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INTEGRATING DIGITAL COMPETENCE IN ADULT EFL LEARNERS: STRATEGIES FOR EFFECTIVE TECHNOLOGY USE

Ikhfi Imaniah[1*], Akhmad Zakky[2]. Deni Yuliana[3]
[1,3]*Universitas Muhammadiyah Tangerang, Indonesia*
[2] *Universitas Islam Negeri Syarif Hidayatullah, Indonesia*

***Corresponding Author:** ikhfi.imaniah@umt.ac.id*

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Abstract: The integration of digital literacy into language learning has been widely explored, yet studies focusing on adult English as a Foreign Language (EFL) learners' digital competence in academic settings remain limited. Previous research has highlighted general digital literacy frameworks (Reddy et al., 2023; Fadilah, 2023), teacher digital competence gaps (Giannikas et al., 2022), and the positive correlation between digital literacy and language proficiency (Wahyuddin et al., 2024). However, these studies have not specifically examined how adult EFL learners navigate digital literacy challenges, particularly in critical evaluation of online resources and cybersecurity awareness. This study aims to assess the digital competence of adult EFL learners, focusing on five key dimensions: general digital competence, technology integration in language learning, digital literacy and skills, digital communication and collaboration, and online safety. Using a structured questionnaire administered to 56 university students, the findings indicate that while students demonstrate strong proficiency in basic digital tasks and language learning applications (71% overall digital competence score), they struggle with critically evaluating online resources and cybersecurity practices. These results emphasize the need for structured pedagogical strategies, including targeted digital literacy training and collaborative learning environments, to enhance EFL learners' technological integration skills. This study contributes to the effective implementation of digital literacy in EFL education by addressing the specific challenges faced by adult learners, ultimately fostering their linguistic and digital proficiency in academic and professional contexts. The findings imply that EFL programs should include targeted digital literacy education that tackles critical thinking and online safety. Strengthening these areas will enable adult learners to effectively navigate digital settings, promoting academic achievement as well as lifetime digital involvement.

Keywords: *digital literacy; adult EFL learners; technology integration; digital competence; online safety; collaborative learning and language learning.*

INTRODUCTION

Language learning has not been an exception to the growing trend of using technology in the classroom in recent years. The rapid growth of technology enables educators to try out cutting-edge teaching strategies with today's digital natives. The interaction hypothesis states that language acquisition occurs in contexts where learners and other speakers interact regularly. Given how rapidly technology is developing and changing our daily lives, it is imperative that language educators have the necessary digital competencies in order to successfully integrate technology into language learning (Beetham & Sharpe, 2014; Tomita, 2023; UN Secretary-General's High-level Panel, 2020). In short, Language educators must develop digital competencies to integrate technology effectively into language learning, keeping pace with rapid technological advancements.

According to Howard et al. (2021), the fundamental competencies, skills, and mindsets required for utilizing digital technology responsibly and effectively are collectively referred to as digital competence. By providing students with access to real-world language

resources, interactive language exercises, and opportunities for interaction and collaboration with other students and native speakers, digital proficiency might enhance teaching and learning in language classes. Furthermore, by integrating digital competencies into language instruction, teachers may provide a more individualized, student-centred learning experience that is tailored to each student's specific needs and interests (Braslavska & Ozerova, 2022; Caviglia et al., 2024; Inamorato dos Santos et al., 2023; Kassymova et al., 2023; Kreuder et al., 2024; Pan et al., 2024; Priyantin & Herawati, 2023; Scheel et al., 2022; Serajuddin, 2023; Spivak et al., 2024; Tawafak et al., 2023; Tomczyk & Edisherashvili, 2024; Tóth et al., 2022; Yadav, 2024; Zakharevych & Hryhorenko, 2024)

In an era marked by rapid technological advancement (Jegadeesan & Akkara, 2024; Sari & Abrar, 2024), integrating digital literacy into language education is essential to prepare students for the challenges of the digital age (Cao et al., 2023; Mirzayunusova ZI & Azamjonov AA, 2024; Normuratova, 2024; Subkhi & Tyas, 2024). Digital literacy encompasses a broad spectrum of skills, ranging from advanced search techniques to effective digital collaboration (Buchholz et al., 2020; Ferrari, 2013; Hsu et al., 2011; Sá et al., 2021). Navigating these skills in a foreign or second language poses unique challenges for students. However, educators can play a pivotal role in mitigating these challenges by explicitly incorporating digital literacy development in their language lessons (Azzahra & Amanta, 2019; Mardiah, 2022; Normuratova, 2024; Özden, 2018; Subkhi & Tyas, 2024; Zhang et al., 2024).

