**DO EFL STUDENT TEACHERS HAVE SUFFICIENT DIGITAL COMPETENCIES TO DEAL WITH ONLINE LEARNING DURING THE COVID-19 PANDEMIC?**

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**Abstract**

The Covid-19 pandemic has forced all teachers to deliver online learning whether they are ready or not, which can be stressful. Hence, it is logical to assume that student teachers will face even a more complex situation when carrying out online teaching practicum. Unlike in-service teachers, they are lack experience in dealing with face-to-face and online learning. Therefore, this study attempts to report a need analysis investigating the familiarity of English as a Foreign Language (EFL) student teachers with digital technology and their readiness to use digital technology in their future teaching and learning process. Using the TESOL Technology Standards for Teachers and Technology Acceptance Model (TAM) theories, the study shows that most participants possess adequate basic digital skills to teach digital technology. However, they need to learn various digital tools that specifically support language instructions more effectively. The participants also show acceptance of the utilization of technology and are willing to integrate it into their future teaching. This study implies the need to include technology in the curriculum of the English Education Department.

**Keywords**: ***Need Analysis, ICT, TAM, TESOL Technology Standards, TELL.***

**INTRODUCTION**

The spread of the COVID-19 pandemic all over the world has impacted all aspects of human life. It forces most human activities previously done through a physical approach, including education, to migrate into a digital platform (Adedoyi & Soykan, 2020) and push the running of online learning in a sudden and utterly unprepared situation (Atmojo and Nugroho, 2020). The pandemic has caused school suspensions in education, resulting in online learning needing to substitute conventional face-to-face classroom learning (Moorhouse, 2020; Schneider and Council, 2020). For instance, the Indonesian Ministry of Education for and Culture (MoEC) has ordered all education units to do their activities from home to maintain the health of the students, teachers, and all people involved in educational matters (Mendikbud, 2020a). Furthermore, the Ministry has also instructed the schools in the affected areas to run the online learning started from March, 17th 2020, due to the increasing spread of the COVID-19 plague (Mendikbud, 2020b).

When teachers have to carry out all school activities from home, teachers worldwide feel anxious, distressed, reluctant to teach on the computer, and are poorly facilitated (Bruun & Zachariassen, 2020). Innovation is therefore required to preserve the development of education (Verawardina et al., 2020). It is undeniable that the COVID-19 pandemic has implied the need to redefine instructional approaches by setting several preparedness competencies to achieve the objectives of the curriculum and considering the opportunities and the challenges that happen during the process (Capahay, 2020).

Many have acknowledged the rapid advancement of digital technology years before the outbreak of the COVID-19 pandemic. Due to its high capacity to facilitate ubiquitous learning in this pandemic, technology in education is one promising innovation that has become an inseparable component in managing academic hurdles during the COVID-19 outbreak to reduce disease propagation (Onyema et al., 2020). It facilitates convenience and practicality for modern people's lifestyles, but it has also significantly impacted education (Benali, Kaddouri, and Azzimani, 2018; Sullivan and Bhattacharya, 2017). Woodson (2018) suggested that it allows teachers to design and make the lesson plan, provide multimodal instructions deliverance to foster students learning styles, do engaging practices and reviews, and support exciting assessment and instant feedback. Luckin, Holmes, Griffiths, and Forcier (2016) also mentioned that it promotes autonomous learning and activities to suit each students' pace and learning style. Previouly, Li, Worch, Zhou, and Aguiton (2015) argued that digital technology could also potentially improve learning outcomes when used effectively. Moreover, integrating technology with its gamification and fun aspects into classroom instruction enhances students' motivation and engagement toward the subject given (Licorish, Owen, Daniel, & George, 2018).

Previous studies have shown that technology has recently played a pivotal role in language education. It provides rich, authentic, and meaningful language learning resources, efficient and effective instruction delivery, and facilitates language teaching and learning productivity (Ghanizadeh, Razavi, and Jahedizadeh, 2015). The appropriate utilization of digital technology provides practical ways to engage students' learning (Bal, Grewal, Mills, and Ottley, 2015). Further, it facilitates students to have real-world language exposure (Richard, 2015; Li, Snow, and White, 2015) and provides solutions and numerous possibilities to overcome language teachers' obstacles on their instructions (Walker, 2015). A study conducted by Mashhadi and Jamalifarb (2015) found that visual support can facilitate vocabulary mastery. It provides students with attractive visual cues to focus on specific items on the language input supporting the textual lines. Visual cues have significantly bridged and given meaningful definition towards delivered information since visual cues/textual input-enhancement is a Focus on Form approach that facilitates L2 acquisition.

