

University Students' Use of ICT in EFL Learning: An Investigation of Perceptions, Attitudes, and Competencies

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Abstract

In the digital era, Information and Communication Technology (ICT) plays a critical role in shaping English as a Foreign Language (EFL) instruction. While prior studies have primarily focused on teachers' perspectives, limited research has explored students' experiences in using ICT to support language learning. This study investigates university students' perceptions, attitudes, and self-reported digital competencies regarding ICT use in EFL learning. Employing a qualitative case study approach, data were collected through semi-structured interviews with three seventh-semester students from the English Language Education Program at Universitas Islam Malang. Thematic analysis revealed that students generally perceived ICT as beneficial for enhancing flexibility, motivation, and access to diverse language resources. Participants expressed positive emotional attitudes toward ICT integration but also reported challenges such as technical difficulties, inconsistent internet access, and limited guidance from instructors. Furthermore, students demonstrated varying levels of digital competence, indicating a digital divide in readiness and confidence. The findings suggest that while ICT holds great potential for enriching EFL learning, its effectiveness depends on students' digital skills, institutional support, and the implementation of blended learning strategies. This study contributes to a more comprehensive understanding of student-centered ICT use in EFL contexts and highlights the need for inclusive, well-supported digital pedagogy.

Keywords: ICT, EFL learning, student perceptions, digital competence, student attitudes, student competencies

INTRODUCTION

The integration of Information and Communication Technology (ICT) in language education has brought about significant pedagogical shifts in recent years. As higher education institutions increasingly adopt digital tools to support English as a Foreign Language (EFL) instruction, it

becomes crucial to explore how such technologies are experienced by students the primary users in the learning process. While much of the scholarly focus has been placed on the role of instructors, curriculum designers, and institutional infrastructure, there remains a critical gap in understanding how learners themselves perceive and

interact with ICT in their academic journeys. Without this learner-centered insight, the full potential of ICT-enhanced language education may remain underutilized, particularly in diverse contexts such as Indonesian universities, where digital readiness varies significantly among students.

In today's digital era, Information and Communications Technology plays an important role in transforming educational practices, particularly in language education. Due to the growing demand for digital literacy and English competence, the use of ICT in EFL instruction has changed from being a supplemental tool to a crucial element (Aliyyah et al., 2020). The use of ICT in language acquisition has become essential, as it plays a crucial role in modern teaching and learning environments (Desai, 2023). Modern English as a Foreign Language (EFL) instruction requires the use of tools like language learning applications like Duolingo, video conferencing platforms like Zoom and Microsoft Teams, and learning management systems like Moodle and Google Classroom. These resources foster learner autonomy, improve teamwork, and facilitate communication in the real world (Syafryadin et al., 2022). ICT offers a wide range of tools and resources that support English language acquisition, providing learners with access to authentic materials, interactive platforms, and flexible learning environments (Perdomo et al., 2022). The effective implementation of ICT, however, depends not only on technological infrastructure but also on the users' perceptions, attitudes, and digital competencies. Successful ICT integration depends significantly on users' attitudes, beliefs, self-efficacy, and digital competencies not only infrastructure and these factors influence both intentional and

actual technology use in educational settings (Peng et al., 2024).

Another important part of using ICT in education is teachers' digital skills. In recent years, several frameworks have been used to measure ICT skills. These frameworks use terms like ICT literacy, digital literacy, and ICT proficiency. The term "ICT competency" usually means the ability to use digital tools. Digital competence means using digital knowledge, skills, and attitudes effectively. The arrival of COVID-19 had a big impact on education and made online learning more important. It also increased the need for teachers to have strong digital skills. Studies show that digital skills are very important for using ICT well. Teachers who are more skilled with technology tend to use ICT more often. Also, teachers who use more digital tools in class usually have higher digital skills. Liu's (2023), explored user engagement on e-learning platforms and demonstrated that computer-based mind mapping can improve students' learning outcomes, cognitive presence, and reflective thinking in online learning environments. The study showed that interactive digital tools boosted student engagement and enhanced their digital competence by encouraging effective use and navigation of various technological resources. Besides that, Liu (2023) investigated the use of computer-supported collaborative idea mapping and discovered that students' positive perceptions of collaboration positively influenced their comprehension, behavior, and digital skills. The study highlighted that collaborative tools created a more interactive and engaging learning environment, which helped improve students' competence in using digital technology.