It is more difficult to integrate technology in language classrooms. In addition to navigating a wide range of digital tools and resources, educators also need to stay up to date with the rapidly evolving technological world and make sure that technology is utilized appropriately and effectively (Li, 2019; Mathai & Arumugam, 2016; Thomas, 2014). Moreover, educators must ensure that digital literacy does not overshadow the core linguistic competencies that students need to develop. Balancing the use of technology with traditional language teaching methods is crucial, as over-reliance on digital tools may hinder face-to-face communication skills and deeper language acquisition. Furthermore, students' varying levels of access to technology can create disparities in learning experiences. Therefore, it becomes essential for teachers to design inclusive lesson plans that accommodate diverse technological proficiencies, while also providing support to students who may struggle with digital tools (Bharathi, 2023). Ultimately, digital literacy should enhance language learning by fostering interactive, collaborative, and engaging educational environments that prepare students for the digital demands of the modern world.

The integration of digital skills into language learning is guided by digital literacy models, which are crucial frameworks in language education. Given the rapid pace at which technology is developing and the trend towards online learning environments, these models address the necessity for teachers and students to use digital tools and resources efficiently.

In order to improve language learning and competence, the models place a strong emphasis on the development of abilities that allow students to use digital tools to browse, assess, and produce information.

Previous studies have extensively explored the role of digital literacy in language education, yet significant gaps remain in understanding how adult EFL learners develop and apply digital competencies in academic settings. The South Pacific Digital Literacy Framework (SPDLF) focuses on six essential literacies to bridge digital skills gaps (Reddy et al., 2023), while Fadilah (2023) emphasizes human transformation in Indonesia's critical digital literacy framework. However, these studies primarily address digital literacy from a broad educational perspective and do not specifically consider the unique challenges faced by adult EFL learners, whose limited English proficiency and literacy skills may hinder their ability to acquire digital competencies. Unlike these frameworks, the present study evaluates digital competence within the specific context of adult EFL learners, recognizing their diverse backgrounds and varying levels of experience with technology.

Research on digital literacy integration in language education has also revealed gaps in teacher preparedness and pedagogical approaches. For example, Giannikas et al., (2022) explored digital literacy in Cyprus through the lens of complex adaptive systems, highlighting discrepancies between teachers perceived and actual digital competencies. Similarly, in Santos & Boa Sorte, (2024) examined digital literacies as social practices, emphasizing hybrid technological integration rather than isolated tool use. While these studies contribute valuable insights into digital literacy and pedagogy, they focus primarily on teacher competence and technology

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adoption, leaving a gap in understanding how adult EFL learners themselves navigate digital literacy in academic settings. This study addresses this gap by assessing five key dimensions of digital competence—general digital skills, technology integration, digital literacy, communication and collaboration, and online safety—specifically among university-level adult EFL learners.

Furthermore, empirical studies have established the positive correlation between digital literacy and language proficiency. In Indonesia, Wahyuddin et al. (2024) demonstrated that blended learning environments integrating digital literacy significantly improved English language skills. However, this research does not detail which aspects of digital literacy contribute most to language learning success, nor does it highlight challenges such as critical evaluation of online resources and cybersecurity awareness—both of which were identified as weak areas in the present study. By examining adult EFL learners' specific difficulties in evaluating digital content and navigating online safety, this research builds upon previous findings and provides a more targeted approach to digital literacy training in language education.

Ultimately, while prior studies emphasize theoretical frameworks, teacher competencies, and general digital literacy in language learning, they do not sufficiently address the practical challenges faced by adult EFL learners in applying digital skills to their academic and linguistic development. This study bridges that gap by offering a comprehensive analysis of adult learners' digital competence, identifying specific weaknesses, and proposing structured pedagogical interventions to enhance digital literacy integration in EFL classrooms.

