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ISSUES

The LONELY JOURNEY of EFL PRE-SERVICE TEACHERS in REMOTE AREAS: READINESS and CHALLENGES in INTEGRATING ICT in TEACHING

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This study addresses the overlooked aspect of evaluating pre-service teachers' preparedness for technology-based instruction. Focusing on EFL pre-service teachers at a remote university, it explores their readiness to integrate Information and Communication Technology (ICT) into teaching while navigating associated challenges. Employing a mixed-method design, data were collected through a Likert scale questionnaire and semi-structured interviews. Participants included pre-service EFL teachers enrolled in an English education program at a university in East Nusa Tenggara. The findings highlight the region's pre-service teachers' readiness to incorporate technology, despite encountering barriers such as inadequate knowledge, perception, confidence, financial constraints, limited student access, and inadequate facilities. Consequently, universities must consistently provide assistance, instruction, and essential resources, ensuring prospective educators acquire the necessary skills to integrate technology into future pedagogical inquiries seamlessly.

1. Introduction

The assimilation of Information and Communication Technology (ICT) has become a global priority for all nations due to the massive and vigorous changes that occur continually. ICT links every region of the globe. It has become an indispensable instrument for keeping up with the rapid evolution of the 21st century. To prevent exclusion, the countries (including Indonesia) must therefore consider its magnitude. All citizens must possess ICT skills and knowledge to navigate the ever-changing world regardless of circumstances.

The increasing use of ICT in teaching EFL has improved learning outcomes, increased student engagement, and expanded opportunities for students to learn and develop. ICT plays a crucial role in enhancing the quality of a teacher and English learner in the 21st century, given that incorporating ICT can assist teachers in instructing, thus accelerating the knowledge transfer process from teachers to students (Suherdi, 2012). Furthermore, the massive transformation of ICT alters society's social and cultural circumstances. Technological innovation directly impacts scientific and technological growth in all societal sectors (Bilyalova, 2017). Technology enables classrooms to have a global perspective by bridging geographical boundaries. In the 21st century, there is a global recognition in education research and policy of a shift from traditional teaching and learning methods to modern pedagogical practices integrating Information and Communication Technology (ICT) (Hossain et al., 2016).

Learning in the 21st century undoubtedly requires the incorporation of ICT into the educational system, and the educational system has thoroughly grasped the potential of technology as a practical teaching and learning aid (Vajargah & Saadattlab, 2014). The significance of ICT is multifaceted in terms of the 21st-century skills that present and future students hope to acquire in classrooms (Valtonen et al., 2018). According to Singh and Chan (2014), integrating ICT into the classroom creates a dynamic learning environment that revolutionizes teaching and learning processes. Besides, ICT teaches all prerequisite skills; teamwork readiness, problem-solving, creativity, and critical thinking (Voogt & Roblin, 2012). In short, ICT facilitates students' interactions with the world as a whole. This arrangement provides students with exposure to an infinite amount of knowledge and information. Regardless of time or location, students can partake in collaborative learning with classmates from across the globe.

Unfortunately, the Covid-19 pandemic has disrupted school and university operations worldwide, exacerbating existing inequalities. Concerning full school closures, a considerable percentage of students hailing from more disadvantaged backgrounds would possibly endure drawbacks (Drane et al., 2021). In comparison to schools in more developed locations, schools in poor and rural areas faced unique obstacles due to constrained access to technology for continuing online learning and instruction (Indrawati et al., 2020). This circumstance compelled stakeholders to incorporate technology into the educational process despite their lack of readiness to accomplish this. To address this new approach, instructional strategies and teacher duties must be reconfigured. However, numerous teachers lack the confidence, training, skills, technical assistance, resources, and technological infrastructure to successfully incorporate ICT into the educational contexts of their respective institutions, despite their desire and enthusiasm to do so (Krause et al., 2017).

As technology is crucial in education, teachers need to be adaptable and aware of the importance of incorporating it into their teaching practices. Pre-service teacher education programs are responsible for equipping future teachers with the necessary skills to use ICT for various educational purposes effectively. Educational programs must prepare aspiring teachers to utilize ICT for various educational needs (Valtonen et al., 2018). Prospective teachers must possess a particular set of abilities to use ICT in pedagogically constructive ways. All relevant parties must seize this opportunity to build a technology-enhanced learning atmosphere to reach this goal. This concern considers the demands for educating future teachers to utilize ICT. First, pre-service teachers are digital natives who proactively exploit ICT for educational objectives in their daily lives (Tapscott, 2008). Second, the potential teachers of today are members of a generation that heavily utilizes many apps but lacks ICT integration for instructional objectives (Lei, 2009).