Numerous research studies have demonstrated the benefit of ICT integration in improving language learning results. However, the viewpoints of educators have been the primary focus of a large portion of

the literature that is currently available. For example, Lisia et al. (2024) evaluated EFL teachers' perspectives, attitudes, and abilities toward ICT integration in Indonesia, discovering that, while many teachers have favorable views, they nevertheless confront substantial hurdles in terms of infrastructure and training. Although useful, these studies don't fully reflect how students, who are the main recipients of technology-enhanced instruction, view and use ICT in their own learning.

Recent research indicates that students' experiences with Information and Communication Technology (ICT) are influenced by their access to technology, digital competence, and the learning environment. According to Akbıyık and Koç (2024) noted that students often feel a disconnect between institutional digital practices and their actual needs in English as a Foreign Language (EFL) learning. Similarly, Perdomo et al. (2022) highlighted the importance of considering students' perspectives to understand how they interact with digital platforms and tools for language learning. This underscores the urgent need to directly investigate learners' viewpoints, particularly in the context of higher education in Indonesia, where the adoption of digital technologies varies significantly.

This study aims to investigate university students' experiences with Information and Communication Technology (ICT) in learning English as a Foreign Language (EFL). Specifically, it will examine (1) their perceptions of ICT usage, (2) their attitudes toward digital tools and platforms and (3) their self-reported digital competencies. By emphasizing the perspectives of learners, this research seeks to fill a significant gap in the literature and contribute to more learner-centered integration of ICT in EFL instruction.

In addition to understanding learners' attitudes and competencies, it is also important to explore the challenges they face when engaging with ICT based EFL instruction. These challenges may include unstable internet connectivity, limited access to devices, and lack of adequate training in using digital platforms effectively (Shrestha et al., 2022). Students from rural or underprivileged backgrounds, for instance, often encounter greater obstacles in digital learning compared to their peers in urban areas due to disparities in infrastructure and resources (Mhlongo et al., 2023). Furthermore, cultural and motivational factors also influence how students adopt ICT. Some learners may perceive digital tools as distracting or overwhelming, while others see them as opportunities for self directed learning and global communication (Lembani et al., 2023).

Recent studies have also pointed out that the integration of gamification elements, virtual reality (VR), and artificial intelligence (AI) powered applications in EFL learning has the potential to enhance engagement, especially among digitally savvy students (Zhang & Miao, 2025). However, without adequate digital literacy, the effectiveness of these tools remains limited. Thus, an in-depth investigation into students' lived experiences, including their strategies for overcoming digital challenges, is crucial to design more inclusive and effective ICT based learning environments. This learner-centered approach not only bridges the gap in existing literature but also offers practical implications for policymakers, educators, and instructional designers aiming to create equitable and meaningful digital learning experiences in EFL contexts.

METHODOLOGY

Research Design

In order to thoroughly examine students' experiences utilizing information and communication technology (ICT) to learn English as a foreign language (EFL), this study used a qualitative research design. According to Martin (2023), qualitative research is a method used to study phenomena in natural settings as opposed to experimental settings, where the research serves as the main instrument. This research was conducted using a case study methodology to explore teaching and learning strategies that make use of Information and Communication Technologies (ICT) among students of the English language education program at the University of Islam Malang. Understanding students' attitudes, views, and abilities in using ICT to enhance their learning process is the primary goal of this study.

Participants

The researcher played a vital role in this study, which was conducted in a natural setting within the English Language Education Study Program at Universitas Islam Malang. Participants were selected using purposive sampling, focusing on students who could provide valuable insights into the use of ICT in their English learning experiences. A total of three seventh-semester students were chosen as participants due to their significant engagement with ICT tools throughout their coursework. These students actively utilized platforms such as Google Classroom, Zoom, Gmeet and various mobile learning applications during both synchronous and asynchronous learning activities. They were also selected because they had participated in several courses that emphasized ICT integration and had demonstrated a reflective attitude toward their learning experiences. Their diverse backgrounds and levels of engagement made them well-suited to provide rich, detailed narratives aligned with the aims of this

qualitative case study. The participants also varied in terms of digital competence, learning preferences, and access to devices and internet connectivity, allowing for a more nuanced analysis of how digital readiness influences students' perceptions and attitudes toward technology integration in English language learning.