METHOD

A quantitative survey method was employed, involving 56 university-level EFL leaners. The participants varied in age (19–35 years), English proficiency (intermediate to advanced), and prior digital experience. The study utilized a validated questionnaire adapted from DigComp 2.1 (Carretero et al., 2017), integration of Technology in Language Learning (Moraes, 2023), digital literacy and skills (American Library Association, 2016), digital communication and collaboration (Hackett et al., 2024), online safety and digital citizenship (UK Council for Internet Safety, 2020). The questionnaire used a 4-point Likert scale for responses (Mumu et al., 2022), with students selecting the option that best represented their confidence or frequency.

The questionnaire's reliability was confirmed through expert review, a pilot study and statistical testing. Validity was established by corrected item total correction analysis, where all 20 items demonstrated correlations between 0.600 and 0.900, indicating strong validity. Reliability was assessed using Cronbach's Alpha, resulting in a coefficient of 0.912, reflecting excellent internal consistency. These results confirm that the questionnaire is both valid and reliable for measuring digital competence.

Responses were recorded on a 4-point Likert scale, reflecting students' confidence or frequency of use. Competence levels were categorized as follows: Low (20–35 points), Developing (36–50 points), Proficient (51–65 points), and Advanced (66–80 points), based on the total scores for each area. This classification aligns with established digital competence frameworks, such as DigComp 2.1 (Carretero et al., 2017).

RESULTS AND DISCUSSION

The findings indicate that university students exhibit a moderate-to-advanced level of digital competence, with an overall score of 71%. However, competence levels vary across different dimensions, which challenges the assumption that all students possess advanced digital skills. While students demonstrate high proficiency in general digital tools (84%), their technology integration for language learning (68%) and digital communication and collaboration (63.5%) remain weaker. Additionally, over 30% of students struggle with technology integration (Figure 3.3), highlighting inconsistencies in digital competence levels. This suggests that although students can effectively use digital tools for personal and academic tasks, they lack structured engagement with collaborative and evaluative digital literacy practices.

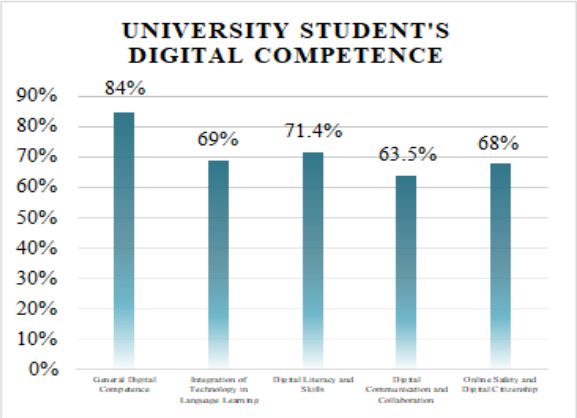

Figure 1. *University student's digital competence*

When compared to established digital literacy frameworks, such as DigComp 2.1 (Carretero et al., 2017) and UNESCO's Digital Literacy Framework, the findings reveal gaps in critical information processing, online collaboration, and problem-solving skills (UNESCO Institute for Statistic, 2018). DigComp 2.1 defines digital competence as a combination of accessing, managing, understanding, and critically engaging with digital content. However, this study suggests that while students excel in functional digital skills, their collaborative and evaluative competencies require further development. This aligns with Giannikas et al., (2022) who found discrepancies between perceived and actual digital competence among educators, a trend that is also evident among students in this study. Additionally, Santos & Boa Sorte, (2024) emphasize the importance of hybrid digital literacy practices, yet the findings suggest that many students still struggle to integrate digital tools in a structured and consistent manner within their language learning process.

The results further indicate that students' digital competence levels vary based on age and prior exposure to technology. Younger students (19–24 years old) tend to outperform older students (25–35 years old), particularly in technology integration and digital communication. Similarly, students with prior experience using digital tools in high school or other educational settings exhibit significantly better collaborative and research-based digital skills. These variations suggest that prior exposure to digital tools plays a crucial role in shaping students' digital literacy levels. Consequently, differentiated instructional approaches are necessary to accommodate varying levels of digital competence among learners.