Ongoing studies have explored the readiness of ICT integration for educational purposes. Among them, Champa et al. (2019) examined factors influencing teachers' readiness to use ICT in the classroom. They identified four variables that support the integration of ICT in teaching. Most instructors benefit from formal training to enhance their ICT-based teaching skills and maximize their effectiveness in utilizing modern technologies in the classroom. Mwapwele et al. (2019) conducted a study in South African rural schools to explore teachers' experiences and attitudes regarding using ICTs for teaching and learning. Despite facing financial, technical, and digital skills challenges, most teachers expressed enthusiasm for integrating ICTs into their instructional practices. This suggests that teachers are ready to embrace ICTs.

Interestingly, most schools had policies restricting using personal digital devices on campus, except calculators. In addition, Ngeze (2017) focused on the readiness of secondary schools and teachers to integrate ICT in teaching and learning. The findings revealed that most schools lack ICT facilities and face a high student-to-computer ratio in schools that do have such infrastructure. Additionally, teachers expressed a willingness to incorporate ICT, but only if they possess the required skills and knowledge.

Evaluating prospective teachers' readiness for technology-integrated instruction is often overlooked, particularly among pre-service teachers in Indonesian education institutions near the border. To assess their preparedness for school closures, examining how frequently ICT is used for instruction during their teacher training programs is essential. This is a valuable starting point to understanding their readiness for technology-based teaching. This research is an extension of a previous investigation conducted by one of the authors, focusing on technological awareness in Indonesia's border regions (Taopan & Siregar, 2021). In this light, this study aimed to determine whether pre-service EFL teachers at a remote university are prepared for technological integration in the classroom and to uncover barriers affecting their readiness for it. The study addressed the following research questions:

1. To what extent are EFL pre-service teachers in remote areas ready to integrate ICT into teaching?
2. What are the challenges EFL pre-service teachers encounter in integrating ICT into teaching in remote areas?

2. Literature review

2.1. Teacher readiness

Considerable research has focused on teacher readiness, specifically regarding professional development and embracing innovative teaching methods. Readiness encompasses teachers' openness and ability to adopt new practices influenced by factors such as their past experiences, beliefs, and knowledge. Teacher readiness gauges the extent to which educators possess the required

skills, knowledge, and attitudes to utilize technology and incorporate it into their teaching approaches effectively. Readiness is a multifaceted concept comprising technology skills, pedagogical knowledge, attitudes toward technology, and support structures (Ertmer et al., 2006).

Regarding technology integration, teacher readiness seems to be an essential component of successful technology integration. Teacher readiness refers to the extent to which teachers have the required knowledge, skills, and attitudes to utilize technology in their instructional practices (Scherer et al., 2021). Readiness to incorporate technology into educational activities is a complex and multidimensional construct comprised of numerous technological, pedagogical, and individual factors (Gyaase et al., 2019). Teacher readiness encompasses not only the awareness and skills necessary to use technology but also the disposition and self-assurance necessary to implement it into teaching and learning in a manner that optimizes student learning (Drent & Meelissen, 2008).

Multiple studies have acknowledged variables influencing teachers' readiness to implement new practices. For example, Boonmoh et al. (2021) discovered that background knowledge and experience were significant determinants of teachers' readiness to incorporate technology-enhanced instruction. Similarly, Buabeng-Andoh (2012) highlighted that teachers' perceptions of the efficacy and utility of novel practices significantly predict their readiness to embrace the technology. In addition to their attitudes toward change, perceived self-efficacy, and access to resources and support, teachers' readiness is affected by their attitudes toward change, their perceptions of competence, and the availability of such resources and support (Cheon et al., 2012).

Assessing teacher preparedness is essential for the lucrative integration of technology in education. Teachers who have not been adequately prepared or supported may struggle to use technology successfully in the classroom, negatively impacting student learning and enthusiasm (Ertmer, 2005). Therefore, understanding and promoting teacher readiness is crucial for realizing the potential of technology to enhance education.

