



## ICT BARRIERS IN EFL REMOTE EDUCATION: COMPARATIVE EXPERIENCES OF SENIOR HIGH SCHOOL TEACHERS ACROSS SCHOOL TYPES IN WEST JAVA, INDONESIA

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**Abstract:** The COVID-19 pandemic has disrupted education globally. In response, the Indonesian government mandated an immediate transition to virtual teaching. However, the rapid transformation was associated with unprecedented challenges and complications. This qualitative study investigates the experiences of 24 EFL senior high school teachers in West Java, Indonesia, representing diverse school backgrounds. The study illustrated that the teachers faced various challenges categorised into three significant aspects: 1-Technological/Technical (equity and accessibility, bandwidth, technological support), 2- Students (lack of motivation, time management, changed behaviour), and 3-Facilitator's abilities (limited ICT abilities, burnout, workload). Specifically, urban public high school teachers failed to keep students engaged and motivated in online classrooms. In contrast, rural public senior high school instructors encountered severe technical hurdles, such as inadequate internet access and limited digital equipment, making it challenging to prepare interactive classes. Furthermore, private senior high school instructors were unprepared for online education and battled to keep their pupils engaged and motivated. Furthermore, private Islamic school teachers had a particular issue connecting their teaching techniques with Islamic beliefs, which complicated digital tools and platforms. The study suggests that EFL teachers require extensive support networks, focused interventions, and specialised training to address these issues.

**Keywords:** COVID-19 pandemic; Indonesian EFL teachers; remote teaching; ICT challenges.

### INTRODUCTION

In late December 2019, the emergence of the COVID-19 pandemic caused unprecedented global disruptions, profoundly impacting education systems worldwide, resulting in widespread school closures and a rapid transition to online learning assisted by Information and Communication technology (ICT).

Incorporating ICT in foreign language instruction such as English as a foreign language (EFL) provides unlimited momentum access to various types of material (audio, video, text), benefiting the learning process directly or indirectly (Sabiri., 2019). Further, if accurately utilised, multimedia and technology positively impact language classrooms, providing various

resources, enhancing motivation, and improving students' language skills (Su & Zou, 2022., Klimova et al., 2023). Further, it facilitates learn-centered approach and global communication (Duque & Garzon, 2024).

Despite positive beliefs about technology use in the classroom and considerable assets and promising prospects of employing ICT in education (Tondeur et al., 2017; Li et al., 2018), the COVID-19 pandemic's rapid shift to online learning has imposed bewilderment and incertitude towards technology use (Mutton, 2020; Juárez-Díaz & Perales, 2021).

Alike, in Indonesia, English teachers confronted several significant issues, including poor internet bandwidth, absence of computers or

devices, and low digital literacy skills, maintaining student enthusiasm and engagement (Kuswoyo et al., 2022)

Further, infrastructure is another fundamental consideration in remote education; numerous educators and students in remote areas were challenged with the necessity of adequate and sufficient internet bandwidth to support the demands of online classes, failing to keep up with remote education (Zhong, 2020).

Despite the availability of online materials and required equipment such as computers, Indonesian EFL teachers are hesitant, psychologically uninspired, and unprepared to use digital gadgets in their lessons (Mutiaraningrum, I. 2020). In contrast, an alternative study indicated that instructors belonging to the millennial generation expressed a favourable disposition toward integrating technology into their instructional practices. Notably, those instructors utilised cell phones and computers to assist students in learning four essential English skills, including speaking, reading, writing, and listening (Pratolo & Solikhati, 2020).

Further, Li (2021) investigated how EFL Chinese instructors shifted to online teaching amid Covid-19, highlighting the critical role of ICT literacy and acceptability in determining teachers' readiness for digital instruction. Similarly, Oliveira et al. (2021) explored the experiences of higher education students and professors during emergency remote teaching. They emphasised the requirement of extensive ICT training for educators to support smooth transitions to digital learning.