The question is whether student teachers are ready to integrate technology into their classrooms. Student teachers' preparation programs at the university level play a significant role in providing well-armed graduates to support and introduce their student teachers to the meaningful utilization of technology (Carpenter et al., 2019). Teaching digital technology literacy and competence at the university level is essential in developing student teachers' attitudes and perspectives toward using digital technology in their instruction and enhancing their confidence level in incorporating it inside their class (Jeong, 2017). Notwithstanding, Teo (2015) predicted that the teachers' education program is less concerned about preparing the preservice teachers with initial technology integration training. They face some hurdles in managing the preparation program for their teacher candidates to integrate technology and intensively provide them with the related courses that have already included the prerequisites needed (Zipke, 2018). As a result, at the beginning of their carrier, many fresh graduated teachers face some difficulties in integrating technology into their instructions due to the excessive amount of course content, insufficient time to create and apply the technology-integrated lesson, the unavailability of the software needed that provided by the educational institution and merely being facilitated with the conventional course and workshop (Buss, Foulger, Wetzel, and Lindsey, 2018). Most technology integration preparation programs focus on the software rather than the methods or models to integrate it into instructions that make preservice and in-service teachers feel unprepared even though they have completed the course (Snow, Dismuke, Wenner, and Hicks, 2019).

Therefore, it is crucial to examine student teachers' readiness to use technology in the classroom and understand the digital competencies to deliver this pandemic's teaching and learning process. In addition, this study can offer helpful information, especially for student teachers, to reflect their readiness and digital competencies. The report will help redesign the curriculum at the faculty of education, especially the English Education Department, as the context of this study.

**SOME CRITERIA TO TEACH WITH DIGITAL TECHNOLOGY**

1. **Digital Competences and Digital Literacy**

Maré and Mihai (2018) defined technology as using any tools or digital applications to support the instructions inside the classroom. They suggested it engages and facilitates students in learning through, from, and with the use of it, assisting teachers in completing the teaching administration, creating the content to be delivered, and using it on their teaching presentation. Zhou and Wei (2018) also suggested that to be effective teachers in the digital age, they have to possess sufficient knowledge and skills to utilize digital devices and applications inside the class. Therefore, the utilization and the integration of digital technology into the instructions require teachers to have sufficient digital technology competence covering the knowledge, skills, and literacy.

Nami & Vaezi (2018) defined technology knowledge as comprehension of utilizing digital devices (computer, smartphone, etc.), search engines, web browsers, social networking sites, blogs, wikis, LMSs (learning management systems), audio, video, and text sharing software. In the broader sense, Kabanova and Kogan (2017) refer Information and Communication Technology (ICT) competence of a language teacher as a combination of four groups of skills, namely cognitive level skills (the ability to learn and to master new technology, understanding its place in the teaching process, and instructional design), technical level skills (the ability to use computer programs, internet resources, LMS, etc. for teaching purposes), motivation level skills (the ability to feel the need in professional development in online teaching, to enjoy using technology, etc.), and experience level skills (sustainability in using technology, ability to use new skills, time management, etc.)

Similarly, Bahcivan, Gurer, Yavuzalp, & Akayoglu (2019) described ICT competence as the ability to purposefully combine digital technology knowledge and skills and having a positive attitude towards it. Therefore, possessing ICT competence is not merely using the ICT technically and having the knowledge and comprehension on its matters. It also involves the functional aspects, interpersonal attributes, and ethical value of ICT. Educators from different disciplines and different countries also noted that ICT competence is not merely about technology alone. Teachers are also supposed to understand pedagogical considerations and skills required to support them effectively and efficiently (White, Folley, Williams, and Allen, 2015).

In other words, digital literacy is not merely the ability to use digital tools but also includes the collaboration between the technical, procedural, cognitive, and socio-emotional skills required to live as digital citizens (Cervera and Cantabrana, 2015). In line with this, Gonzalez-Lioret (2014) mentioned that digital literacy covers various skills, from operating the hardware and software and gathering and selecting relevant information and communicating effectively with others through the internet or computer-mediated literacy.

In summary, digital literacy is deemed a compulsory competence to acquire by student teachers to teach effectively in the digital era (Merç, 2015). Therefore, when preparing the student teachers, Dinçer (2018) recommends that teacher education institutions provide them with a technology-rich educational environment and gradually specialize it according to their disciplines to ensure their future integration. The focus on developing the technological literacy and skills for language teachers should aim to 1) acquire and maintain foundational knowledge and skills in technology for professional purposes; 2) integrate pedagogical knowledge and skills with technology to enhance language teaching and learning; 3) apply technology in record-keeping, feedback, and assessment; and 4) use technology to improve communication, collaboration, and efficiency. (TESOL, 2008, as cited in Egbert and Borysenko, 2018). Nevertheless, these objectives will not be achieved when teachers and student teachers do not have technology acceptance.

