

ICT INTEGRATION IN FOREIGN LANGUAGE TEACHING IN VIETNAMESE HIGHER EDUCATION: LANGUAGE TEACHERS' PERSPECTIVES

Nguyen Tien Dung

Hanoi University, Vietnam
E-mail: dungnt@hanu.edu.vn

Received: 2025-11-02

Accepted: 2025-11-21

Published: 2025-12-10

Abstract

Information and communication technology (ICT) has been conducting sweeping changes in higher education worldwide. With its focus on communication and interaction, language education can be immensely benefitted from various available ICT tools. A number of studies have been conducted in the field of ICT application in language education, but the perspective of language teachers in Vietnamese higher education – a pivotal part – is not thoroughly studied. Hence, this research investigated the issue of ICT integration in foreign language teaching in Vietnamese higher education from the perspective of language teachers. Using the descriptive qualitative method, the research employed the instrument of interview with 87 teachers of different foreign languages from a number of tertiary institutions in Vietnam. The findings showed that various ICT tools were used in their foreign language teaching for different purposes and can be grouped into 06 groups according to their functions in use. Such ICT integration resulted in more effective teaching, learning, assessment, class management, and students' higher learning motivation and better language learning outcomes. The ICT tools were acknowledged to help with the development of the four macro-language skills as well as vocabulary. To promote ICT integration in language teaching, supportive school leadership and policy frameworks alongside with ICT training for language teachers are required. In short, this research has provided insights into how ICT can be more effectively integrated into language teaching practices in Vietnam.

Keywords: *ICT integration; language teaching; teachers' perspectives; Vietnam.*

1. Introduction

In recent years, information and communication technology (ICT) has become a transformative force in global education, reshaping teaching, learning and administrative models via technology integration. Advances in artificial intelligence (AI), cloud-based platforms, and mobile learning have expanded the possibilities for interaction, personalization, and learner autonomy across educational systems worldwide. According to the UNESCO (2023) and the OECD (2021), ICT tools increasingly underpin innovative pedagogies, data-driven decision-making, and flexible learning models in higher education. Studies have shown that digital environments, such as learning management systems (LMS),

virtual classrooms, and AI-powered tutoring systems, can facilitate interactive learning and promote student-centered pedagogies, leading to improved accessibility, more flexible delivery modes, and greater inclusivity in higher education globally (e.g., Bond et al., 2021; Henderson et al., 2022).

As for language education, ICT has had particularly useful implications, given its emphasis on communication, interaction, and learner autonomy. Computer-assisted language learning (CALL) research demonstrates that ICT can enhance oral fluency, strengthen receptive skills, and support individualized feedback (Chapelle & Sauro, 2017; Chapelle, 2020; Zou & Thomas, 2023). Digital tools such as speech-recognition apps, automated writing evaluators, and multimodal learning platforms help create immersive learning environments that align with communicative language teaching principles. The pedagogical affordances of ICT - immediate feedback, authentic input exposure, and collaborative learning - are widely recognized as valuable for both teachers and learners.

In Vietnam, ICT integration in higher education has become a national priority. Major policy frameworks, namely the *Program for National Digital Transformation to 2025, Vision 2030* and the *Project on Enhancing IT Application and Digital Transformation in Education for the 2022-2025 Pperiod, Vision 2030*, underline the urgent need to enhance educational quality, accessibility and innovation via the application of technology. To guide the implementation, the Ministry of Education and Training has provided a set of indicators for the evaluation of digitalization in higher education. Despite this strong policy momentum, research shows that several challenges persist, including uneven digital competence among teachers, limited access to digital resources, and institutional barriers to innovation (Nguyen & Le, 2021; Pham, 2023).

Although international scholarship on ICT integration is extensive, studies focusing specifically on ICT integration in foreign language education in Vietnam's higher education remain comparatively limited, leaving a gap regarding university-level language instructors' experiences, perceptions, and classroom practices. Few studies systematically examine how foreign language teachers in Vietnam navigate ICT demands, what tools they adopt, and what contextual factors shape their ICT application in language teaching.

Therefore, this study aims to explore teachers' perceptions, practices, and challenges in integrating ICT into foreign language teaching in the context of Vietnamese higher education. Guided by the Technological Pedagogical and Content Knowledge (TPACK) framework (Mishra & Koehler, 2006) and focusing on teachers as key agents of pedagogical innovation, the study offers insights that can support the development of digital teaching competency, inform institutional planning, and contribute to ongoing national efforts in educational modernization for improved educational quality.

In summary, this research addresses the existing gap in the literature by providing empirical evidence on ICT integration in foreign language teaching at the university level in Vietnam. It aims to (1) identify teachers' perceptions of ICT in language training, (2) examine their current ICT-supported teaching practices, and (3) analyze the challenges and favorable conditions that affect technology adoption. The findings are expected to contribute to effective ICT integration in higher education.

2. Literature Review

This section aims to review the existing scholarship on the integration of ICT into foreign language teaching by synthesizing global and Vietnamese research on ICT integration and to identify the research gap in the literature.

2.1 ICT in Education and Language Learning

In response to the trend of digital transformation in education, applying advanced technologies in general and integrating ICT in particular into foreign language teaching, has become a critical necessity. Numerous studies have appreciated the cutting edge of ICT integration into language teaching. According to UNESCO (2019), ICT supports equitable access and enhances teaching quality by enabling interactive, multimedia-rich environments. Recent studies (Selwyn, 2022; García et al., 2021; Warschauer & Liaw, 2020) continue to affirm that ICT can help to create adaptable and individualized learning environments, support learner-centered education and encourage innovative teaching methods that enhance interaction and collaboration between teachers and learners, thereby contributing to the overall improvement of educational quality.