University students' digital competence

General digital competence

Digital competence is a multifaceted concept that encompasses a range of skills, knowledge, and attitudes necessary for effective participation in the digital world. It is increasingly recognized as a critical component of professional and personal development in the 21st century. This competence is not limited to technical skills but extends to the ability to use digital technologies in a meaningful, critical, and responsible manner. The following is the result of questionnaires on students' digital competence:

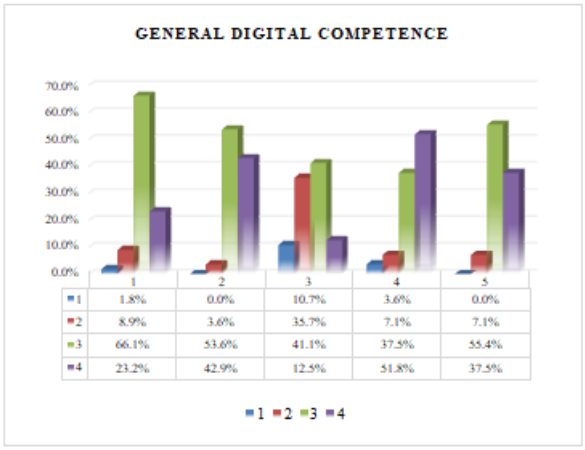

Figure 2. *Students' general digital competence*

Based on figure 1, the university student's general digital competence is 84%, this indicates a very high level of proficiency in basic digital tasks. Students are confident in using computers and smartphones for browsing, emailing, and using word processing tools. A majority also regularly use digital resources such as online dictionaries and language learning apps (e.g., Duolingo, Babbel). This reflects their strong foundation in general digital literacy. However, there is still a small percentage of students (around 10%) who feel only moderately confident in using these tools, implying the need for some targeted support for those individuals.

Moreover, figure 2 provides a detailed breakdown of university students' general digital competence, categorizing them into four levels based on their confidence and proficiency with digital tools. A small portion of students (1.8%) falls into the low competence category, indicating they are not confident or comfortable using basic digital tools such as web browsing, email, and document creation. This group likely requires substantial support, including introductory training on foundational digital skills to help them build confidence and competence.

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A larger segment of students (8.9% to 35.7%) falls into the developing competence category. These students use digital tools intermittently but are not fully comfortable or confident, particularly when it comes to using language learning apps or collaborative platforms. Their responses suggest that more structured practice and guided use of these tools could help them develop proficiency. For example, 35.7% of students report only moderate confidence in using language learning apps, indicating an opportunity for improvement in this area.

The majority of students (55.4% to 66.1%) demonstrate proficiency in general digital competence. They regularly use digital tools for tasks like browsing the internet, word processing, and using language learning apps, and they feel confident navigating these tasks. However, while proficient, there is still room for deeper integration of more advanced digital tools into their academic routines. These students could benefit from using collaborative platforms and multimedia resources to further enhance their digital competence and engagement in learning.

Finally, a smaller but significant portion (23.2% to 51.8%) falls into the advanced competence category. These students exhibit strong digital skills and are highly comfortable with using complex digital tools, often serving as digital leaders among their peers. They are proficient in using advanced features of digital tools and apps for language learning. However, even in this group, there is still potential for growth. These students can benefit from structured opportunities to explore emerging technologies, such as artificial intelligence or virtual reality, to deepen their learning experience.

In summary, while the majority of students display strong digital competence, a targeted focus on those in the developing and low competence categories is necessary. Workshops, peer mentoring, and structured assignments involving digital tools can accelerate progress, while advanced students can be leveraged to support their peers. This approach will enhance overall digital literacy across the student body, helping all students improve their use of technology in language learning.

Integration of technology in language learning

The integration of technology in language learning has become a pivotal aspect of modern education, offered numerous benefits while also present certain challenges. The use of digital tools and platforms has revolutionized traditional language teaching methodologies, enhancing learner engagement, proficiency, and cultural understanding. However, successful integration requires careful consideration of various factors, including access to technology, teacher training, and pedagogical strategies. The integration of technology in language learning scored 69% (figure 3.1), which shows that while students are fairly comfortable integrating digital tools into their language learning, there is room for improvement. Most students regularly use multimedia resources like videos and podcasts, which they find useful for improving listening and comprehension skills. However, a notable portion of students only occasionally uses language learning platforms or digital flashcards, indicating potential gaps in consistent engagement with digital resources. This suggests that further strategies, such as incorporating these tools more systematically into the curriculum, could help maximize their language learning effectiveness.