The role of teacher characteristics in ICT integration has also gained interest in the literature. For instance, Rahimi and Yadollahi (2011) studied how teachers' attitudes, technological competence, and institutional support impact ICT adoption in EFL classrooms. Pozas and Letzel (2021) expanded this idea by finding determinants of pre-service teachers' potential ICT usage, underscoring the relevance of early digital preparation in teacher education. Similarly, Choi et al. (2021) proposed reassessing teacher education policy in ICT, stressing lessons learnt from emergency remote teaching in Korea. These studies together underline that successful ICT integration involves more than simply access to technology, suggesting sufficient training and a good approach toward digital pedagogy.

Beyond individual teacher preparedness, structural barriers impact ICT use in EFL settings.

Valverde-Berrocoso et al. (2021) investigated pre-pandemic ICT integration in education, offering insights into the structural impediments that prevent digital adoption. In a recent study, Muhajir et al. (2025) further analysed Indonesian EFL instructors' challenges in remote areas where insufficient technological infrastructure and training opportunities hinder successful ICT use. Likewise, Armendariz et al. (2021) examined the influence of emergency remote teaching on technical and technology education, demonstrating differences in access and student involvement.

Student and instructor views also play a key influence in defining ICT's efficacy in EFL classes. Hajji and Kim (2024) compared Moroccan and Korean high schools, illustrating how cultural and environmental variables influence the adoption and utility of ICT in language training. Kusuma (2022) investigated how EFL pre-service teachers used technology to manage and teach speaking skills during emergency remote teaching, finding benefits and limits in digital speaking education. These findings demonstrate that ICT provides chances for language acquisition, but its effectiveness depends on careful implementation, teacher preparation, and contextual flexibility.

Much research has been conducted on the use of ICT in EFL classes, particularly in various school settings, such as public, private, religious, urban, and rural areas. Research indicates that ICT assists in language learning. However, its effectiveness depends on the equipment, teachers' skills, and the support from the school.

Emphasising the requirement of ongoing professional development and infrastructural investment, Que (2021) indicated the difficulties of maintaining ICT integration in remote rural schools. Comparably, Muhajir et al. (2025) examined how Indonesian EFL instructors see ICT use in distant locations, exposing issues including poor digital resources and insufficient training. In Chinese rural schools, Wang et al. (2022) investigated ICT integration, therefore highlighting the discrepancy between policy recommendations and actual classroom practices. This research implies that although rural schools face significant issues in digital adoption, focused interventions might assist in closing the digital gap.

In contrast, private and urban schools often have more access to ICT resources and technologies. Medina (2021) investigated high

schools in Ecuador and revealed how underprivileged rural and well-resourced urban schools differ in how they incorporate ICT. Further, in exploring the transformational impact of ICT in EFL classrooms, Duque and Garzón (2024) demonstrated how technology can promote dynamic and engaging learning experiences. Their results are consistent with those of Valverde-Berrocoso et al. (2021), who evaluated ICT integration before the pandemic and stressed the significance of teacher preparation in efficiently using digital resources.

Although previous studies have examined the challenges of integrating ICT into remote education, there remains a significant gap in understanding how these challenges vary across school settings in Indonesia, including public, private, and Islamic schools in urban and remote areas. The Indonesian educational setting is highly diverse, with school types differing in resources, institutional policies, and readiness for digital learning. Little research has explored the influence of these disparities on the experiences of English as a Foreign Language (EFL) teachers in distance learning during the pandemic. This study aims to fill this gap by conducting a comparative investigation of ICT-related challenges faced by secondary EFL teachers in West Java, Indonesia, across different school settings.

