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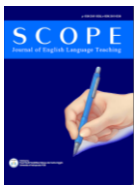

Research Article

# Indonesian EFL Teachers' Technology Integration in the Shifting of Online to Offline Learning

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**A B S T R A C T**

The evolving education system has led to new habits and adaptations in technology use. This study aims to investigate the Indonesian EFL university teachers' integration of technology in the shifting period from online to offline learning and explore preferences on teaching methods (online/offline). This study employed a phenomenological research design to discover the technology integration in the shifting period from online to face to face learning from the perspective of teachers. To collect the data, the researchers employed questionnaire and interviews by involving 30 EFL teachers teaching at several universities in Indonesia. The qualitative data were analyzed using thematic analysis to identify patterns and themes related to teachers' technology integration and teaching preferences. Additionally, descriptive statistical analysis was applied to identify and visualize the most technological tools used during this transition. The results show that even though the learning system return to offline learning, teachers still implemented technology in their teaching and technology habituation was still maintained in the post-pandemic period. Teachers integrated technology in three aspects: teaching preparation, teaching implementation, and teaching assessment. Furthermore, teachers' preferences of online or offline teaching are also being investigated. The findings of this study contribute insights for education stakeholders in designing appropriate teaching systems in the post-pandemic context.

## INTRODUCTION

The pandemic has brought disruptions and challenges to education affecting students and teachers. There has been a change in the way human do activities, including studying around the world. In education aspect, teachers must switch and adapt quickly from offline to online learning overnight. It has been rather overwhelming to teach in a completely new and unforeseen situation with little or no preparation. This phenomenon encouraged teachers and students get used to the use of online and digital learning.

Furthermore, numerous studies have found that both teachers and students were dealing with poor internet connections, complicated family conditions, low engagement, low motivation, lack of confidence, and mental health issues (Liang, 2021; Lin et al., 2021; Zhang, 2020). These study reveals that teachers consider the

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abrupt mode of migration as an unwanted experience and cause confusion, stress, and other negative emotion. In addition, it is noted that the absence of an online educational framework, the demand for experienced teachers, data gaps, and complex home conditions were the obstacle of online learning.

Despite its obstacles, the education system shift post Covid-19 pandemic has prompted educators to swiftly adapt to online learning (Adedoyin & Soykan, 2020; Sandars et al., 2020; Simamora, 2020). Teachers have to adapt to digital learning, in which every aspects have been dominated by technology (Klimova, 2019; Nartiningrum & Nugroho, 2021). In this context, it is no doubt that technology-assisted learning tools need to be used consistently by teachers and students at all levels, including primary and secondary schools, as well as universities. (Mahmood, 2021; Wahyuningsih & Baidi, 2021).

Now, in the post-pandemic era, schools and colleges are already returning to face-to-face learning (F2F). The education system in pandemic has brought the technology habituation in the implementation of education in educational institutions (Nartiningrum & Nugroho, 2021; Pokhrel & Chhetri, 2021). In and after the Covid-19 pandemic, technology integration has been one of the most essential tools for establishing higher education resilience, maintaining quality standards, and sustaining learning processes(Sánchez Ruiz et al., 2021). Thus, it can be concluded that the technology integration has become an old habit/pattern that has the potential to be maintained in post pandemic era where the education system switched to face to face learning. In this case, teachers are encouraged to acquire technology integration in teaching by having sufficient skills and knowledge. Related to this, TPACK focusing on technology, pedagogy, and content knowledge interaction, is essential to the development of better teaching practices when teachers teach content by using technology (Koehler & Mishra, 2009). Thus, it is intriguing to investigate the integration of technology not only in online learning but also in face to face learning.

Furthermore, the success of online learning is significantly influenced by teachers' perspectives about digital teaching (Ertmer & Ottenbreit-Leftwich, 2010). Teachers should have pedagogical experience and knowledge related to technology integration because they play such an important role in the educational system (Nurisma et a., 2024; Rohmana, 2022). As a result, it should be supported by professional development and training for teachers. However in reality, they lack technical understanding, as seen by a disparity between their ideas and behaviors towards technology integration (Nugroho & Mutiaraningrum, 2020; Sundberg, et al., 2012). Teachers' perspectives on the integration of technology into education therefore need to be constantly investigated in order to apply the appropriate strategies and methods to support student learning processes (Borg, 2015).