1. **Teachers' Technology Acceptance**

Technology acceptance refers to users' admission and agreement of the technology utilization in which the actual use of technology can be predicted (Teo, Milutinovic, & Zhou, 2016). Student teachers' intention to use and integrate technology in their future practice can be predicted by examining their technology acceptance level (Scherer, Siddiq, & Tondeur, 2019). Among the other acceptance or adoption models, Technology Acceptance Model (TAM) is acknowledged as the robust model since every variable from the later modified models has already been included in the TAM (Venkatesh, Thong, & Xu, 2016; Marangunić & Granić, 2015). TAM is claimed as the most popular used model to describe one's motivation in using technology. Proposed by Davis in 1985, it is also claimed that on the TAM theory, individual's use of ICT can be predicted based on their beliefs and attitude toward the technology (Anni, Sunawan, & Haryono, 2018; Handayani, Hidayanto, Pinem, Hapsari, Sandhyaduhita, & Budi, 2016). There could be two important reasons to accept and incorporate new technology i.e., the belief of the usefulness of the latest technology in improving productivity (perceived usefulness) and whether the new technology helps accomplish works (perceived ease of use). Numerous studies using the TAM as the conceptual framework has shown that perceived usefulness and ease of use are highly reliable in predicting one's attitude towards technology use and intention to use it (Ducey & Coovert, 2016). Figure 1 describes the TAM framework.

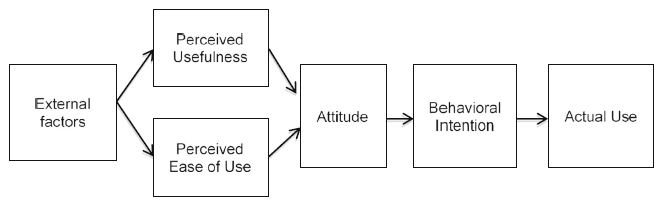


Figure 1 1 The TAM framework

1. **Teachers' Technology Integration**



Picture 2 Technological pedagogical content knowledge framework

(Mishra and Koehler 2006).

Besides having adequate digital competence, both preservice and in-service teachers should also know how to integrate this knowledge in their classrooms to deliver effective teaching (Gellerstedt, Babaheidari, and Svensson, 2018; Boholano, 2017). This technology integration can be defined as how teachers utilize technology for instructional deliverance to provide and reshape the teaching and learning activities more effectively (Gilakjani, 2017). In other words, it is a way of doing particular assignments by practically incorporating technical processes, methods, and knowledge that includes the hardware and the relation between the users, the tools, and the environment (Ahmadi, Reza, 2018).

As one of the technology integration approaches, Technological Pedagogical and Content Knowledge (TPACK) suggests the teachers' necessity in acquiring technological and pedagogical knowledge to be eligible and effective in incorporating technology into their teaching for any kind of content knowledge they have already possessed (Teo, Sang, Mei & Hoi, 2019). TPACK is the interdependent situated knowledge needed to effectively integrate digital tools and resources in curriculum-based teaching (Harris, Phillips, Koehler, & Rosenberg, 2017). It suggests that teachers understand how knowledge of technology, pedagogy, and content interact in their instruction (Rosenberg & Koehler, 2015). In 2006, Mishra and Koehler developed TPACK in response to the absence of theory guiding technology integration into education. Based on the TPACK framework, technology integration should occur in all school subjects, which means that English teachers also need to acquire the knowledge and competence to enhance their instruction to meet the requirement of being professional EFL teachers (Wang & Dostál, 2018).

In the context of preservice teachers, only limited studies focus on the needs analysis intended to reveal the EFL student teachers' readiness for the technology integration into language learning. Some previous studies focus more on the lack of infrastructure and the causes of in-service teachers' incompetence in incorporating digital technology into their classrooms. For instance, Vatanartiran and Karadeniz (2015) carried out a large-scale study on the challenges and needs of K-12 in-service teachers in Turkey, which findings revealed three significant issues they face in integrating technology into their instruction, namely 1) executive issue which relates to managerial and financial matter; 2) the infrastructural issue which deals with the limitation of technological facility and maintenance, and 3) instructional issue which includes instructional material, students' readiness, and teachers' competencies. Furthermore, Adegbenro, Gumbo, & Olakanmi, (2017) investigated the attitude of 21 in-service teachers in Gauteng Province, South Africa, and their needs in integrating technology to support their instruction in a secondary school context. The result revealed that most teachers have a positive attitude toward incorporating technology into their classrooms and are willing to integrate it into their teaching and learning sessions. However, they still have to struggle with the insufficient ICT facilities, lack of ICT training, and teachers' professional development programs. Another example comes from Kabanova and Kogan (2017), which identified university language teachers' personal needs concerning their professional ICT competence to design a specially tailored in-service training course and test its efficiency. The findings revealed that most participants are reasonably confident in using ICT for their basic needs and have enough technical skills to prepare their content for the teaching. However, most of them consider themselves to have low professional ICT competence. A course syllabus was then designed to develop technical skills, instructional technology, and practices based on the findings.