Below, we explore the results of technology integration in language learning in details, drawing insights from the provided research questionnaires.

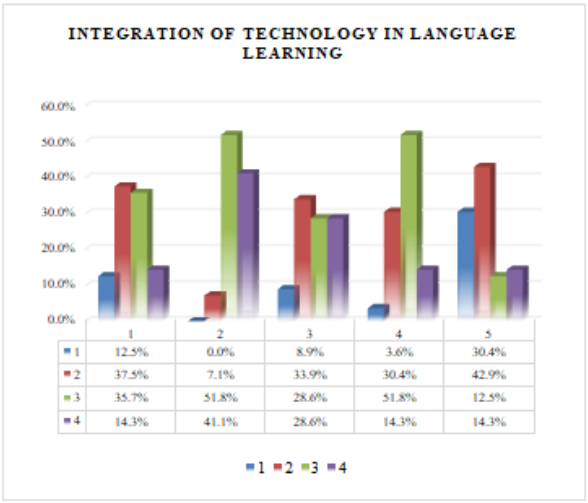

Figure 3. *Integration of technology in language learning*

In terms of technology integration for language learning, the 68% proficiency score (Figure 3.3) suggests that while students frequently engage with multimedia resources such as videos and podcasts, they are less likely to use interactive digital tools like language learning applications, grammar platforms, or collaborative writing tools. The findings indicate that 12.5%–30.4% of students rarely use digital tools for structured learning, suggesting a lack of awareness or formal implementation in coursework. This sporadic usage limits students' ability to maximize digital

tools' effectiveness in language acquisition. To address this gap, educators should integrate structured assignments using language learning applications, such as Duolingo, Quizlet, and Anki, to ensure consistent engagement with digital resources.

Digital literacy and skills

For digital literacy and skills on figure 3.1., the score was 71.4%, which reflects a strong but not exceptional level of digital literacy among students. Many students are confident navigating learning management systems (e.g., Google Classroom, Moodle) and solving basic technical issues, but some still face challenges in these areas. This implies that while a majority of students are digitally literate, additional training or resources on troubleshooting and managing learning platforms could further enhance their skills and independence in digital environments.

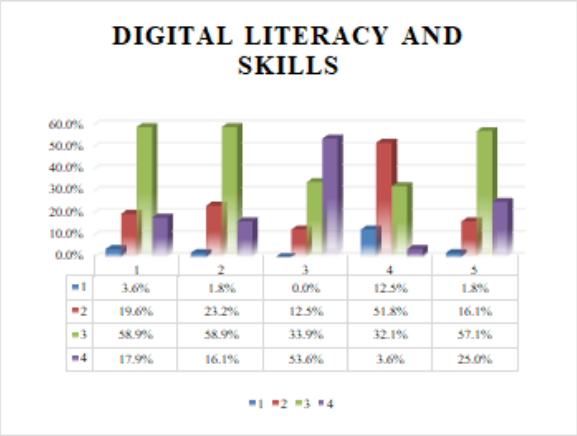

Figure 4. *Digital literacy and skills*

The study also reveals that digital literacy and problem-solving skills remain areas for improvement, with an overall score of 71.4% (Figure 3.4). While students confidently navigate learning management systems (e.g., Google Classroom, Moodle) and handle basic troubleshooting, some struggle with more complex digital tasks. This is particularly evident in the 19.6%–51.8% of students who fall into the "developing competence" category, indicating a need for technical troubleshooting workshops and structured digital skill development programs. Peer-assisted learning could also be an effective strategy, with advanced students mentoring those with lower digital literacy levels to promote collaborative digital learning environments.