Numerous studies have been conducted on teachers' technology integration into teaching practice in some countries with mixed results Mertala (2019), in his study about about technology use in Early Childhood Education (ECE) found that education, socialization, and care all play an important part in teachers' integration of technology. In the same direction, O'Neal et al. (2017) investigated the use of technology in teaching and learning in the Southeastern United States. The result is that even though teachers acknowledged the benefit of technology in teaching and learning, they still needed additional guidance on how to properly integrate technology in education. Study of pre-service teachers' perceptions of developing digital literacy along three digital literacy concepts: digital native, skills-based, and sociocultural perspective, shows that teachers' beliefs about developing digital literacy include formal and informal contexts can be used to boost students' interest and motivation to develop their digital skills (List, 2019; Sadaf & Johnson, 2017). Additionally, Zhang, (2020) studied teachers' beliefs of Chinese as a foreign language about online teaching methods and self-assessment of digital skills. This study shows that teachers' perception influenced teachers' teaching strategy. Hence, teachers are responsible for the appropriate use of technology in teaching and learning to prepare students for the digital future. (Kondos, 2018; Wright & Wilson, 2011). If teachers are doubtful of the potential use of technology, they are less likely to successfully integrating technology into classroom activity. Subsequently, it is exceptionally vital to know the technology integration and what is stimulating and preventing the use of technology within the classroom from the perspectives of teachers(Chand, et al., 2020; Lestarina et al., 2022; Zhang, 2020). These previous research have primarily focused on the use of technology in either fully online or fully face-to-face environments without addressing the shift between the two (Mertala, 2019; O'Neal et al., 2017). Additionally, studies on teachers' digital literacy development have often overlooked how these skills translate into practical integration during transitional periods (List, 2019; Zhang, 2020). The majority of existing research lacks a comprehensive examination of the factors that facilitate or hinder the use of technology when moving from online to offline teaching settings (Chand et al., 2020; Lestarina et al., 2022).

Furthermore, despite the numerous studies on the use of technology in the classroom activity, the technology integration in the shifting period from online to face to face learning are still rarely being studied, especially in light of EFL universities' teachers in Indonesia. There were not many studies that report on how EFL universities teachers

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reoriented themselves back to F2F learning while still integrating technology. Hence, researcher propose the following research questions.

(1) How is Indonesian EFL university's teachers' technology integration from online to f2f learning?
(2) What are Indonesian EFL university's teachers' preferences on teaching modes (online or face to face learning)?

This study would also be critical in revisiting the established strategies in different learning environments where the switching from online to F2F learning occurred. Acknowledging the teachers' views would undoubtedly pave way for building realistic educational policies in crisis management as well as planning for similar future issue. Hence, our study attempted to address the research gap by investigating teachers' use of technology in the transition from online to offline learning, which may be beneficial or become a barrier in the present form of education.

## METHOD

This study was based in Indonesia and employed a phenomenological research design as it was the most appropriate method to bridge into the teachers' perception about the technology integration in the shifting period from online to face to face learning. This research design emphasizes on the importance of the individual's perspective and interpretation of the investigated phenomenon in the context of their environment (Creswell & Poth, 2018). Phenomenological research is appropriate for examining lived experiences and capturing the essence of those experiences (Creswell, 2013). By focusing on teachers' narratives, this approach allows for a deep understanding of their subjective experiences and the context of how technology integration in teaching practices evolved over time.

This study examines the integration of technology in EFL learning of Indonesian university teachers who teach at university level after returning to offline learning. It also seeks the teachers' teaching preferences using online or offline modes.

### *Participants*

There were 30 EFL teachers teaching at 8 universities in Indonesia participating in this study. Convenience sampling was used to select research subjects based on the availability of informants in the field. The subject of this study were teachers who experienced online teaching in pandemic era and offline teaching post covid era. Thus, most of teachers have teaching experiences for more than 2 years.

### *Data Collection*

The researchers used an online questionnaire to collect the data by using a Google form filled out by participants of the study. The first section of the questionnaire aimed to collect information regarding the participants' technology usage. The question items include the technological tools utilized in the class and how teachers integrated technology into their teaching. The second portion required individuals to select their preferred teaching system (online or offline) in the aftermath of the epidemic, as well as their justifications. The researchers also conducted direct interviews with the participants and used the Zoom meeting platform to gather further information from the teachers about technology integration after returning to face-to-face learning post-COVID-19 pandemic. It was conducted to ensure the data's validity, triangulation, and the entire study process.