2.2. ICT integration in education

The integration of information technology has brought about significant transformations in education. It goes beyond the mere use of technology tools and has far-reaching effects on the form and content of education. The impact of ICT extends beyond the educational environment, permeating society and leading to profound advancements in learning and its broader consequences (Hernandez, 2017). Technology has had an extensive impact on schools, transforming the role of teachers and becoming an essential part of various school activities.

Several studies have shown various benefits inextricably linked with incorporating ICT in education. One significant advantage is that it may provide learners access to a broad range of multimodal materials and resources, boosting their engagement with content and making it more relevant to their life (Hsu & Wang, 2019). For instance, instructional software can give learners tailored feedback and direction on their learning progress. In contrast, interactive whiteboards can showcase multimedia information, such as movies, photographs, and audio recordings, to pique learners' interest in a topic.

Furthermore, ICT can also enhance personalized learning by allowing teachers to modify education to the unique needs of each student. Technology may grant students access to large amounts of knowledge, enhance collaboration and communication, and facilitate personalized learning (Warschauer & Matuchniak, 2010). Technology in education offers various benefits. Computer-based assessments enable evaluating learners' knowledge and identifying areas that need additional support. Internet resources and learning management systems provide opportunities for enhanced features like gamification and adaptive learning. Furthermore, technology fosters communication and collaboration through online forums, video conferencing, and social media platforms, irrespective of physical distance. This promotes a sense of community and engagement, boosting motivation among students.

While it is essential to be aware of these positive values of integrating technology in education, being concerned about the criticism of ICT in education is also crucial. One of the primary concerns of using ICT in education is that it can create a digital gap, with underprivileged students and schools experiencing poor access to technology and digital resources. This can worsen existing disparities and hinder these students' educational chances (Warschauer & Matuchniak, 2010).

Besides, the employment of ICT in education can lead to "technological fetishism," in which technology is regarded as the panacea for all educational issues rather than as a tool or instrument to facilitate teaching and learning (Selwyn, 2016). The excessive focus on technology rather than its pedagogical value is a concern. Moreover, there are worries about the impact of technology on students' attention spans, concentration, and physical and mental well-being (Turkle, 2011).

2.3. Technology readiness model

The technology readiness model (TRM) was developed by Parasuraman (2000) to have a more comprehensive understanding of how individuals react to new technologies. TRM visualizes the tendency of individuals to adopt and utilize new technologies for achieving goals at home and work (Parasuraman, 2000). The TRM construct can be regarded as a combination of conceptual drivers and constraints that collectively influence an individual's propensity

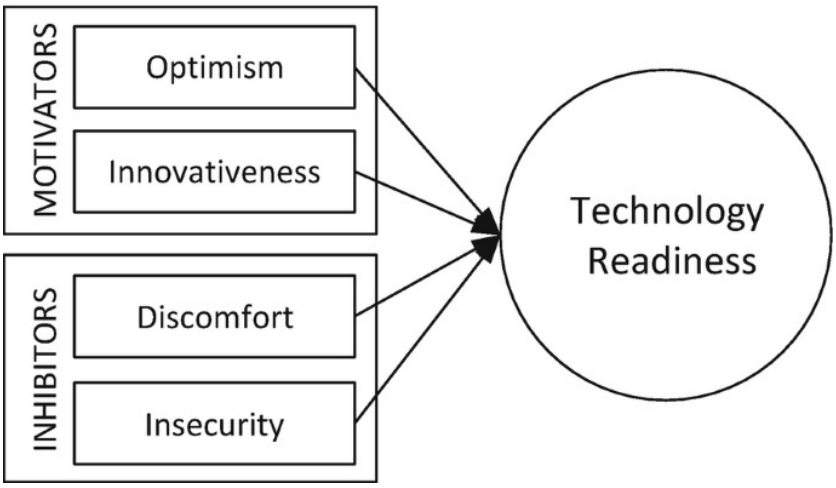

Figure 1. Technology readiness model

to adopt technologies (Lin et al., 2007). TRM has been used in education to investigate factors that drive teachers' and students' attitudes and behaviors toward using technology.

TRM comprises four components: optimism, innovativeness, discomfort, and insecurity (Parasuraman, 2000). Optimism refers to the extent to which a person contends that technology can be advantageous. Innovativeness refers to a person's receptivity to new experiences and willingness to experiment with new technologies. Discomfort pertains to the degree to which a person experiences discomfort and anxiety when utilizing novel technologies. Finally, insecurity is the degree to which a person lacks confidence in their capacity to use technology.