This paper aims to contribute to EFL instruction and ICT integration in Indonesia. First, it highlights EFL teachers' specific challenges in remote instruction, which is frequently disregarded. Second, this study emphasises differences in digital access, teacher training, and technological resources that impact remote education and highlights inequities in technology use in various educational settings, including public, private, and Islamic schools in urban and rural areas. Third, by directing national education policy and professional development programmes, the study assists policymakers and teachers in equal access to digital learning tools. Finally, this study contributes to digital literacy in EFL teaching by examining how Indonesian EFL instructors overcame technological challenges during the COVID-19 pandemic, highlighting opportunities for institutional support and teacher training. To achieve these objectives, this study aims to answer the following central question: What challenges did senior high school EFL teachers across different school types in West Java, Indonesia, encounter amid COVID-19 while incorporating technology into remote education?

To an international audience, it is vital to briefly clarify the differences between public and private schools in Indonesia. Public schools are free and secular, supported mainly by the government. The public school system serves the vast majority of the schooling population.

## METHOD

This study employed a qualitative approach based on a survey and semi-structured interviews to collect data and investigate the challenges EFL teachers at different senior high schools in West Java, Indonesia, encountered in integrating ICT in remote education amid COVID-19, which is challenging to explain quantitatively (Myers & Avison, 2002).

This study encompasses a cohort of 24 EFL senior high school educators situated in West Java, Indonesia. They represent diverse educational backgrounds, including public, private and Islamic schools in urban and rural areas. A random sampling strategy was implemented to identify the participants. Although the sample size may appear to be relatively small, it was determined to be adequate for this exploratory study, which was designed to acquire preliminary insights into the obstacles encountered by EFL instructors during the COVID-19 pandemic. The study's vast range of educational institutions further enhances its scope, aiming to capture a nuanced view of the issues EFL educators encounter teaching remotely. Notably, all respondents in this study served as in-service English teachers, actively engaged in emergency remote teaching practices amid the COVID-19 pandemic.

To collect data efficiently, the researchers opted for an online questionnaire designed and administered using Google Forms. The survey questionnaire was adapted from a similar study conducted by the British Council. The British Council developed and validated the original questionnaire, ensuring its reliability and relevance to the context of EFL teaching. Minor modifications were made to tailor the questionnaire to this study's specific research question and context. The survey link was distributed through WhatsApp and personal networks. The questionnaire comprised 39 items, including open-ended questions, multiple-choice options, Likert-Scale ratings, and yes or no responses, allowing for quantitative and qualitative data collection.

Ethical considerations were taken into account to ensure the confidentiality and anonymity of

participants. Before the commencement of data collection, the participants were provided explanatory instructions, elucidating the purpose of the study. The participants were assured that their responses would be confidential and used solely for this study. The teachers filled the survey electronically via a smartphone, tablet, computer, or laptop at their convenience. The entire survey data collection process was completed within a one-week time frame, ensuring a focused and time-bound effort in gathering valuable insights from EFL teachers in the specified regions.

To gain a more detailed and meaningful understanding of the research problem from the primary source (Patton, 2014), the researchers purposefully selected four available and reachable teachers for in-depth semi-structured interviews to represent different school types. The interviews were conducted through WhatsApp or Zoom, and interview saturation was reached after collecting sufficient data and shared experiences.

As Woodfield (2008) highlighted, such interviews enable participants to elucidate their choices by sharing their reasoning and perspectives. Each interview lasted for about thirty minutes. Following the interviews, the researcher performed a debriefing to allow participants to ask questions, comment, or add any information not discussed during the interview. The interviews were completed within a week and were recorded to facilitate subsequent analysis.

A summary of the responses of the 24 participants was derived from Google Forms. The survey data were analyzed using descriptive statistics, including frequencies and percentages, which were calculated using Google Sheets. Graphs like bar charts and pie charts were also created to represent the results visually. The researchers employed an audio recording technique to acquire thorough insights into the investigated phenomena and develop a transcript of the in-depth interview. Post-interview, a comparative analysis of audio-recorded transcriptions and interview scripts was generated from notes taken during interviews to ensure the precise words uttered by the interviewees. Thematic analysis was conducted through systematic and iterative coding, categorizing, and theme development. The interview transcripts were carefully read and re-read, and codes were assigned to relevant data segments. These codes were then grouped into categories, and themes

were identified through pattern identification and meaning-making.