Instrument

Data for this study was collected through semi-structured interviews, which allowed students to share their thoughts, feelings and experiences regarding the use of Information and Communication Technology (ICT) in learning. The interview questions were adapted from previous research on ICT integration in language education, focusing on three main themes: students' perceptions, attitudes, digital competencies as well as their learning experiences. The format provided a balance between guided questions and open-ended responses, giving participants the flexibility to elaborate on their experiences while ensuring that the discussion remained aligned with the research objectives. The interviews were individualized and designed to gain in-depth insights into how students engage with digital tools during their EFL learning process. In line with the qualitative case study approach, the use of semi-structured interviews enabled the researcher to explore not only factual information but also students' personal interpretations and emotional responses to ICT-mediated learning. This method was particularly effective in capturing the complexity of students' lived experiences and their individual approaches to navigating digital learning environments. Furthermore, the interview protocol was piloted prior to the actual data collection to ensure clarity and relevance of the questions. Minor adjustments were made based on initial

feedback to enhance the validity and reliability of the instrument.

Data analysis

The data collected from the semi-structured interviews were fully transcribed and then translated into English to ensure consistency in interpretation and reporting. Since the interview questions were organized into labeled sections covering students' perceptions, attitudes, and digital competencies, the researcher could group participants' responses according to these predefined categories.

After grouping the responses, the researcher conducted a thematic interpretation, identifying commonalities, differences, and significant insights within each category. Instead of coding line by line, the analysis focused on organizing the responses thematically based on the structure of the interview questions. This was followed by interpretation and reflection to uncover key findings related to students' experiences with ICT in English as a Foreign Language (EFL) learning.

RESULT AND DISCUSSION

Result

Students' Perceptions of ICT in EFL Learning

All participants perceived ICT as a highly beneficial tool for learning English, they demonstrated a positive perception of ICT as a useful and relevant tool in their English learning journey. One student stated

"Digital competence is very useful for learning languages, especially English," (P1)

while another mention

"I can use phone, laptop, and internet to learn English. I can click things and know how to use them." (P2)

ICT was also seen as very important in supporting English skills beyond textbooks and the classroom. Participants highlighted the importance of ICT in expanding their access to English materials beyond textbooks and traditional classrooms. They noted that ICT offers valuable resources such as videos, songs, e-books, and podcasts. However, one participant recognized that not all students adapt well to ICT, suggesting that traditional learning methods still have an essential role

"Some of my friends struggle to adapt to using ICT, so I believe traditional learning remains very important." (P3)

Attitudes Towards ICT Tools

All participants showed positive attitudes towards the use of ICT tools such as apps, websites, and online platforms. They feel happy and enjoyable using ICT. For instance, stated that

"I feel happy and more practice". (P1)

"Sometimes fun, sometimes hard. But I like English games!". (P2)

however some challenges were acknowledged, such as

"I agree with ICT, but sometimes we don't understand the platforms". (P3)

However, all participants agreed that using both ICT and face-to-face learning is better. ICT is flexible, but traditional classes allow students to ask questions and talk directly with others.

ICT Competency

From the interview results, it was found that the level of confidence in using digital platforms varies. Some participants/students felt confident, while others were not

confident due to lack of understanding in using ICT. One student stated that

"I'm confident enough to use such tools".
(P1)

Another student mentioned

"A little confidence, if someone teaches me first". (P2)

The technical issues, especially with poor internet connection, heavy application, and lack of explanation from lecturers about how to use digital platforms. Although all participants mentioned that the university had provided training or support, there is still a need for better guidance.

"Bad internet connection and lecturers don't always explain how to use platforms". (P3)

Learning Experiences

Participants shared both positive and negative experiences regarding the use of ICT in their English learning journey. On the positive side, ICT was perceived as an effective tool that made learning more enjoyable, engaging, and accessible. Interactive tools such as quizzes, videos, and digital platforms contributed to a more dynamic and student-centered learning environment.

As one participants noted:

"Learning English with ICT is more fun and interactive." (P1)

Another participant said:

"It was fun when we played quizzes on our phones." (P2)

"Technology helps me find word meanings and share information." (P3)

Nevertheless, several challenges were also highlighted, especially related to technical disruptions and unequal access. Unstable internet connections, limited access to

adequate devices, and inconsistent infrastructure created obstacles in the learning process.

These concerns were illustrated through the following responses:

"Zoom keeps freezing." (P2)

"Internet and devices are limited or buffering." (P1)

"Not all students have the facilities or skills to access ICT." (P1)

These findings suggest that while ICT has the potential to enrich language learning, its success is highly dependent on reliable infrastructure, user readiness, and equitable support from educational institutions

Suggestions and Needs

Students provided a variety of suggestions and expressed specific needs aimed at enhancing the integration of ICT into English language learning. A key recommendation centered around the improvement of facilities, including more equitable access to reliable internet connections and proper digital devices such as laptops or smartphones. They emphasized that not all students are equally equipped to engage in digital learning, and thus institutional support is crucial in bridging this digital divide.