TRM has been applied in various educational contexts, such as online learning, blended learning, and technology integration in the classroom. For example, Geng et al. (2019) found that the level of technology readiness among instructors played a crucial role in determining their motivation to use blended learning in the classroom. Similarly, Al-Fraihat et al. (2020) found that during the COVID-19 pandemic, students' technology proficiency significantly predicted their orientations toward online learning. Overall, the technology readiness model is a valuable framework for better understanding how educators and students respond to introducing new technologies in the classroom. It has been discovered that TRM is an effective predictor of attitudes and behaviors regarding technology, and it has been utilized in various educational contexts.

3. Methodology

3.1. Research design

This study employed quantitative and qualitative research designs to explore the research questions (Creswell, 2012). As previously stated, there are two research questions in this study. A quantitative survey was administered to explore the pre-service EFL teachers' readiness to integrate technology into

teaching. Furthermore, qualitative data were gathered to explore the participants' challenges in integrating ICT into teaching and their strategies to improve their readiness to incorporate ICT into their teaching.

3.2. Research site and participants

The study participants were 30 pre-service EFL teachers from a university in a remote area of East Nusa Tenggara, Indonesia. All of the participants received a questionnaire between February to March 2023. After the return of the questionnaire, five pre-service teachers were selected to participate in semi-structured interviews. The selection was based on the participants' willingness to engage in the interviews.

3.3. Data collection techniques

The study collected Likert-scale questionnaires and interviews as data collection instruments. Both instruments were guided by Technology Readiness Model (TRM) framework (Kaushik & Agrawal, 2021; Parasuraman, 2000). The questionnaire was made systematically by considering the indicators of the framework. Prior to being distributed, the questionnaire was reviewed by some professors who did not participate in the study to ensure the clarity of each of the items asked (Patten, 2016). This is a crucial stage in the development of the questionnaire (Cohen et al., 2007). The questionnaires consisted of four main parts. The first section consisted of six items pertinent to participants' innovativeness in using technology in language classrooms. The second section included 17 items that regard participants' optimism in integrating technology. The third section had four items about participants' discomfort with using technology. Finally, in the fourth section, there were five items about participants' insecurity in integrating technology into teaching.

Furthermore, the study conducted semi-structured interviews to gather qualitative data to explore the participants' challenges in incorporating ICT for teaching. The qualitative data will prompt an in-depth examination of complex social issues to thoroughly comprehend the context and significance of people's experiences (Patton, 2014). Based on each participant's inclination, in-person or video conference interviews were executed. The Indonesian language was selected to conduct the interviews to empower the participants' provision of pertinent and essential information regarding the targeted data (Siregar et al., 2020). With the participants' permission, each interview was audio-recorded for between 30 and 60 minutes. Finally, the audio interview recordings were transcribed verbatim and processed using content analysis (Krippendorff, 2018) since it is considered helpful for drawing reliable and replicable conclusions from texts (or other relevant material) to their contexts.

Table 1. The categorization for the results of the questionnaire

Categorization	Scale
SD (Strongly Disagree)	> 1.0 to 1.8
D (Disagree)	> 1.9 to 2.6
U (Undecided)	> 2.7 to 3.3
A (Agree)	> 3.4 to 4.1
SA (Strongly Agree)	> 4.2 to 5.0

3.4. Data analysis

Descriptive statistics were applied to analyze the quantitative data collected from survey responses to calculate each questionnaire item's frequency and mean score. The average score on the Likert scale was then classified using a categorization technique (Joshi et al., 2015). The categorization is summarized in Table 1.

In addition, the qualitative data from the interview were analyzed by employing the interactive model data analysis (Miles et al., 2014). When conducting thematic analysis, it is necessary to adhere to specific procedures. Before beginning the coding procedure, it was necessary to process and classify the interview data. This encompasses both the naming and organization of files and data. The subsequent phase involved the reduction of data. The analytical data were chosen in support of the research objectives. Then, the selected data were evaluated and analyzed. Afterwards, open coding was employed, which is a method for associating a code with a concept within the data. The researchers used NVivo 12 software to help code the data. Following data classification for a critical concept, an emerging theme was developed to gain a deeper understanding of the concept's implications. The next step entailed analyzing the patterns uncovered by the codes. The final step of qualitative analysis was communicating the entire classification and conceptualization procedure regarding the study's themes. Given the research objectives, the data processing, coding, and conceptualization processes were investigated.