## RESULTS AND DISCUSSION

The findings derived from the survey and the interviews revealed that EFL teachers at Indonesian senior high schools of West Java faced challenges in using ICT in distance education amid COVID-19 and could be classified into three main significant themes. 1-Technological/ Technical (equity and accessibility, bandwidth, technological support), 2- Students (lack of motivation, time management, changing behaviour), and 3-Facilitator skills (limited ICT abilities, burnout, workload).

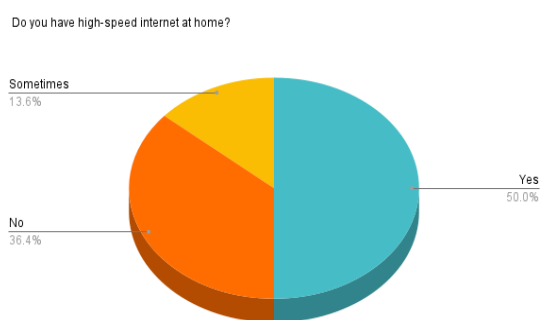


Figure 1. *Internet bandwidth*

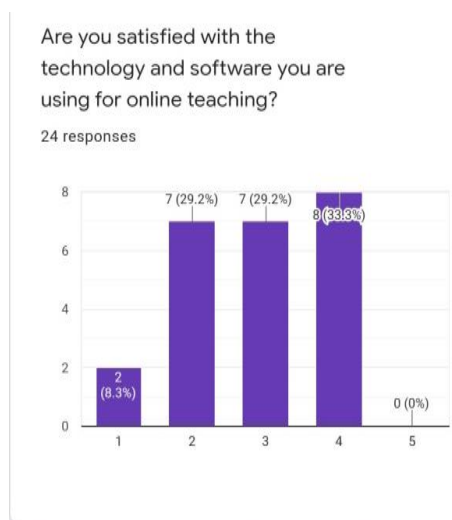


Figure 2. *Technology satisfaction: 1= Satisfied; 5= unsatisfied*

Ten out of twenty-four respondents teach in rural areas. Figure 1 illustrates that just 50% of the respondents had home access to high-speed internet, which is crucial for facilitating their teaching duties remotely.

Furthermore, when asked how satisfied they were with using technology for online teaching, most respondents expressed dissatisfaction, as

depicted in Figure 2. The interviews with the teachers provided additional support for these findings. Throughout the interviews, many instructors expressed their frustrations with interruptions or complete cuts in internet connectivity, particularly in rural areas and during rainy weather.

**Student challenges:** Teachers revealed that students faced significant challenges with distance education, including laziness, low motivation, procrastination, negligence, adverse changes in behaviour, and lack of engagement, which disrupted the educational process and made assessing pupils' genuine skills laborious. Moreover, academic dishonesty, such as plagiarism or cheating, was discouraging for professors. Dealing with such situations increased the burden and led to burnout.

Further, not all students had cell phones or signal. Mr Robi regrettably highlighted that "Students in rural areas had to walk 5-10 kilometres daily to search for signal."

Mrs Sri added, "In rural areas, some students opened YouTube and browsed the internet for the first time. They had no training in using technology for online learning, which posed challenges for teachers." One of the interviewees stated, "In rural areas, English is not as important as in urban areas. In face-to-face teaching, I rarely used English in my English classes. Now with online teaching, I never used it; I only communicated with my students using local languages."

One of the teachers interviewed mentioned, "I prefer teaching at school. It is much easier and more interactive than teaching online. Students understand better when studying at school. Teaching online is very challenging because I have to find more ideas to make my students enjoy studying in my class and to motivate them to do the exercises."