### *Data Analysis*

This study adopted thematic analysis to search for commonalities emerging from the teachers' responses (Yin, 2016). The participants' responses were examined, evaluated, and integrated to identify emergent themes shared by all participants, subsequently leading to the outcomes of making conclusions.

## RESULTS AND DISCUSSION

### 1. Technology Integration in the Shifting of Online to Face-to-face Learning

### A. Technological tools used by teachers in face-to-face learning

This section portrayed the technological tools used by EFL teachers and how they applied in the class. The study findings revealed that teachers still integrate technology into their teaching despite returning from online to face-to-face learning. Below are several technological tools that the teachers employed post-Covid pandemic in offline classes.

**Table 1** Technological tools used by teachers in face-to-face learning

| Technological tools used by teachers in face-to-face learning | Frequency |
|---|---|
| Learning Management System (Google Classroom, e-learning) | 10% |
| Presentation Tool (Ms. Powerpoint, Prezi, Canva) | 30% |
| Online Meeting Platform (Zoom Meeting, Google Meeting) | 12% |
| Social Media (Instagram, TikTok, Facebook, Twitter, etc.) | 7% |
| Audio Visual Tools (Speakers, LCD Projector) | 15% |
| Messaging Apps (WhatsApp, Telegram, etc.) | 12% |
| Website containing supporting material | 14% |

Table 1 shows that 30% of teachers mostly used presentation tools in face-to-face learning. Meanwhile,

social media is the least use of technology (7%) being employed by teachers. It implies that Indonesian EFL university teachers mostly integrated technology into the current learning system using presentation tools such as Ms. Powerpoint. This result is similar to previous research conducted in different contexts and countries (Li, 2014; Liang, 2021; Zhang, 2020). These studies imply that presentation tools are well-known and mastered by teachers. Hence, teachers' integration of technology is affected by the digital platform types and classroom activities used in the class. It means that when they use familiar digital tools, they tend to feel confident in teaching.

**B. The technological integration of EFL university teachers in face-to-face learning**

The result of the technology integration of EFL university teachers can be explored in three aspects: teaching preparation, teaching implementation, and teaching assessment.

***Teaching preparation***

The findings showed that there was a difference when teachers prepared to teach during the pandemic and post-pandemic periods. Before, teachers put more effort into preparing the media to teach. However, with the shift to face-to-face learning, the use of technology in lesson plans is less pressing than during the pandemic. Teachers choose a less complicated approach without considering the prevalent usage of technology in education. Although the teachers did not ignore the use of technology in the classroom, the frequency of integrating technology was no longer dominant. Based on the interview, teachers stated that this happened since they have abundant agenda related to their academic life (teaching, conducting research, conducting community service programs) and limited time to create digital teaching media. It was revealed in the following statement.

*"During the pandemic, we had more time to focus on making digital content, but now, with everything back to normal, the preparation is more straightforward and less tech-heavy."* (T2)

*"My schedule is packed with teaching, research, and community service, so creating new digital media takes a backseat to other priorities."(T11)*

Since lesson planning is one way to evaluate teachers' quality, it is ideal for this technological integration to flow naturally from the process. Professional educators are individuals who can create excellent lesson plans to accomplish learning objectives (Otaya et al., 2020; Tjabolo & Herwin, 2020). Thus, the instructional media should be thoughtfully planned (Hanshaw et al., 2022; Mahmood, 2021). The success of learning and accomplishing goals may be challenging if the teacher cannot prepare well throughout this system.