Digital communication and collaboration

The score for digital communication and collaboration is 63.5% (figure 3.1.), indicating a moderate level of comfort in this area. Students feel fairly confident in using digital tools to communicate, such as writing emails or participating in online discussions. However, there is significant variability, with some students expressing discomfort or limited experience in collaborating using shared tools like Google Docs or Padlet. This suggests a need for more structured opportunities to engage in collaborative digital learning activities, which can be facilitated through group projects or peer-to-peer learning tasks.

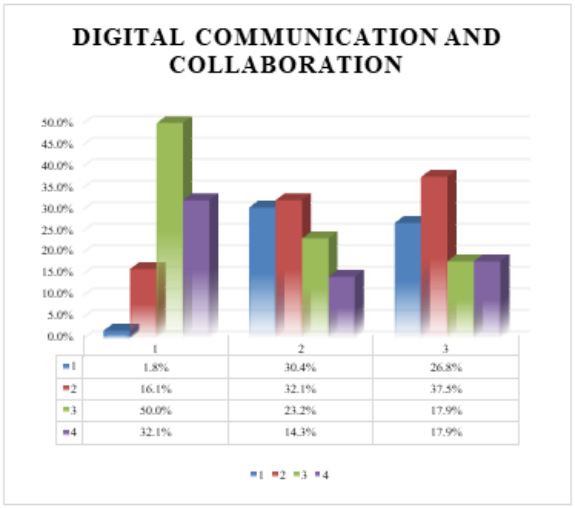

Figure 5. *Digital communication and collaboration*

Moreover, one of the most concerning findings is the low proficiency in digital communication and collaboration (63.5%) (Figure 3.5). While students are familiar with emailing and online discussions, many lack experience with collaborative tools such as Google Docs, Trello, or Padlet. This deficiency hinders students' ability to engage in peer-to-peer learning and co-create digital content, skills that are essential for both academic and professional success. To address this gap, educators should integrate project-based learning activities that require students to collaborate using digital platforms. Additionally, peer-review exercises and real-time collaborative writing assignments can improve students' confidence in digital teamwork.

Online safety and digital citizenship

For online safety and digital citizenship, the score is 68% (Figure 1), which indicates that most students are familiar with basic online safety practices, such as recognizing phishing attempts

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and protecting personal information. However, only around 30% of students feel fully confident in evaluating the credibility of online sources, a critical skill in today's digital learning environment. This suggests a need for further education and resources to help students become more adept at assessing the quality and reliability of the information they encounter online, particularly in the context of language learning materials.

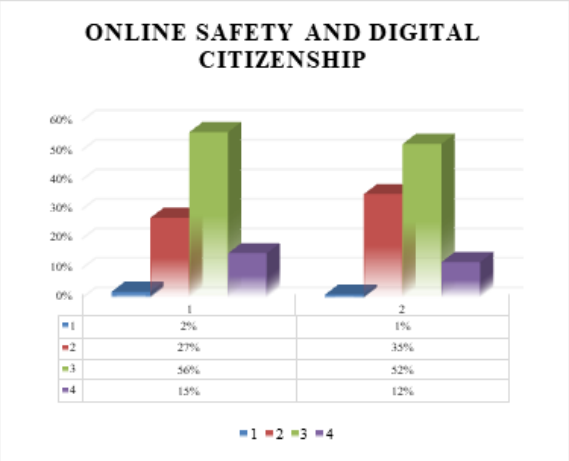

Figure 6. *Online safety and digital citizenship*

In terms of online safety and digital citizenship, students scored 68% (Figure 3.6), indicating moderate awareness of cybersecurity practices but a lack of critical evaluation skills for assessing online content credibility. A significant portion of students struggles with recognizing misinformation, verifying sources, and protecting personal data online. Given the increasing reliance on digital resources in academic settings, it is essential to incorporate fact-checking exercises and cybersecurity awareness training into digital literacy instruction. Educators can design activities that require students to analyze the credibility of online sources, recognize phishing attempts, and practice safe data management. These interventions can help students become more responsible digital citizens and critical consumers of online information.

Overall, the study highlights both strengths and gaps in university students' digital competence. While they are proficient in basic digital literacy skills, their ability to critically evaluate online information, collaborate effectively, and integrate digital tools into structured language learning remains underdeveloped. The findings suggest that structured pedagogical interventions are necessary to enhance digital literacy instruction in EFL education.