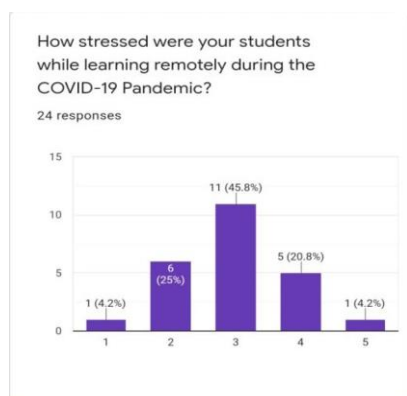


Figure 3. *1= Motivated; 5=Not motivated*

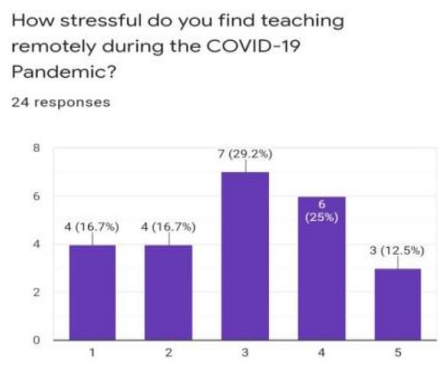


Figure 4. *1=Stressed; 5=comfortable 2-Facilitators' abilities*

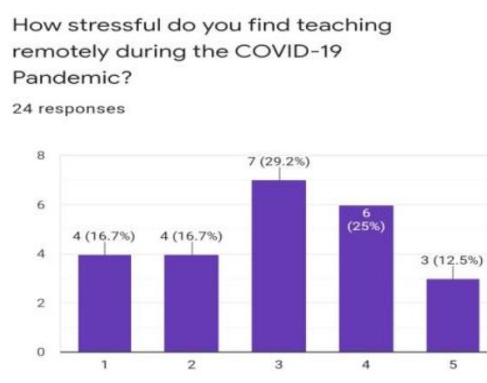


Figure 5. *1= Stressful; 5= Unstressful*

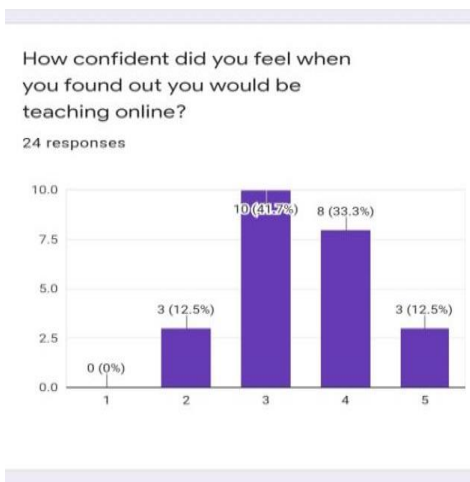


Figure 6. *1= Very confident; 5= Not confident*

**2- Teachers' abilities:** The facilitators' or teachers' abilities include lacking ICT skills, time management, stress, and burnout. Teachers claimed they experienced various psychological burdens, including stress (29.2% of respondents experienced moderate stress), anxiety, and burnout due to excessive workload, time constraints, and uncertainties. In response to the question related to burnout experience, the respondents reacted as follows: "Yes, when you

realise that your students copy all their friends' assignments",

Furthermore, prof Robi, one of the interviewees who taught 14 classes, each with 35 students in a rural area expressed his discomfort with teaching online. "Now I plan to go to students' houses to deliver the material and explain the course".

Although some teachers benefited from training on using Google Meet, editing videos, and creating interactive presentations, they were bored and exhausted by the lengthy time they needed to prepare the material. "It is getting harder every day", claimed prof Abdulkhaleq. Preparing materials is demanding and laborious. Learning and adapting to new technology could take time, and the constant requirement to provide exciting material could lead to tiredness and a perception of increased difficulty over time. Teachers confronted various issues concerning ICT skills, time management, stress, and burnout. These difficulties could substantially influence teachers' well-being and capacity to execute their jobs efficiently. Some facilitators or teachers were unable to use ICT, which was a legitimate problem, as technology had become a vital element of education, particularly during the COVID-19 epidemic. Non-ICT-adept teachers needed assistance adjusting to online teaching platforms and tools, adding stress and pressure.