3.5. Ethical considerations

Before conducting interviews and disseminating the questionnaires, informed consent was acquired from all participants, and participants were enlightened that they might withdraw from the study at any moment without penalty (British Psychology Society, 2021). All data retrieved were kept confidential and anonymous, and data were stored securely in a password-protected electronic database (British Psychology Society, 2021).

4. Findings

The findings are ordered following the research queries: (1) the readiness of the pre-service EFL teachers in remote areas to integrate ICT in teaching; and (2) the challenges encountered by the pre-service EFL teachers in integrating ICT in teaching.

Table 2. Survey of pre-service teachers' readiness in integrating ICT

No.	Items (Constructs)	Mean
1	I will be integrating technological tools into my teaching. (OPT1)	4.0
2	I will be open to using any technological tools to support my teaching method in the future. (OPT2)	4.17
3	I plan to integrate many kinds of technological tools or websites in all my courses. (OPT3)	3.67
4	I recommend that my peers integrate any technological tools or websites for their teaching. (OPT4)	3.77
5	I enjoy teaching using technological tools, websites, or apps. (OPT5)	4.0
6	I am comfortable using apps or websites when preparing and teaching my class. (OPT6)	3.83
7	I enjoy using technology in my teaching. (INN1)	4.0
8	Using technology makes my teaching more interesting. (INN2)	4.2
9	The process of preparing and creating learning materials and media by using technology is pleasant. (INN3)	3.87
10	Integrating technology into teaching is a good idea. (INN4)	4.13
11	I am positive that using technology will improve students' learning experience. (INN5)	3.9
12	The use of technology in teaching provides an interesting classroom atmosphere. (INN6)	4.1
13	Using technology eases my workload. (INN7)	3,8
14	There are many websites and apps that can help me to prepare and conduct my class when needed. (INN8)	3.97
15	The campus provides immediate support when I am having problems with the use of technology. (INN9)	3.17
16	The campus provides good support and knowledge about using technology for teaching. (INN10)	3.3
17	I can create an attractive learning experience when using technology in my teaching. (INN11)	3.93
18	Technology fits my teaching style. (INN12)	3.8
19	I am confident in using technology to plan and make teaching materials and media. (INN13)	3.83
20	I have the necessary skills to use technology in my future class. (INN14)	3.9
21	I am able to use technology for educational purposes without any assistance. (INN15)	3.7
22	In general, I am competent in integrating technology into teaching. (INN16)	3.67
23	I have no difficulty in accessing and using technology for my teaching. (INN17)	3.3
24	I get nervous when using technology to prepare for my class and to teach. (DIS1)	3.23
25	I feel uneasy about using technology for teaching and learning. (DIS2)	2.7
26	I feel uncomfortable about using technology to accomplish my teaching tasks. (DIS3)	2.9
27	I feel overwhelmed whenever I use technological tools for teaching. (DIS4)	2.73
28	I would need a course to learn how to use technology in teaching. (INS1)	3.53
29	I am unhappy about the technological knowledge and support from the campus. (INS2)	2.53
30	I need training in the use of technology for teaching on a regular basis. (INS3)	3.5
31	Using technology makes my work more difficult. (INS4)	2.1
32	There is an intermittent loss of connection when using technology in my teaching. (The quality of the connection is not adequate). (INS5)	2.93

4.1. EFL pre-service teachers' readiness in integrating ICT into teaching

This study indicated that most pre-service EFL teachers are ready to integrate technology into their future teaching. The portrait of their readiness is demonstrated by their acknowledged optimism, innovativeness, discomfort, and insecurity, as elaborated in Tables 2 and 3 below.

The descriptive analysis in Table 2 reveals some valuable insights. The participants demonstrate high optimism (average score of 3.9) regarding integrating ICT into their teaching. They are willing to utilize various technological tools and websites to support their instruction. Moreover, they

Table 3. Scale categorization of readiness in integrating ICT

Constructs	Mean	Scale categorization
Optimism	3.9	Agree
Innovativeness	3.8	Agree
Discomfort	2.9	Neutral
Insecurity	2.9	Neutral

enjoy using apps and websites to prepare and teach their classes, and they intend to recommend using such tools to their colleagues to enhance teaching practices.

