary to guarantee competency. Pre-service teachers play an essential role in sustaining ICT in schools. It is of vital importance. Accordingly, the training institutions should consider the nature of the programs they offer in the teacher training courses (Steketee, C. 2005).

One of the study’s key results derived from interviews is that prospective English instructors lack TPACK knowledge and the abilities required to utilize TPACK in their classroom instruction. Pre-Covid-19 epidemic, most teachers worldwide were hesitant to adopt technology into their classrooms for various reasons, including fear of change, failure, a lack of experience, knowledge, technology skills, support, training, and a lack of infrastructure. Amid the covid-19 epidemic, in-service teachers encounter several obstacles while delivering online classes employing various technologies, including TPACK, in their English instruction. As a result, future instructors require training to succeed in this and similar epidemics to meet teaching-learning objectives. Nonetheless, policymakers began a series of conferences, seminars, and training on using technology and TPACK in English instruction, teacher educators lack proficiency, and their modest technology training does not prepare them for a deeper understanding of TPACK. TPACK is divided into three domains: What instructors know, how they teach, and how they utilise technology in teaching. The TPACK approach intends to help instructors develop and evaluate teaching that effectively integrates Content, Pedagogy, and Technology expertise (Shmidt et al., 2009). A well-implemented TPACK would aid instructors in comprehending how technology enhances student learning (Koehler & Mishra, 2008). Teachers willing to incorporate technology into their classroom practice must be proficient in all three domains (technology, content, and pedagogy) (Voogt et al., 2012). Training qualified teachers is critical to attaining a high standard of education (Lin et al., 2017).

English instructors face a substantial barrier in linking theory and praxis. The scenarios that arise in the classroom differ from what has been discussed in training. Most instructors who completed pre-service teacher preparation programmes in Indonesia appeared to struggle to integrate theoretical references they had acquired with the concrete English teaching conditions. Claims (Zein, 2014).

Shulman (1986) claimed that knowledge of subjects like English, Mathematics, History,
and general pedagogical strategies is required but not enough for teaching. Technology’s fast advancement and development have dramatically changed and affected human work and occupation in all domains. Integrating technology into education is more complicated than anticipated (McKnight, 2016). Introducing technology to education is not enough; a consideration of how this technology is used is vital (Koehler & Yadav, 2004). What instructors need to know to integrate technology into teaching-learning has received considerable attention (Zhao, 2003). However, focusing on how the technology is used is vital (Misha & Koehler, 2003).

CONCLUSION

This paper investigates Indonesian teaching institutions’ inadequacy in preparing future EFL teachers with TPACK and 21-century skills. Several implications and suggestions are recommended for developing PPG training, including emphasizing practice rather than theory, integrating TPACK into training to prepare future English teachers for online teaching, and training trainees in various classroom settings. PSET2 stated that in her institution, “Most of the trainers did not know how to operate Google meet and how to record and use features, which created obstacles in the process of the program” she also emphasized that “trainers should be equipped with ICT skills and materials. Some trainers do not master the material. They should have read all the modules and textbooks, not just a single source. Teachers must be well prepared for everything related to teaching, including ICT”. In other words, teacher educators should possess the TPACK skills to train their students (future teachers) successfully. PSET2 highlighted the importance of choosing the appropriate institutions to hold PPG programs “The government has chosen some institutions for PPG programs. The institutions, therefore, should be more prepared, and provide more training to educators including ICT skills so that the program goes smoothly.”

Furthermore, it is vital to strengthen teacher educators’ teaching quality, ensure a career for graduates, and offer follow-up programmes and initiatives. “Guarantee that the teachers work at government schools. I think they need to improve that too. In the aftermath of the PPG program, after graduation until now, they are not following any meetings, projects, or anything related to PPG again. It would be nice if we can have follow-up programs to gather in one place to share our experiences, that would be great, I guess. Reflection program.” added PSET1.

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