Based on the data collected from the 10 EFL teachers who taught in rural areas, significant insights emerged regarding the online teaching experience. A substantial majority, 6 out of 10 teachers, reported that their pupils learned less efficiently online than offline. Despite this hindrance, 7 out of 10 educators received training on online teaching methods and resources, revealing a positive indicator of professional development efforts. However, it is worth noting that half of those educators, 5 out of 10, conveyed that their confidence in teaching remained constant even after several months of online instruction.

Based on the provided data from the Likert scale (1-5), where one represents "Very satisfied" and five demonstrates "Not satisfied", we observed varying levels of satisfaction among respondents regarding the technology and software they employed in online instruction. Most responses fall within the 2 to 4 range, indicating moderate satisfaction. Multiple entries of 3 and 4, imply that most respondents are neither highly satisfied nor highly dissatisfied.

Overall, while there are instances of satisfaction, the data highlights areas for improvement in the technology and software used for online instruction in rural areas to meet educators' needs.

Teaching remotely during the COVID-19 pandemic introduced high stress levels among educators in rural areas, with responses varying widely. On a scale where 1 indicates high stress and 5 signifies high comfort, most teachers reported a stress level of 3, reflecting moderate degrees of stress. A few teachers experienced higher stress levels, rating their stress at 4, while one found the experience as highly stressful. The diverse range of responses reflects the heterogeneous impact of remote instruction on educators' stress degree during the pandemic.

Many educators have reported experiencing burnout and breakdowns throughout the pandemic. Some have managed to avoid these issues. Others, however, have struggled significantly. Students copying assignments and assisting those left behind caused frustration and insecurity. Despite various activities and methods to cope with burnout, several educators declared boredom and unhappiness with online instruction.

During the COVID-19 pandemic, educators reported that their pupils' stress levels were relatively high, with most ratings around three on a scale of 1 to 5 where 1 signifies highly stressed and 5 highly comfortable. The ratings indicate considerable degrees of tension, but not to the extreme. A few educators rated their students' stress levels slightly higher, indicating more significant challenges. Overall, the statistics show that remote teaching-learning during the pandemic was a challenging experience for most learners.

During the COVID-19 epidemic, the EFL educators in rural areas reported that students' motivation levels for online learning were largely moderate to low, with most students rated at 3 or 4 on a scale of 1 to 5, with 1 signifying high motivation and 5 indicating low motivation. Although some students love the learning process, others find online learning uninteresting. Students in remote areas experience obstacles due to inadequate internet connections and lack of necessary resources, leading to frustration. Educators reported that learners interested in online learning have lost interest over time.

Furthermore, educators see the remote teaching tools as moderately helpful but insufficient. It is worth noting that the sudden shift to remote learning has negatively influenced

students' learning outcomes, specifically in rural areas.

Based on the data collected from the 14 EFL teachers who taught in urban areas, significant insights emerge regarding the online teaching experience. These educators experienced a large transition to online teaching during COVID-19, with most encountering this mode of instruction for the first time. Despite initial obstacles, many instructors gained confidence gradually, feeling significantly more at ease and proficient in conducting online classes. However, adjusting lesson plans required longer time for most.

These educators expressed a crucial necessity for improved digital resources and tools, adequate support, and continues professional development to enhance their online teaching quality and student engagement.

Based on insights gathered from an EFL instructor in a private school in an urban area, the findings showed that, unlike many peers, Mr W lacked prior training in online pedagogy but approached the challenge with moderate initial confidence rated (4 out of 5). As he acquired experience, his confidence has slightly increased. His primary online sources included Google Classroom, ClassDojo, and Khan Academy, leveraging high-speed internet for instructional delivery.