Analyzing the second indicator, innovativeness (items 7 to 23), it is evident that participants are enthusiastic about adopting and utilizing ICT for language teaching and learning. Their innovativeness significantly influences their perception of technology's usefulness. An average score of 3.8 indicates that most participants are motivated and prepared to integrate available technologies. They find joy in using technology for teaching, believing it enhances the overall teaching experience. Moreover, participants acknowledge the pleasant use of technology to create learning materials and media.

Furthermore, regarding classroom management, most participants agree that technology will improve students' learning experience. They regard that technology in teaching provides an enjoyable classroom atmosphere and can enhance students' engagement. Also, technology enables them to create an engaging learning experience for students. Most participants acknowledge many existing websites and apps that can help prepare and conduct the class as needed. In short, they agree that using technology eases their workload since it fits their teaching style.

The participants' innovativeness is also evident in their recognition of the university's role in preparing them for future teaching. They agree that the institution offers valuable support and knowledge in using technology for teaching purposes. They also appreciate the immediate assistance provided by the university when they are facing technology-related challenges. As a result, participants feel confident in utilizing technology to create teaching materials and media. They possess the necessary skills to independently employ technology for educational purposes and feel competent in accessing and utilizing it for language teaching.

The third indicator regarding pre-service EFL teachers' discomfort can be seen in items 24 to 27. Based on the mean score (2.9), it can be inferred that the EFL pre-service teachers in remote areas are unsure whether they feel uncomfortable integrating technology into their teaching. Most participants agree that they can utilize technology for teaching and learning more efficiently. They are comfortable using technology to accomplish teaching tasks and do not feel

overwhelmed when using technological tools for teaching. However, a few participants tend to get nervous when using technology to prepare and teach their classes.

The fourth indicator focuses on pre-service EFL teachers' uncertainty in integrating ICT into their teaching, as in items 29 to 32. With an average score of 2.9, it can be concluded that the pre-service EFL teachers in the study are unsure about the specific insecurity they face when using technology in teaching. Most participants expressed a need for a dedicated course to effectively use technology in teaching. They also believe that regular technology training is still necessary. However, participants have contrasting views, with some acknowledging that the university has provided them with sufficient technological knowledge and support. Additionally, intermittent loss of connection when using technology is highlighted as a significant aspect of their insecurity.

The results of the questionnaire assessing the readiness of prospective EFL teachers in a remote area to integrate technology in teaching and learning indicate their preparedness to utilize information and communication technology for future language education. However, those areas still require improvement before teachers can enhance technology-driven language teaching in their classes.

4.2. Challenges encountered by the pre-service EFL teachers in integrating ICT

The second research question examines pre-service EFL teachers' challenges in integrating ICT. Semi-structured interviews were conducted to identify emerging categories related to this issue. The study's results highlight several themes that hinder the use of technology in teaching for pre-service EFL teachers. These include limited knowledge about technology for educational purposes, perceptions towards technology in education, lack of confidence in using technology, financial constraints, limited student access, and inadequate facilities.

Firstly, the lack of technology knowledge poses a significant barrier for pre-service English as a Foreign Language (EFL) teachers in remote areas. While technology offers benefits such as increased engagement, access to resources, and personalized learning, not all teachers are comfortable using it. The rapid pace of technological advancements challenges participants to stay updated and knowledgeable. They require more time to learn and adopt new tools, which can make them feel overwhelmed and unsure about effective technology use in the classroom. Consequently, they hesitate to integrate technology into their teaching practice.

> "... maybe a lack of knowledge about the use of technology because, as we know, in the current era of technological advancement, many applications or teaching media use

> technology, so sometimes it takes time to adjust or learn to use it. Sometimes, I'm not sure if I can use it effectively in my class." (P1, Interview)

> "...I'm not fluent in using existing technology. There are so many apps that I don't know. I'm only fluent in a few basic applications." (P4, Interview).

Secondly, participants acknowledged that their mindset and perception towards technology could impede their effectiveness in using it for teaching. While initially perceiving technology integration in language teaching as effortless, they found it challenging in practice, discouraging them from using it. These findings underscore the significance of having a growth mindset and being open to learning new skills and adapting to new technologies. A fixed mindset or negative attitude towards technology can lead to resistance or reluctance in incorporating it into teaching practices, ultimately missing out on opportunities to enhance teachers' and students' teaching and learning experiences.