Educators should implement differentiated learning models, such as introductory digital skills workshops for low-competence students and advanced technology integration activities for highly proficient learners. Additionally, incorporating blended learning approaches, project-based collaboration, and targeted cybersecurity training will ensure that students develop well-rounded digital competencies aligned with international digital literacy standards. By addressing these gaps, EFL educators can better equip students with the necessary digital skills for academic success and professional communication in an increasingly technology-driven world.

Discussion of strategies for effective integration of technology and language learning

Enhancing purposeful use of technology in language learning

While students are already using various technological tools, a more targeted integration of these tools to support specific language learning outcomes will maximize their effectiveness. For example:1) multimedia resources: tools like videos, podcasts, and interactive simulations can be more explicitly integrated into language courses to develop specific skills like listening comprehension, pronunciation, and contextual understanding of language use; 2) language learning applications: Encourage the use of apps like Duolingo, Babbel, and Anki for vocabulary building, daily practice, and grammar exercises. These applications can complement formal classroom instruction and provide personalized learning experiences (Alakrash & Razak, 2021; Dev & Schleyer, 2021; Fan, 2016; Indrastana, 2022; Jegadeesan & Akkara, 2024; Li, 2019; Sari & Abrar, 2024; Serajuddin, 2023; Shukr & Jameel, 2022; Tomita, 2023; Vijayakumar & Karthikeyan, 2019; Yadav, 2024).

Moreover, educators can create structured lesson plans that integrate technology directly into the curriculum (Amarullah & Imaniah, 2020; Caviglia et al., 2024; Imaniah, 2020; Inamorato dos Santos et al., 2023; Kassymova et al., 2023; Kreuder et al., 2024; Pan et al., 2024; Priyantin & Herawati, 2023; Scheel et al., 2022; Tomczyk & Edisherashvili, 2024; Tóth et al., 2022). For instance, assigning specific video resources or apps as homework can provide students with clear goals for using these tools effectively. This ensures that digital tools are not just supplementary, but a core part of the language learning process.

Developing collaborative digital learning spaces

The digital communication and collaboration scores indicate that students are using tools like Google Docs, but there is potential for expanding collaborative learning experiences. In language learning, peer-to-peer collaboration can significantly enhance speaking, writing, and critical thinking skills. For example: 1) collaborative platforms: tools like Padlet, Trello, and Miro can be introduced for group projects where students work together in real-time, sharing insights and practicing language skills in authentic contexts; 2) online language exchanges: Encourage participation in online language exchange platforms or conversation partner programs (such as Tandem or HelloTalk). These platforms offer opportunities for students to practice speaking and listening with native speakers (Azieva & Khakimova, 2022; Hsu et al., 2011; Sá et al., 2021).

In line with the digital communication and collaboration platform, the faculty can organize regular online group activities, such as collaborative writing projects or virtual language exchange events (Gunarathna et al., 2023). This creates more opportunities for students to engage in meaningful language practice through digital tools.

Improving digital literacy through critical resource evaluation

Although students demonstrate good digital literacy skills, their ability to critically evaluate the credibility of online sources could be improved. In a world where misinformation is rampant, it's crucial that students learn how to assess the quality and trustworthiness of the digital materials they encounter. So, to support their competence in digital literacy skills, it might be held the workshops on digital literacy (Harisanty, 2021; Hartanto et al., 2020; Iskandar et al., 2022; Lestari & Santoso, 2019; Normuratova, 2024; Pertiwi & Musthafa, 2021; Rochanaphapayon, 2023; Son, 2024; Subkhi & Tyas, 2024; Wang, 2022; Zakharevych & Hryhorenko, 2024; Zhang et al., 2024). Organizing workshops focused on identifying reliable language learning resources, checking the credentials of authors, and verifying information can strengthen students' critical thinking skills (Imaniah, 2022; Indah, 2017). Additionally, teaching them how to use research databases, library tools, and citation managers like Zotero or Mendeley can improve their research skills (Gürdür Broo et al., 2021; Merzifonluoğlu & Gonulal, 2018; University of Birmingham, 2014).

Incorporate digital literacy modules that are embedded into language learning courses. These modules should focus on online research, fact-checking, and avoiding misinformation, ensuring that students are well-equipped to navigate online resources effectively.