Mr W was satisfied with the technology and software he used for online instruction, rating it 2 on a scale where lower scores indicate satisfaction. He received significant assistance from his school and colleagues. Regarding the success of remote teaching during the pandemic, he rated it moderately successful (3 out of 5), while acknowledging a moderate stress level ranking (4 out of 5). Mr W perceived his students as similarly stressed (3) and unmotivated. He observed decreased student engagement compared to in-person classes.

Parents were generally supportive, yet the students' learning effectiveness has diminished. Mr W reported no significant challenges with technological devices or the internet, yet underlined a need for additional support from the government to enhance the teaching experience. Despite the challenges and occasional burnout during the pandemic, Mr W found satisfaction in remote teaching, emphasising the importance of mental well-being support.

This profile illustrates the diverse experiences and difficulties faced by EFL teachers in private schools in West Java, Indonesia, shifting to online instruction, highlighting adaptability and

ongoing demands within this educational setting.

The comments of two high school EFL instructors from distinct Islamic boarding schools, an urban male and a rural female, provided numerous insights into their online teaching experiences during COVID-19. No instructors had online teaching experience but were trained to use Zoom, Google Meet, OBS, and Camtasia throughout the pandemic.

After several months of online education, the male teacher gained confidence. The female instructor, who felt more comfortable teaching online than before, agreed that listening skills are optimal for online teaching.

Despite taking longer to organise online classes, the male instructor was happy with the technology and software he utilised, but the female teacher was less satisfied (rating of 4). The male instructor assessed his coworkers' and school's assistance as applicable (rating of 2), but the female teacher did not.

Remote teaching during the COVID-19 epidemic caused the male instructor to have a high-stress level of 5 and view his pupils as worried and uninspired. The female instructor had moderate stress and noticed that her students were initially enthusiastic about online learning but became bored after a while. Both teachers found it unpleasant. They favoured offline instruction for its convenience and interactivity.

Despite having an internet connection, both instructors had trouble incorporating technology into instruction. Thus, Islamic boarding school instructors faced several online teaching challenges throughout the epidemic, varying in satisfaction and stress.

Mastering distance teaching mandated by the COVID-19 pandemic presented numerous challenges for teachers worldwide. In investigating the significant challenges Indonesian EFL teachers of senior high schools in West Java encountered in integrating technology for distance education, our findings underline various technological and pedagogical obstacles across school types. The lack of ICT skills, limited digital tools, and poor internet infrastructure impede the efficient implementation of digital education. These findings are consistent with previous research (UNESCO, 2023; OECD, 2024; World Bank, 2024), which emphasises differences in digital competency among educators and demonstrates how these constraints lead to more significant educational inequities. In rural locations, where students primarily rely on mobile devices for online learning, the digital gap is

significantly pronounced, mirroring Vieira et al.'s (2021) claim that uneven access to technology exacerbates learning differences.

The use of ICT in EFL classrooms differs significantly across public and private institutions. In Ecuador, private high schools are better prepared with ICT resources, and instructors and students have more access to this technology at home and at school, which leads to a more positive attitude towards ICT integration in private schools than in public schools, where resources are few and instructors are frequently underqualified to utilise ICT successfully (Medina, 2021). Similarly, in Indonesia, public schools confront obstacles in integrating ICT due to low resources despite instructors using various ICT tools to improve teaching efficacy (Kibar et al., 2023). These findings are consistent with previous research (OECD, 2023; World Bank, 2024), which shows that underfunded schools have lower levels of digital integration and fewer teacher training opportunities. Public school instructors, particularly in rural regions, sometimes lack professional development opportunities for properly incorporating ICT into their teaching methods (UNESCO, 2023).

Private schools often have more outstanding digital infrastructure, but discrepancies exist in teacher preparation and pedagogical integration (Kemendikbud, 2024). Private school instructors frequently receive superior training, but some still struggle to successfully integrate digital technologies into language education (Wahyuni, 2023; World Bank, 2024).