Referring to the studies mentioned above, not much is known concerning student teachers' readiness to integrate technology in the classrooms. Due to the urgency of digital literacy and competence during the covid-19 outbreak, it is crucial to verify student teachers' readiness in terms of their existing basic digital skills and whether they have met the required criteria to be eligible to teach with digital technology. Therefore, this study intends to address two research questions: the first is how EFL student teachers are familiar with digital technology while the second is whether they are ready to teach with digital technology. The findings of this study are expected to give important information on the lacks, wants, and needs of EFL student teachers concerning their basic digital skills and literacy.

**RESEARCH METHOD**

Needs analysis with the descriptive quantitative design was employed in the present study to reveal student teachers' readiness to teach with digital platforms and the kind of competencies they should acquire. Using purposive sampling, the present study involved 60 EFL student teachers from an Islamic university in Bogor. These participants were selected as they have taken ICT, Computer Assisted Language Learning (CALL), or Mobile Assisted Language Learning (MALL) courses and have accomplished the teaching practicum program that offers them experience the real struggles many teachers face in incorporating technology into their instructions. Therefore, they were expected to give more apparent descriptions of the lacks, wants, and needs and whether their existing basic digital skills and literacy have met the required competencies based on the TESOL's Technology standard for EFL teachers.

Due to the outbreak of the Covid-19 Pandemic, the primary data for the present study were collected by delivering a semi-close-ended questionnaire through a google form. There were 50 items representing the participants' familiarity with digital platforms and their readiness to teach with digital technology based on the TESOL Technology Standard for Language Teachers and the participants' technology acceptance level (TAM).

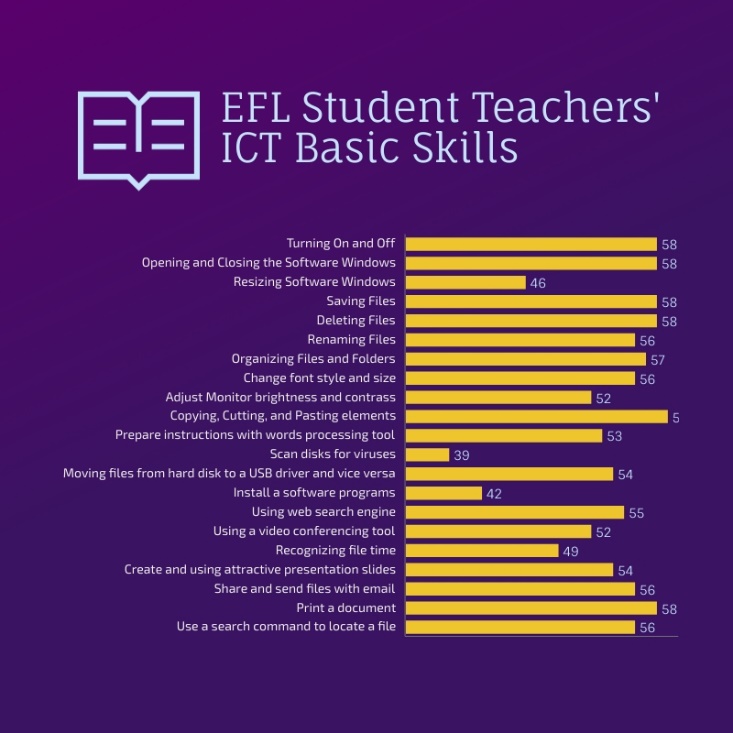
Content validity analysis was employed by inviting 2 expert validators while the Cronbach's Alpha was used to examine the instrument's reliability. The reliability coefficient for each construct varies from .76 to .94, indicating that the instrument is reliable. The data were analyzed using descriptive statistics in which both frequency and percentage were calculated.

**RESEARCH FINDINGS**

**EFL STUDENT TEACHERS' FAMILIARITY WITH DIGITAL TECHNOLOGY**

Regarding the student teachers' familiarity with basic technical skills to be ready in teaching and operating the digital tools, the findings, as displayed in Figure 1, reveal that more than 90% of the participants can utilize ICT basic skills starting from turning on and off, opening and closing Windows software, saving, deleting, renaming as well as organizing files and folders. Nearly all of them are also skillful in creating powerpoint presentation files, sharing files through emails or moving them from their device to USB driver or vice versa, and use a search command to locate a file. However, few of them need more training on ensuring safety from viruses, installing software programs, and resizing windows.

Figure 1 EFL Student Teachers ICT Basic Skills.