One participant articulated this concern:

"Facilities for each student need to be improved, and find other tools to make English learning more effective." (P1)

Moreover, students highlighted the importance of engaging and interactive teaching approaches that leverage the potential of ICT. They encouraged lecturers to incorporate fun and user-friendly applications, such as educational videos, online quizzes, and gamified learning platforms, in order to foster a dynamic and

enjoyable learning environment. These tools are seen not just as supplementary but as essential for maintaining motivation and enhancing comprehension.

This was clearly stated by another participant:

“Lecturers can use apps to make learning fun and easy, and explain how to use them properly.” (P3)

Another participant provided concrete examples of preferred tools:

“Funny videos, games, and online quizzes.” (P2)

In addition to the media and platforms themselves, students stressed the importance of clear instructions and guidance from lecturers on how to effectively use these tools. Many students still feel uncertain when navigating digital platforms on their own, which highlights the need for better pedagogical scaffolding within ICT-based instruction. Ultimately, these insights underline that successful ICT integration in EFL learning is not solely dependent on the availability of technology but equally on the human and instructional support provided alongside it.

Discussion

This study reveals that the majority of students hold positive perceptions of using ICT in English as a Foreign Language (EFL) learning. They perceived digital competence as a means to access a variety of learning resources such as videos, e-books, podcasts, and online quizzes, making the learning process more flexible, enjoyable, and interactive. These findings are consistent with (Sabiri, 2020) who emphasized that ICT integration in EFL teaching enriches learning methods and promotes active student engagement. Other studies have shown

positive attitudes toward ICT integration among university students, which supports the general view of students' positive perceptions (Kopinska, 2020).

Many of them expressed that digital tools not only supported their academic engagement but also enhanced their sense of autonomy, allowing them to tailor their learning to personal needs and schedules (Susanti et al., 2023). The ability to revisit materials, pause and replay content, or explore various interactive media contributed to a more self-directed and enjoyable learning experience (Wijayanti et al., 2023). Moreover, the use of technology was perceived as a motivational driver, making lessons feel more dynamic and aligned with students' digital lifestyles (Martínez et al., 2025). This positive attitude toward ICT suggests a growing internalization of digital learning as a natural extension of modern education, especially in language learning contexts.

Moreover, students expressed mostly positive attitudes toward ICT tools, describing their experiences as fun, enjoyable, and helpful. Some students particularly liked using English games, interactive quizzes, or educational videos and music to support their language development (Ochoa-Cueva et al., 2023). These tools not only enhanced engagement but also allowed learners to personalize their study process, contributing to a more flexible and autonomous learning experience. However, several challenges surfaced that hindered the effective and consistent use of ICT among certain students. Some participants described difficulty navigating digital platforms, particularly when instructions were unclear or when platforms frequently changed. They often struggled to use tools like Zoom, Google Classroom, or other learning management systems, especially without proper guidance. As a result, many students expressed a

preference for blended learning which they believed offered both technological benefits and the clarity of face-to-face support (Huang et al., 2022).

A portion of students also reported low self-efficacy when dealing with technical problems, which led to feelings of frustration, anxiety, and a reliance on instructors or peers. These findings highlight that while students enjoy using ICT, enjoyment alone is insufficient to guarantee effective learning outcomes. Students also require clear instructions, structured support, and access to consistent technical guidance. This supports previous research stating that positive attitudes enhance willingness to use ICT, but institutional and instructional support remain crucial for ensuring long-term success (Rasheed et al., 2020). Furthermore, the post-pandemic study by Wijayanti et al. (2023) revealed similar concerns in Indonesian EFL classrooms, where the lack of consistent training and guidance became a significant barrier to effective ICT adoption.

Institutional support for ICT utilization was perceived as inconsistent. Several students mentioned that while lecturers did use digital platforms, they often failed to provide sufficient training or explain how to use the tools effectively. This reinforces the argument made by Li et al. (2024), who emphasized that successful ICT integration requires not just access to technology, but structured pedagogical and technical support to guide students through its use. Although some students felt confident in navigating platforms like Zoom, others felt uncertain and needed help, particularly during their initial exposure. Common issues included unstable internet connections, app malfunctions, and vague instructions from instructors.