***Teaching Implementation***

The study's findings showed a decreasing intensity in the technology integration in EFL class after returning to face-to-face class. Even though the policy of returning to offline classes was welcomed by many parties, at the same time, it appears to be the cause of the declining usage of technology in teaching implementation. Initially, teachers relied on online meetings (Zoom, Google Meet, E-learning, Google Classroom, etc.) but now have gone back to the previous practice (before the pandemic) by relying heavily on conventional lectures, questions and answers, and assignments without integrating technology in face-to-face learning. One teacher stated,

*"We used to rely on Zoom and Google Classroom a lot, but now, I find myself teaching more like I did before the pandemic, with lectures and direct interactions."(T15)*

However, = even though technology integration is declining in its application, the technology habituation during the online learning period seems to be maintained, as demonstrated by the use of WhatsApp groups as a medium of communication and information related to learning and even for material delivery. A teacher shared,

*"Even though we are back in the classroom, we still use WhatsApp groups to share materials and communicate with students outside of class."*

Additionally, some teachers stated that sometimes they still teach using video conference platforms such as Google Meet or Zoom meetings. The reason was that teachers could not attend the class based on the schedule or thought some materials were better delivered through online meetings.One teacher remarked,

*"If I can't make it to class, I prefer to use Google Meet so students can still get the lesson, especially for topics that are easier to explain online."*

It is in line with previous results studies about the positive influence of WhatsApp on students' language skills in reading and writing (Amalia & Sapriya, 2021; Fadhillah et al., 2020; Warman, 2018). The studies revealed statistically significant improvement in the student's writing and reading achievement after they were taught through blended learning by WhatsApp group chat. Thus, it can be concluded that technology integration in EFL class is still sustainable in some aspects.

***Teaching Assessment***

Changes were seen in the findings about the use of technology in learning assessment post-pandemic period. Teachers claimed face-to-face classes gave them more control and access to students' work. This is because


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teachers and students are already present in the same room. Previously, it was difficult to determine whether the students' test results were based on their own work. There was a limitation to control since teachers and students were not in the same place. One teacher commented,
*"It was harder to trust that the results were genuine during online assessments. Now, with everyone in the room, I feel more confident about the students' performance."(T8)*

Interestingly, some teachers exposed that they sometimes also still relied on the use of technology in assessing students' work; for example, written exams employing multiple choice questions were held in the e-learning. One teacher noted,
*"Even though we are back to face-to-face, I sometimes use the e-learning platform for multiple-choice exams because it automatically grades the answers, which saves time."* (T27)

They claimed that it was easier to get students' results since the e-learning system would directly and automatically provide the exam score. This is supported by Yuliani et al. (2020), who asserted that although teachers have difficulty assessing students' work, the use of technology in classrooms may make teachers' jobs easier. Teachers can readily gather and analyze assessment results by using technology. The results of this study are supported by earlier findings that show utilizing mobile technology in learning assessments will improve the assessment quality conducted by teachers(Andrews et al., 2018; Herwin et al., 2022).

**2. University teachers' preferences of teaching modes**
Research findings regarding the teachers' preferences for teaching systems revealed that 68 percent of respondents chose offline learning, compared to 32 percent who took online learning. Below are the teachers' statements regarding their teaching mode preferences in face-to-face learning.
*"I believe that online teaching contributes to good teaching and learning process, but I would choose offline teaching because I can conduct face-to-face learning and meet my students directly. You know that in online teaching, for example, in Zoom meeting, we cannot guarantee whether they really attend the class because most of them always put no video mode in that platform" (T3)*

Teachers' statements above showed that while they positively perceived online teaching, they still preferred face-to-face learning for some reasons. Firstly, the study showed that face-to-face learning enables teachers to meet and control students directly and guarantee that they participate in offline classes. In online teaching, it is difficult to ensure their participation. Thus, their learning progress is hard to monitor as well. This is in line with the study by Wang et al. (2018), who found that students' participation through Zoom was low in online classes. It is difficult for teachers to engage the students in the online class because students occasionally shut down their webcams and do not answer when they are called upon. This agrees with the conclusion that in the post covid era, face-to-face learning was preferred because both students and teachers were more comfortable in the traditional classroom setting (Roy et al., 2020; Toquero, 2020; Wang et al.,2018).

Furthermore, teachers added that they preferred to choose offline learning because they could ensure students' learning outcomes by directly conducting the assessment in the class.
*"I would prefer face-to-face learning because I can control the classroom activities, including the material delivery and students' assessment. From my experience in assessing students' work in online class, I could not 100% believe that students' test result was obtained by their own ability. It's hard to control whether they are being honest in finishing the assigned tasks(T7)*

The excerpt above implies that despite the accessibility of digital information technology in online teaching, this also generates students' academic dishonesty. It means it is unsure whether students used their abilities in online learning or not. Conducting academic dishonesty in online courses, for example, cheating is much easier than in traditional courses, especially when nobody watches students in an online environment, the opportunity to cheat is maximized (Awosoga et al., 2021; Bachore, 2016; King et al.,2019). Hence, this infers that teachers prefer offline learning because of the issues of academic dishonesty in online learning.