Urban schools often have more access to ICT resources than rural schools. In China, urban schools offer a sufficient ICT environment, and instructors have enough technical skills. However, ICT use is frequently confined to basic programs such as PowerPoint presentations (Li & Walsh, 2011). The discrepancy in ICT availability between urban and rural locations might hinder the efficient integration of technology in rural schools, where resources and training opportunities are frequently limited. Urban Indonesian schools have improved internet access and digital technologies but face resistance from older instructors who struggle to adapt to modern teaching approaches (Lucky, 2024). Furthermore, there are discrepancies in teacher preparation, with wealthy private school instructors frequently receiving more training than those in public and Islamic institutions (Wahyuni, 2023; World Bank, 2024).

Islamic schools frequently emphasise character education with digital literacy, requiring educators to integrate technological use with Islamic values (Rahman & Yusuf, 2024). While some well-funded Islamic schools benefit from private investment in digital resources, others have comparable challenges to public schools, such as insufficient teacher training and poor ICT access (Hassan et al., 2023). Islamic schools require training that combines ICT usage with faith-based pedagogy, ensuring that digital resources are consistent with ethical and religious standards (Rahman & Yusuf, 2022).

Common obstacles across all school types include a lack of time, insufficient professional support, and insufficient training for teachers to successfully integrate ICT into their teaching methods (Li & Walsh, 2011; Pardede, 2020). However, ICT has enormous prospects to improve EFL classrooms by promoting learner-centred approaches and offering access to different knowledge and worldwide communication (Duque & Garzón, 2024). Teachers' perspectives and attitudes towards ICT are critical to its effective integration, with good perceptions associated with increased ICT use (Pardede, 2020).

Given these obstacles, a comprehensive strategy for professional development is required. Policymakers and educational institutions must prioritise ongoing and organised teacher training programs focused on digital education. According to UNESCO (2023) and Baran et al. (2024), professional development activities should be continuous, context-sensitive, and practical rather than one-time seminars with limited application. Implementing mentoring programmes in which digitally skilled instructors assist their peers might boost ICT skill development and promote long-term advances in digital pedagogy.

Furthermore, bridging the digital gap necessitates a comprehensive infrastructure improvement plan. Investment in high-speed internet, low-cost digital gadgets, and ICT support services in rural and poor schools is critical (Livingstone et al., 2024). As the Indonesian government seeks to develop its digital literacy roadmap (Kemendikbud, 2024), targeted policies should prioritise digital transformation activities in disadvantaged schools. These activities should be consistent with worldwide best practices in digital equity, as noted in World Bank research (2024), which advocates for public-private partnerships to increase digital access in

education.

Furthermore, teacher training programmes must incorporate technological and pedagogical frameworks, such as the TPACK model, to assist educators in effectively combining topic knowledge with digital technologies (Mishra & Koehler, 2023). Strengthening the pedagogical part of digital literacy guarantees instructors can utilise technology and modify it to improve student engagement and learning results (Kreber & Kanuka, 2006).

Finally, instructors need psychological and emotional assistance as they navigate digital education. According to studies conducted by UNESCO (2023) and Darling-Hammond et al. (2024), teachers require resilience training and assistance with well-being to deal with the challenges of fast digital change. Schools may improve teacher efficacy by creating a supportive learning environment for educators, ensuring that digital education becomes an empowering tool rather than an added load.

## CONCLUSION

Our findings highlight the critical need for targeted policies and interventions to improve Indonesian EFL instructors' digital literacy and proficiency across various educational contexts. While technical and pedagogical hurdles remain, targeted professional development, infrastructure upgrades, and comprehensive support systems can dramatically close current gaps. By investing in teacher empowerment and equitable digital access, Indonesia can create a more robust and successful digital education system that serves all students, regardless of geography or school type, including Islamic schools' educational frameworks.

## LIMITATION OF THE STUDY

This study acknowledges the limitation of a small sample size (N = 24), which may not represent the entire population of senior high school EFL teachers in West Java, Indonesia. Future studies should aim to recruit a larger sample size to increase the generalizability of the findings.

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