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Furthermore, concerning the utilization of supporting digital platforms for their future teaching, Table 1 shows that the student teachers have been familiar with the use of most popular digital tools such as WhatsApp, zoom, google meet and google classroom, and Instagram to initiate social networking and teaching and learning interaction though conference meeting. To provide media for their teaching and learning, Ms Powerpoint is the most famous while Prezi and Sway are the two least familiar platforms. It is also clear that more than 50% of the participants are familiar with applications to create video content, in which the highest portion (78%) know Kinemaster.  **Table 1 EFL Student Teachers' Use of Digital Technology in Supporting Their Future Teaching** | | | | | | | |
|  | | | | | | | |
| 2. | Social networking platforms | Whatsapp | Twitter | Blog | Telegram | Facebook | Instagram |
| 59 (96,67%) | 36 (60%) | 20 (33,33%) | 45 (75%) | 40 (66,67%) | 52, (86,67%) |
| 3 | Conference and meeting tools and digital learning platforms | Skype | zoom | Edmodo | Google meet | Google Classroom | Moodle |
| 12 (20%) | 59 (98,3%) | 9 (15%) | 52 (86,6%) | 57 (95%) | 1 (1,6%) |
| 4. | Applications to create engaging presentations | | Ms. Powerpoint | Canva | Sway | Powtoon | Prezi |
| 58 (96,67%) | 51 (85%) | 3 (5%) | 10 (16,67%) | 6 (10%) |
| 5. | Applications to create interactive quizzes or activities | | Google form | Ms. Form | Live worksheet | Kahoot | Quizzes |
| 57 (95%) | 19 (31,7%) | 2 (3,33%) | 42 (70%) | 30 (50%) |
| 6. | Applications to create annotated, engaging video content | | | Kinemaster | Video | InShot | Viva Video |
| 47 (78,33%) | 8 (13,33%) | 38 (63,33%) | 38 (63,33%) |
| 7. | Applications to provide interactive and collaborative learning | WIKI | mentimeter | Survey Monkey | Google drive | Padlet | Blogger |
| 19 (31,67%) | 5 (8,33%) | 1 (1, 67%) | 57 (95%) | 29 (48,33%) | 19 (31,67%) |
| 8. | Create Visually engaging content | | | Corel draw | Canva | Photoshop | Google draw |
| 18 (30%) | 51 (85%) | 36 (60%) | 8 (13,33%) |
| 9. | Create digital portfolios | | | Weebly | | Google sites | |
| 2 (3,33%) | | 11 (18,33%) | |
| 10. | Preparing learning material and activities | | | | lessonwriter.com | Google sites | WebQuest |
| 2 (3,33%) | 15 (25%) | 1 (1,67%) |
| 11. | Manipulating or changing link of websites into QR code or memorable websites address | | | QR Code Generator | QR Code Reader | Bitly.com | gg.gg |
| 19 (31,67%) | 20 (33,33%) | 16 (26,67%) | 4 (6,67%) |

Regarding the provision of interactive and collaborative learning, google drive is the most familiar, while survey monkey (1,67%) and Mentimeter (8,33%) are the two least likely to be used by the EFL student teachers in this study. Apparently, Padlet is quite well known as 48,33% of participants plan to use it in their future teaching and learning activities. In creating visually engaging content, many participants plan to use Canva and Photoshop, at 85% and 60%, respectively. Unexpectedly, for preparing learning materials and activities, only few of them are familiar with the three offered options, i.e. Lesson Writer (3,33%), Google Sites (25%), and Webquest (1,67%).

**Table 2 Student Teachers Familiarity with Digital Applications and Websites to Enhance Language Learning**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | **Reading Skills** | | | | WebQuest | Bilingualkidspot.com | Independent.co.uk | AR textbooks |
| 4 (6,67%) | 4 (6,67%) | 2 (3,33%) | 6 (10%) |
| 2. | **Listening Skills** | Lyricstraining.com | | talkingbook | Ello | Esl-lab.com | audacity | vocaroo |
| 5 (8,33%) | | 4 (6,67%) | 24 (40%) | 1 (1,67%) | 8 (13,33%) | 3 (5%) |
| 3. | **Speaking Skills** | | | | Talktyper | Or | Google assistant | google translate |
| 1 (1,67%) | 3 (5%) | 38 (63,33%) | 59 (98,33%) |
| 4. | **Writing Skills** | | | | Essaybot | Killbot | Blog | Writing exercises. co.UK |
| 2 (3,33%) | 8 (13,33%) | 19 (31,67%) | 1 (1,67%) |
| 5. | **Vocabulary** | | visual dictionaries (http://visual.merriam-webster.com/) | | thesauruses (www.visualthesaurus.com) | | visual imagery http://thevisualdictionary.net/ | |
| 11 (18,33%) | | 8 (13,33%) | | 4 (6,67%) | |
| 6. | **Grammar** | | | | Duolingo | Grammarly | Class dojo | Grammar Ninja |
| 46 (76,67%) | 52 (86,67%) | 4 (6,67%) | 1 (1,67%) |

Moreover, in investigating EFL student teachers' readiness to use digital technology in their future classrooms, the present study also attempts to reveal their experience with digital platforms developed to focus on language skills enhancement, as shown in Table 2. The findings show that most participants are not really exposed to various digital media for language learning enhancement, such as reading, listening, writing, and vocabulary enrichment.