Additionally, teachers claimed that preparing online learning material took more time. Thus, they preferred face-to-face learning. It can be seen in the excerpt below.
*"After we returned to offline class, we had so much work to do, so It's difficult to create learning material by integrating technology to teach in online classes. So, I preferred to teach in offline class because I could directly deliver the material in the class to students without being troubled to prepare those." (T9).*

The result above shows that online learning is less preferred than offline learning since preparing material in an online course is more time-consuming. Claimed that revising lesson plans can occupy a great deal of time, but revising lesson plans and creating online course material is even more labor intensive (Phillips et al., 2016). In addition, teachers claimed that they were also being overwhelmed by their workloads. Thus, preparing online course material becomes a challenge for them.

Interestingly, while most teachers preferred offline teaching, the result of the interview revealed that they occasionally implemented online learning using Google Meet or Zoom meetings. If they could not attend the class based on the schedule, they thought that some materials were better delivered through online meetings. They mentioned that they still continue integrating technology when conducting online learning, even after post covid 19 pandemic.

*"If I had to choose, I preferred face-to-face learning. But, sometimes I also conducted online learning If I have urgent agenda and could not attend the offline class. This is more flexible, I think" (T5).*

*"I occasionally ask students to join my class through Zoom Meeting or ask them to finish the assignment in the e-learning" (T1).*

These statements implied that, although offline teaching was favorable, it turned out that teachers also implemented online teaching simultaneously. In other words, these teaching modes could be considered blended learning. In addition, this is supported by research conducted by Guillen (2022), which demonstrates that for their post-pandemic and future career education, tertiary college students in the Philippines choose blended learning (a combination of traditional classroom instruction and online activities) because it increases their satisfaction and retention while also promoting social interaction. Blended learning is encouraged in other studies as the future of higher education (Mukherjee & Hasan, 2022).

This study reveals the importance of supporting the integration of technology into face-to-face learning, emphasizing blended learning as a sustainable approach. It suggests addressing teacher workloads through resources such as training, collaborative planning, and user-friendly tools. Thus, there is necessity of innovative assessment practices, including technology-aided evaluations. Additionally, leveraging digital tools to improve student engagement and communication fosters a more dynamic and continuous learning environment. Overall, this study implies that the learning process must remain integrated with technology, even in non-pandemic situation. Therefore, educators must adjust to changes and advancements in information and communication technologies, particularly in education. Additionally, this study provides valuable insights for education stakeholders in developing effective teaching methods that enhance learning outcomes in both online and offline environments.

## CONCLUSION

This study aimed to investigate Indonesian EFL teachers' technology integration and to explore the teachers' preferences on the teaching modes after returning to face-to-face learning in the post-Covid-19 pandemic. The result of this study revealed that despite the change in the education system, which returned to offline learning, teachers still implemented technology in their teaching. The majority of technological tools being used by teachers was presentation tool such as PowerPoint. Furthermore, teachers integrated technology in three aspects: teaching preparation, teaching implementation, and teaching evaluation. The study showed that even though technology integration in the current learning system has decreased, the technology habituation is still maintained in the post-pandemic period. Interestingly, even though they preferred face-to-face learning, they occasionally still conducted online learning. It means that blended learning has been applied in the EFL classroom. These findings suggest that in the shifting period, teachers implemented more hybrid approach, combining traditional face-to-face methods with the benefits of digital tools. It reveals their adaptability and commitment to meeting students' needs in a dynamic learning environment.

However, the researcher highlighted some limitations in this study, such as the number of participants; consequently, this finding cannot be generalized to all EFL teachers in Indonesia. Therefore, it is advised to undertake future research with more participants to portray the implementation of technology in EFL classrooms after returning to offline learning. This study implies that the learning process must remain integrated with technology despite not being in a pandemic. Therefore, as educators, teachers must adjust to changes and advancements in information and communication technologies, specifically in education. This study contributes insights for education stakeholders in constructing appropriate teaching methods to improve their effectiveness both in online and offline education environments.

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