Fostering continuous development via self-paced learning tools

The moderate use of applications for vocabulary learning suggests that students could benefit from a more structured approach to self-paced learning (Subkhi & Tyas, 2024). Many students might use applications sporadically without integrating them into a daily language learning routine. Application like Quizlet for vocabulary, Anki for flashcards, or even AI-based tools like Grammarly for writing practice could be promoted as daily learning habits (Chiang, 2016; Situmorang et al., 2022). Teachers can assign specific tasks within these apps, like learning new vocabulary words daily or practicing grammar exercises based on class topics.

Integrate these tools into classroom goals by assigning specific tasks on these platforms, tracking students' progress, and incentivizing daily usage. For example, students could be required to complete a set number of flashcards daily or submit written assignments that utilize grammar correction tools.

Promoting digital safety and citizenship

Given the score in online safety, further efforts can be made to enhance students' awareness of digital security issues (UN Secretary-General's High-level Panel, 2020). This could include training on cybersecurity, teaching students how to protect their data, avoid scams, and responsibly use the internet is crucial, especially when engaging with global online platforms (Imaniah, 2020; Inamorato dos Santos et al., 2023; Indrastana, 2022; Jegadeesan & Akkara, 2024; Kassymova et al., 2023; Neupane et al., 2020; Priyantin & Herawati, 2023; Sari & Abrar, 2024; Scheel et al., 2022; Zheng et al., 2024). Courses or modules on cyber hygiene and digital ethics should be part of the curriculum. Create dedicated online safety sessions to teach students how to recognize phishing scams, protect their personal information, and understand digital privacy (Gulyamov et al., 2024; Harahan, 2023; Stepney et al., 2023). Integrating this knowledge into broader discussions on digital citizenship will help students become responsible digital users.

In conclusion, the university students' digital competence is at an advanced level, indicating that they are well-equipped to engage with digital tools in language learning (Archiyesa, 2019; Caviglia et al., 2024; Hidalgo et al., 2020; Inamorato dos Santos et al., 2023; Pan et al., 2024; Pertiwi & Musthafa, 2021; Rajović & Denić, 2023; Sánchez, 2020; Tomczyk & Edisherashvili, 2024; Tóth et al., 2022). However, there are areas where more structured guidance and targeted interventions can improve the integration of technology in language education. By focusing on improving collaborative learning, fostering critical digital literacy, promoting consistent usage of self-paced learning apps, and enhancing digital safety awareness, the university can further elevate the effectiveness of its digital learning environment and ensure students make the most of technology for language acquisition.

CONCLUSION

This study reveals that while university students generally demonstrate strong digital competence (71% overall), their proficiency varies across specific domains. Students exhibit high confidence in using general digital tools (84%) and moderate competence in technology integration for language learning (68%), yet their digital communication and collaboration skills remain the weakest area (63.5%). These findings emphasize the need for structured pedagogical support, particularly in enhancing collaborative platform usage, critical evaluation of online resources, and online safety awareness. Rather than viewing digital competence as a singular skill set, a more nuanced approach is required to address specific challenges within different digital literacy dimensions.

Despite these insights, the study has several limitations. The reliance on self-reported data through questionnaires introduces potential bias, as students may overestimate or underestimate their skills. Additionally, the sample size and demographic scope may not fully represent the diversity of language learners, affecting the generalizability of the findings. The study also focuses only on five dimensions of digital competence, excluding other crucial aspects such as creativity with digital tools and the integration of emerging technologies like AI and VR. Furthermore, the absence of longitudinal data limits the study's ability to track how students' digital competence evolves over time.

Future research should address these gaps by employing objective assessments, such as practical digital skill tests, to validate self-reported findings. Additionally, exploring emerging technologies and their impact on language learning, such as AI-powered tools or immersive VR environments, would provide a more comprehensive perspective. Longitudinal studies tracking students' digital competence over multiple semesters could reveal developmental trends and inform more effective instructional strategies. Expanding the participant pool to include more diverse learner backgrounds will also enhance the generalizability of future findings. By addressing these areas, future research can contribute to a more holistic understanding of digital literacy integration in EFL education.

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