For instance, on reading skills, nearly all participants do not know the four mentioned platforms or websites that can enhance students' reading comprehension since only 10% or less are familiar with the platforms mentioned in the instrument. For listening, the figure is better since 40% of them have known Ello although for other media, the statistics vary from 1,67% up to 13,33%. With regards to productive skills, many more participants know digital platforms for speaking than writing. 63,33% and 98,33% know google assistant and Google Translate respectively while for writing, standing as the highest, 31,67% know blog as a medium for teaching writing. Finally, concerning the familiarity with digital platforms on language components, more student teachers are familiar with digital platforms associated with grammar than vocabulary. 76% and 86% are aware with Duolingo and Grammarly, respectively, compared to only 13,33% and 18,33% who know thesaurus and visual dictionaries.

**EFL STUDENT TEACHERS' READINESS TO TEACH ENGLISH WITH DIGITAL TECHNOLOGY**

In addition to EFL student teachers' familiarity with some digital technology, this paper also addresses their readiness to teach English with digital technology by investigating whether they have met the digital technology standards to prepare them to be ready in teaching with digital technology using the TESOL Technology Standards for Teachers and Technology Acceptance Model (TAM) theories.

**Table 3 EFL Student Teachers' Technological Standard Point 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | ***EFL student teachers acquire and maintain foundational knowledge and skills in technology for professional purposes*** | **Yes** | **No** | **Interpretation** |
| 1. | I belong to online communities (e.g., mailing lists, blogs, wikis, podcasts) | 5  (8,3%) | 55  (91,7%) | No |
| 2. | I share information about available technology to enhance teachings with my classmates | 49  (81,7%) | 11  (18,3%) | Yes |
| 3. | I can take advantage of professional development related to technology integration (e.g., conferences, journals, mailing lists, communities of practice). | 54  (90%) | 6  (10%) | Yes |
| 4. | I keep up with information through a variety of sources that inform technology use. (e.g., books, journals, mailing lists, conventions). | 51  (85%) | 9  (15%) | Yes |
| 5. | I can use online technology as available to deliver instructional or support material. | 60  (100%) | 0 | Yes |
| 6. | I can adapt a variety of digital resources. | 55  (91,7%) | 5  (8,3%) | Yes |
| 7. | I conform to local legal requirements regarding accessibility and copyright | 59  (98,3%) | 1  (1,7%) | Yes |

Table 3 shows whether the EFL student teachers have acquired and maintained foundational knowledge and skills in technology for professional purposes. The findings revealed that all requirements have been fulfilled except involvement in online communities as more than 90% of the participants do not get involved in virtual villages. This is in line with the data that nearly 20% of them do not exchange information on available technology to enhance teaching with their mates, likely due to a lack of involvement in online communities. The good thing is that 100% can use online technology to deliver instructional roles in their online teaching.

The next criteria deals with whether the EFL student teachers can integrate pedagogical knowledge and skills with technology to enhance language teaching and learning, which results are described in Table 4. As expected, it can be clearly seen that more than 90% of participants in this study can integrate their pedagogical skills with technology to deliver their future instruction.

**Table 4 EFL Student Teachers' Technological Standard Point 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | ***EFL student teachers can integrate pedagogical knowledge and skills with technology to enhance language teaching and learning*** | **Yes** | **No** | **Interpretation** |
| 1. | I can identify appropriate technology environments (e.g., lab, one computer class, online, independent use) to meet specific learning/teaching goals. | 58  (96,67%) | 2  (3,33%) | Yes |
| 2. | I choose technology that is aligned with needs and abilities of the students (e.g., language learning–focused software, productivity tools, content tools) | 56  (93,33%) | 4  (6,67%) | Yes |
| 3. | I ensure that students understand how to use the technology to meet instructional goals before I teach | 58  (96,67%) | 2  (3,33%) | Yes |
| 4. | I can make several backup plans when the technology is not working | 55  (91,67%) | 5  (8,33%) | Yes |

Regarding identifying appropriate technology environments to meet specific learning goals, for instance, more than 95% of the EFL student teachers in this study believe that they are capable of doing so. The same percentage also consider themselves to be able to choose platforms and tools appropriate to students' needs and abilities. What should be noted in this point is that nearly 10% of the participants cannot make several backup plans when the devices do not work.