While some level of institutional assistance existed, students frequently found it superficial or insufficient, leading to unequal learning experiences. These disparities show that students' digital skills are not homogenous. Lecturers must first assess the digital competence of their students before fully relying on ICT-based delivery. This finding aligns with Akbiyık & Koç (2024), who emphasized that digital readiness varies among learners and can significantly influence how technology impacts language learning. As a result, blended learning emerges as a relevant and adaptive strategy balancing the autonomy and accessibility of ICT with the clarity, interaction, and support found in traditional face-to-face settings. Rasheed et al. (2020) also affirmed that such an approach preserves the pedagogical integrity of classroom learning while leveraging the flexibility of online platforms.

In addition, students' emotional engagement must be supported by tangible scaffolding. Motivation alone is not enough. Without effective guidance, even enthusiastic students may struggle to navigate ICT tools confidently. These challenges further highlight the digital divide in terms of access and skill level. As stated by Tahmina (2022), the effectiveness of technology in EFL learning depends not only on the availability of resources but also on thoughtful implementation and institutional responsiveness to students' needs. Thus, ICT implementation in EFL learning should be aligned with students' digital readiness, instructional clarity, institutional infrastructure, and social context to ensure both equity and effectiveness in technology-mediated education.

Overall, the findings of this study suggest that the effective integration of ICT in English as a Foreign Language (EFL) learning relies not only on the availability of

technology but also on pedagogical preparedness, institutional support, and the thoughtful design of instructional strategies (Akbiyık & Koç, 2024; Silva-Perdomo et al., 2022). Simply providing access to digital platforms is insufficient; teachers must be equipped with the necessary digital literacy and pedagogical skills to leverage technology meaningfully in language instruction.

In this context, blended learning emerges as a particularly effective and adaptive model, harmonizing the flexibility of online environments where students can revisit materials, learn at their own pace, and engage with interactive content with the structured guidance and interpersonal dynamics of face-to-face classroom instruction. This hybrid approach not only supports diverse learning styles but also fosters learner autonomy and motivation, which are critical for language acquisition in the digital age. By aligning ICT integration with students' digital readiness, institutional capacity, and the broader socio-educational context, EFL education can evolve into a more inclusive, engaging, and resilient system. Looking ahead, a strategic, human-centered approach to technology integration will be essential to bridge digital divides and empower both educators and learners in a rapidly evolving global landscape.

CONCLUSION

This study explored university students' experiences with Information and Communication Technology (ICT) in English as a Foreign Language (EFL) learning. The results show that most students have positive thoughts and feelings about ICT. They said ICT helps them learn English by giving them access to videos, games, e-books, and apps. They like that they can learn anytime and anywhere. However, some problems were also found. Students had issues with slow internet, lack of devices, and

insufficient explanation from lectures. Not all students feel confident using ICT. Some students need help to use like Zoom or Google Classroom. This shows that students have different levels of digital skills. Most students said they like blended learning, a mix of ICT and face-to-face classes. They enjoy learning with ICT, but they also want to talk directly with their teachers.

From this study, we learn that schools should give better internet and tools to students, teachers should use fun and interactive tools like games and videos, and students need more help and clear instructions on how to use digital platforms. To ensure successful ICT integration in EFL learning, it is essential that digital tools are used in a way that considers students' needs, abilities, and learning environments. With proper support, ICT can create a more effective, enjoyable, and inclusive English learning experience for university students.

RECOMMENDATION

Based on the findings of this study, several recommendations are suggested to improve the use of ICT in English language learning. First, universities should give students better internet and devices like laptops or smartphones. This helps all students use ICT equally. Second, lecturers should give clear and simple steps when showing how to use apps like Zoom or Google Classroom. Lecturers can also give short training to help students understand how to use these tools. Next, lecturers should use more fun and interesting materials, such as videos, games, quizzes, and songs. These make learning English more fun and help students stay focused. Blended learning is also a good idea. This means using both online learning and face-to-face learning together. Students can enjoy the benefits of both methods. Also, lecturers should check if students know how to use ICT tools. If not,

lecturers should help them first. Lastly, lecturers should ask students for feedback. This helps lecturers know what works and what needs to change. With these steps, ICT can become easier, more fun, and more helpful for students learning English.

LIMITATION

First, there were only three students in this study. Because of that, the results may not show what other students think or feel. Second, all the students were from one university and one study program. So, the results may not be the same for students from other places or universities. Third, the data was taken from interviews only. The study did not use other ways like surveys, classroom observation, or asking lecturers. So, some important information may be missing. Lastly, the students may not remember everything clearly, or they may say what they think the interviewer wants to hear. Because of these limits, future studies should have more students, from different universities, and use more ways to collect data.

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