> "... Sometimes the inhibiting factor is my mindset, which sometimes thinks technology is easy, but in reality, it is quite difficult to apply it." (P1, Interview)

Thirdly, participants expressed a lack of confidence in and fear of using technology in teaching. They feel uncertain about using technology effectively and worry about making mistakes. These factors contribute to their hesitation and reluctance to incorporate technology into their teaching practices. Lack of confidence and fear of making mistakes are common obstacles for teachers when integrating technology. It can be challenging to try new things, especially with unfamiliar technology, and teachers may believe they need to be experts to use it effectively. This mindset can result in missed opportunities to improve teaching and learning outcomes through technology.

> "... lack of confidence in using technology. Sometimes I feel nervous about new things." (P2, Interview)

> "... As an English teacher, I may feel afraid or insecure about using technology in teaching. I may feel unsure how to use it effectively or worry about making mistakes when using technology." (P5, Interview)

Participants highlighted financial constraints as a significant barrier to incorporating technology in teaching. The cost of acquiring technological tools, such as laptops and internet access, as well as accessing certain applications, poses challenges for pre-service teachers who may lack the necessary resources. Keeping up with the latest technological developments is also expensive, further complicating their integration efforts. Additionally,

the expense of training and certification is prohibitive for teachers on limited budgets, reducing the number of teachers trained in technology use and opportunities for students to learn with technology.

> "... We need quite a lot of money to use technology. For example, we must spend much money if we need a laptop. We need data to access the internet and applications, which requires money. In addition, there are many applications and technologies that require quite a lot of money. The more technology develops, the more money is needed to adjust to technological developments, especially in teaching." (P1, Interview)

> "... Many applications and software can be used in teaching English, but some of them have a subscription fee or a fee to download. If a person does not have sufficient funds to pay the fee, they may be unable to use the required technology in teaching." (P3, Interview)

> "... The cost of training and certification is very expensive. In order to use technology effectively in teaching English, a person may need to undertake specific training or certification. However, the cost of attending such training or certification may be too high for some." (P5, Interview)

Furthermore, the findings emphasize the problem of limited technology access for underprivileged students, leading to a digital divide. Financial constraints and geographical limitations contribute to unequal access to technology, hindering students' participation in online learning activities and access to resources. This digital divide negatively impacts their academic performance and impedes effective participation and learning in English language classes.

> "... Students from less affluent backgrounds may not have access to the technology necessary to undertake technologically advanced English learning". (P4, Interview)

Finally, the participants highlighted the lack of available technology in schools as the main challenge in integrating technology. Despite their strong desire to incorporate technology into teaching, the absence of crucial tools like LCD projectors, reliable electricity, or a stable network connection makes it challenging to deliver lessons as planned. Additionally, teachers may face outdated or incompatible hardware and software, limiting their access to certain applications and resources. This limitation wastes teaching time and hinders the effectiveness of the learning experience for students.

> "... lack of availability of technological facilities that support learning. For example, when I want to display learning media but there are no supporting tools such as LCD projectors or inadequate electrical and network problems are one of the inhibiting factors." (P1, Interview)

> "...when teaching, for example, I want to present using an LCD, but sometimes the power goes out so that the material that has been prepared cannot be displayed." (P2, Interview)

> "... Even though technology has developed rapidly, not all teachers have access to sufficient technology to develop effective teaching materials. Sometimes, certain hardware or software deficiencies can hinder a teacher's ability to use technology optimistically." (P5, Interview)

The interview analysis reveals various challenges that can impede the effective integration of technology in English instruction. These challenges include personal reasons, like lack of confidence, fear of mistakes, and societal factors, such as limited access to technology, infrastructure, and financial constraints. Additionally, the availability and quality of training and certification programs can either facilitate or hinder the use of technology in the classroom. To address these issues, universities, as providers of future teachers, should offer continuous support and training to pre-service teachers, ensuring access to necessary resources and infrastructure. This will help teachers gain confidence and technological proficiency, resulting in more effective and engaging English language instruction. Policymakers should also consider broader societal and financial factors that restrict access to technology and infrastructure, working towards overcoming these barriers and ensuring equal opportunities for all students to succeed in learning English through technology.