Next, it is also important to look at the participants' ability to apply technology in record-keeping, assessing students and providing feedback, which findings are presented in Table 5. Unlike the previous point, the EFL student teachers' answers vary and show a considerable number of participants who are not familiar with digital technology used to record anything during the teaching and learning activities, assess students, and provide feedback for students.

**Table 5 EFL Student Teachers' Technological Standard Point 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | ***EFL student teachers' ability to apply technology in record-keeping, assessment, and feedback*** | **Yes** | **No** | **Interpretation** |
| 1. | I am familiar with few record-keeping tools and techniques (e.g., software-based classroom management tools, electronic grade books, reports to stakeholders) | 35  (58,33%) | 25  (41,67%) | Yes |
| 2. | I can use technology to illustrate learner progress (e.g., graphic representations of scores over time, revision history). | 39  (65%) | 21  (35%) | Yes |
| 3. | I understand various methods of providing electronic feedback on student work (e.g., email, insert comments). | 54  (90%) | 6  (10%) | Yes |
| 4. | I can give feedback through digital file exchange (e.g., review tools in writing; annotated comments in speaking). | 54  (90%) | 6  (10%) | Yes |

As shown from Table 5, 41, 67% are not familiar with some available platforms to manage classrooms and report the results to relevant stakeholders. Similarly, some of them (35%) cannot use technology to illustrate students' progress using graphic representation or revision history. Nevertheless, 90% of them can understand how to provide feedback to students via email or insert comments next to students' work.

Finally, the last point investigated in this section is whether the EFL student teachers use technology to improve communication, collaboration, and efficiency. Table 6 explains the findings, which reveal that most of them have used digital technology to maintain and enhance communication, collaboration, and efficiency. This is because at least 90% of the participants answered "yes" to five out of eight questions posed in the factor. At least 85% of them answered "yes" to the three remaining questions.

**Table 6 EFL Student Teachers' Technological Standard Point 4**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | ***EFL student teachers's use technology to improve communication, collaboration, and efficiency*** | **Yes** | **No** | **Interpretation** |
| 1. | I share my email address with students and peers. | 51  (85%) | 9  (15%) | Yes |
| 2. | I can maintain an electronic forum (e.g., webpage, blog, WAG) to post information for students about the class. | 54  (90%) | 6  (10%) | Yes |
| 3. | I can view and give comment on students' electronic work (e.g., electronic portfolios, project work, websites). | 53  (88,33%) | 7  (11,67%) | Yes |
| 4. | I can share instructional material digitally. | 57  (95%) | 3  (5%) | Yes |
| 5. | I can implement lesson plans obtained from the internet. | 58  (96,67%) | 2  (3,33%) | Yes |
| 6. | I can draw on resources (lesson plans and teaching ideas) that are posted online. | 56  (93,33%) | 4  (6,67%) | Yes |
| 7. | I can use electronic resources to find additional materials for lesson planning and classroom use. | 56  (93,33%) | 4  (6,67%) | Yes |
| 8. | I can arrange a system to collect, organize, and retrieve materials and students' data. | 51  (85%) | 9  (15%) | Yes |

**STUDENT TEACHERS' TECHNOLOGY ACCEPTANCE**

To examine the EFL student teachers' readiness in teaching using digital technology, as previously argued, this study proposes student teachers' technology acceptance as an indicator. TAM offers four aspects to show significant factors that affect one's technological acceptance level, namely, Perceived Ease of Use (PEU), Perceived Usefulness (PU), Attitude toward the Use of digital technology (ATU), and Behavioral Intention to Use (BIU), as in presented in Table 7.

**Table 7 Student Teachers Technological Acceptance (TAM)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. |  | **Yes** | **No** | **Interpretation** |
| ***Perceived Ease of Use (PEU)*** | | | |
| 1. | I would find ICT based learning to be flexible to interact with | 55  (91,67%) | 5  (8,33%) | Yes |
| 2. | Learning to operate ICT based learning would be easy for me | 54  (90%) | 6  (10%) | Yes |
| 3. | It would be easy for me to get ICT based learning to do what I want to do | 55  (91,67%) | 5  (8,33%) | Yes |
| 4. | I feel that my ability to determine ICT based learning ease of use is limited due to lack of experience | 57  (95%) | 3  (5%) | Yes |
|  | ***Perceived Usefulness (PU)*** | | | |
| 5. | Using ICT based learning in my English Language Teaching course would enable me to accomplish tasks more quickly | 58  (96,67%) | 2  (3,33%) | Yes |
| 6. | Using ICT based learning would improve my English Language Teaching course performance | 58  (96,67%) | 2  (3,33%) | Yes |
| 7. | Using ICT based learning would enhance my effectiveness on the English Language Teaching course | 57  (95%) | 3  (5%) | Yes |
| 8. | Using ICT based learning would make it easier to do my English Language Teaching course | 58  (96,67%) | 2  (3,33%) | Yes |
|  | ***Attitude towards the use of Digital Technology (ATU)*** | | | |
| 9. | I believe it is a good idea to use an ICT based learning on English Language Teaching course | 58  (96,67%) | 2  (3,33%) | Yes |
|  | ***Behavioral Intention to Use (BIU)*** | | | |
| 10. | I plan to use an ICT based learning in the future | 59  (98,3%) | 1  (1,7%) | Yes |

The data displayed in Table 7 indicate that most of the participants have fulfilled the criteria, meaning that they accept the positive use of technology in the teaching and learning process. They consider that ICT-based learning is flexible, and they are confident in operating relevant devices. They also believe that ICT-based education will help them finish their tasks faster and enhance their teaching performance. Hence, they conclude that it is a good idea to use ICT-based learning to teach English and confirm that they will use it in their future teaching activities. However, they also note that lack of experience can limit their decision in using ICT-based learning.

**DISCUSSIONS**

The findings indicate that the present study participants show that the EFL student teachers have been familiar with some basic skills to operate digital technology. Therefore, they can be considered to have possessed adequate basic digital skills to make them ready to teach with the digital platform. Moreover, nearly all of them also accept the idea of using technology to deliver instruction, starting from creating materials up to assessing students' work and providing necessary feedback. Nevertheless, it is also clear that some of them do not know yet some platforms which are specifically intended to be used for language learning enhancement.

Initial exposure to technology, which the university's technology-related courses have likely introduced, can explain why many participants have been familiar with some essential ICT operations. The level of student teachers' acceptance of technology can be considered the critical factor affecting student teachers' decisions in incorporating digital technology into their future careers. The present study revealed that the participants' openness to embracing new digital technology results from their positive responses towards the practicality and usefulness of the digital technology and their positive perception and willingness to use it in their future careers.

Nevertheless, the findings of this study simultaneously imply the need of the EFL student teachers to learn more specific platforms intended to deliver online teaching and learning processes for particular language skills and components. This is in line with the study of Littlejohn and Hood (2017), which suggested that basic digital literacy is necessary for student teachers to feel more confident in utilizing the tools and maximizing the use of open educational resources (OER) to support the instructions.

Furthermore, as argued by Jeong (2017), the finding of this study suggests that educational and pedagogical goals should be considered along with the utilization of the new technology to make student teachers aware in choosing the suitable kind of tools to be used and how to operate it on their language learning and future careers as teachers. To ensure that student teachers possess the required competencies, it is not enough to only provide specific courses such as ICT, CALL, MALL, or instructional media. Still, it is also essential to verify that they have met the standardized criteria that have been approved among educators in a broader scope.

Overall, the findings of this study provide information that to be eligible to teach English with technology, the student teachers are expected to possess several criteria of digital competencies. The idea of the present study is in line with Starkey's (2020) division of 4 main types of competencies: generic digital competence, digital teaching competence, professional digital competence, and personal characteristics. The first one refers to technological knowledge as part of the TPACK component that includes general tasks such as skills in operating standard functions of digital devices. Secondly, digital teaching competence refers to the capability to incorporate digital technology into instructional practice. Third, professional digital competence that covers technological proficiency, pedagogical compatibility, and social awareness requires student teachers' sensitivity as problem solvers to incorporate digital technology into their instruction successfully. And lastly, the personal characteristics of the student teachers' personal characteristics include their belief, confidence, and self-efficacy in incorporating the digital tools, aligned with the state of digital nativity, experiences, and motivation in utilizing the digital devices. Finally, the findings of this have important implications on the need to include technology in the curriculum of the English Education Department.

**CONCLUSION AND SUGGESTION**

The present study highlights the necessities of the participants to enhance their basic digital skills regarding the utilization of digital technology, particularly in language learning due to the outbreak of Covid-19 pandemic and the revolution of digital technology in almost every part of human life. Therefore, this present study has conducted a needs analysis to gather some data that can inform the gaps or needs of student teachers compared to the requirements or criteria proposed by the local government and several suggestions from experts and well-established organizations such as TESOL.

The present study has raised two important research questions that deal with the gaps between the present situation and the target situation on student teachers' familiarity with some basic ICT operation and their readiness to integrate digital technology into language teaching. The findings show that most student teachers have adequate essential digital competencies in operating digital tools to be ready to teach with digital platforms. However, it will be better if they are introduced with specific applications, media, or websites that specifically focus on language learning enhancement. Further, student teachers' acceptance of technology is also considered a crucial point determining their decisions on using digital technology in their future teaching. As expected, they believe that integrating digital technology will be helpful to and can ease them in teaching English, and therefore are willing to incorporate it in their later instructions.

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