5. Discussion

The study reveals that most prospective EFL teachers are prepared to incorporate technology into their classrooms. Their acknowledged optimism, inventiveness, discomfort, and insecurity portray their preparedness. Such a condition serves as a good gauge in the context of the current state of education, which is undergoing rapid technological transformation. This finding is in line with Inan and Lowther (2010), who highlight that the preparedness and proficiency of teachers are paramount factors that directly impact technology integration. Teachers' cognition of technology is essential in determining the role and efficacy of technology within educational settings (Johnson et al., 2016). As suggested by Voogt et al. (2013), teachers should be able to recognize that readiness for integrating technology into the classroom is critical, particularly in the 21st century. Technologically proficient educators can facilitate students' exposure to global resources to enhance their education

(Taopan & Siregar, 2021). Thus, pre-service teachers, regardless of their field, should be equipped with well-developed technological skills to integrate technology into their future teaching practices effectively.

Besides, the results indicate that the participant's readiness to incorporate technology in language teaching portrays their awareness regarding how technology is the potential to facilitate students' learning. Technology offers numerous benefits to language acquisition. The integration of ICT has the potential to aid educators in their instructional practices, thereby expediting the transmission of knowledge from teachers to students (Suherdi, 2012). It could allow learners to use various multimodal materials and resources, enhancing their engagement with content and making it more applicable (Hsu & Wang, 2019). Bringing ICT into the classroom produces a vibrant learning atmosphere and transforms teaching and learning processes (Singh & Chan, 2014). The utilization of technology has the potential to facilitate the acquisition of fundamental competencies among students, including but not limited to preparedness for collaborative work, proficiency in problem-solving, innovation, and the ability to engage in critical analysis (Voogt et al., 2013). In short, technology enables students to engage with the rest of the world.

On the other hand, the study identifies barriers that impede teachers' use of technology in the classroom, including the lack of knowledge regarding the use of technology for educational purposes, the perception of technology in education, the confidence in using technology, the financial issue, the lack of student access, and the absence of facilities. This corroborates the research by Hamzah et al. (2021), who elaborated that technological competencies in education, perception of technology, and confidence in using technology are issues commonly associated with anxiety. This condition is acceptable given that these pre-service teachers may result from the traditional teaching model at the preceding grade level. As suggested by Ghavifekr and Rosdy (2015), it is indisputable that a person's educational heritage at the previous level influences the learning process at the subsequent level. Furthermore, this finding resonates with Aşık et al. (2020), who maintain that the university, as well as the language teacher educator is responsible for providing students with more opportunities for enhancing specific ICT utilization strategies. In other words, a university must give continual support and training to pre-service teachers while assuring access to critical resources and infrastructure.

Regarding the financial issue, the finding supports the previous study by Akçayır and Akçayır (2018), underlining that, compared to conventional educational settings, the sole drawback of contemporary classrooms pertained to the expense of technology. Also, this study aligns with the issue of limited student access to technology. In line with this, Leo and Puzio (2016) affirmed that insufficient technological proficiency among students might impede their ability to access digital learning content. As regards the absence of a facility,

Jensen et al. (2015) underlined the importance of ensuring that technology is readily available and accessible to all relevant parties in terms of provision and utilization.

6. Conclusions

The research indicates that pre-service English teachers in remote areas are ready to use technology. However, they face barriers like inadequate knowledge, limited resources, and constrained student access. Accordingly, universities must provide consistent assistance, instruction, and essential resources to equip these future educators with the skills they need to integrate technology seamlessly into their teaching. This approach will enable students to access global resources, enhance their learning experience, and effectively engage with the global community.

This study has certain limitations. Firstly, it focused only on pre-service English teachers in a single remote region, which may limit the generalizability of the results to other groups or settings. To obtain more comprehensive findings, future research should involve a more significant number of participants from various remote areas across Indonesia. Secondly, the study did not assess the practical implementation of technology in the participants' future educational settings, which could have provided more conclusive evidence of their readiness and proficiency in using technology for teaching purposes. To gain more conclusive evidence, it is recommended to observe the use of technology in real-world teaching scenarios or gather data on its implementation. Such research would offer a more accurate understanding of the participants' technology integration skills and help design more effective training programs to enhance their technological abilities in the classroom.

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