In the context of foreign language education, Dudeney and Hockly (2016), Chapelle and Sauro (2017), and Li and Cummins (2019) also share the view that ICT functions as a powerful pedagogical tool that fosters interactive, learner-centered, and personalized learning experiences and enabling multimodal learning by integrating diverse formats such as audio, video, interactive software, and online communication platforms, hence enriching the overall teaching and learning process.

Digital tools, such as computer-assisted language learning (CALL), mobile-assisted language learning (MALL) and other online collaboration tools, can foster autonomous learning and enhance students' motivation and communicative competence by enabling learners to develop their language skills by engaging with multimedia materials and adaptive learning technologies (Egbert & Shahrokni, 2022, Li and Hafner, 2022). Such tools are believed to boost learners' engagement via real-time feedback, pronunciation practice, game-based learning experiences and authentic communication opportunities (Hubbard & Levy, 2016, Golonka, Bowles, Frank & Richardson, 2014) and to further learners' accessibility to language content anytime and anywhere (Kukulska-Hulme & Viberg, 2018). ICT tools also provide language learners with personalized assistance tailored to their specific learning needs (Albashtawi & Al Bataineh, 2020) and enable improved learner retention and increased levels of engagement compared to those in traditional classrooms (Sun and Yang, 2015).

From a pedagogical perspective, ICT integration in language teaching contributes to the four language skills as follows:

- Listening – through interactive audio platforms and speech-recognition feedback;
- Speaking – via synchronous communication tools enabling authentic conversation;
- Reading – with hypertext environments and adaptive reading applications;
- Writing – supported by online editors, grammar checkers, and peer-review platforms.

These affordances highlight ICT's role not merely as a teaching aid but as a transformative driver of language pedagogy.

2.2 ICT Integration Models

ICT integration is grounded theoretically on a number of frameworks as follows:

TPACK Framework

The Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006) conceptualizes successful ICT integration as the interplay between teachers' technological, pedagogical, and content knowledge. According to Li & Deng (2020) and Jang

& Tsai (2021), teachers with higher TPACK competence are able to design more effectively technology-mediated tasks in their teaching practice.

Technology Acceptance Model

The Technology Acceptance Model (TAM) (Davis, 1989) explains users' willingness to adopt technology based on perceived usefulness and ease of use. Teo (2011) points to the fact that TAM makes it possible to examine teachers' attitudes and readiness for digital transformation in higher education.

SAMR Model

The SAMR model (Puentedura, 2014) provides a framework for evaluating the integration of technology in teaching and learning. The model categorizes ICT integration into four progressive levels: Substitution, Augmentation, Modification, and Redefinition.

ICT Competency Framework for Teachers

UNESCO's ICT Competency Framework for Teachers (2018) highlights digital pedagogical competence as foundational for ICT-enhanced teaching practice. Cabero-Almenara et al. (2023) state that there is an increasing emphasis on digital competence assessment in higher education institutions.

These frameworks collectively serve as theoretical anchors for analyzing teachers' ICT practices and identifying competency gaps.

2.3 Determinants of ICT Integration

The literature consistently identifies multiple determinants affecting ICT adoption. Pelgrum (2001) highlights policy support and infrastructure as crucial determinants of ICT success in education. Sharing this viewpoint, Almusharraf and Khahro (2020) point out the challenges language teachers encounter in implementing ICT include limitations in digital literacy, insufficient institutional support, restricted access to technological resources, and various technical or infrastructural constraints.

As noted by Ertmer and Ottenbreit-Leftwich (2019: 68), "simply having access to technology is not enough; teachers must also develop confidence and competence in using ICT to support student learning". Hew and Brush (2007) believe that teachers with unfavorable attitudes toward ICT tend to be less inclined to adopt or explore new technologies, even when resources are accessible. This view is shared by Teo (2011) who holds that the adoption of ICT in teaching is often impeded by teachers' resistance to change, fear of technology replacing conventional pedagogical practices, and a limited perception of its practical value. With regard to resistance to change, according to Wang (2023), in certain cases, traditional teacher-centered approaches are still dominant, making it uneasy to shift to ICT-driven, active learning, personalization and student autonomy, which are core to the student-centered paradigm. Howard & Mozejko (2015) share this when stating that cultural perceptions of teaching authority, assessment practices, and curriculum design have an impact on how technology is integrated into teaching practice.

Regarding access to ICT resources and technical support, Pelgrum (2001) and Bingimlas (2009) note that being short of necessary ICT tools and in the absence of sufficient technical support, teachers frequently struggle to resolve software or network-related problems, which limits their capacity to deliver ICT-based instruction and discourages them from incorporating technology into their teaching practices.

Vietnamese scholarship has increasingly addressed ICT integration in higher education, particularly following the national digital transformation agenda (MOET, 2020). Studies indicate that while ICT awareness among teachers is generally high, effective pedagogical integration remains limited. In their studies, Tran & Nguyen (2021), Pham & Nguyen (2020) and Le & Do (2021) notice the limited digital pedagogical competence among language lecturers, while Tran & Hoang (2020) point to the certain challenges faced by language teachers in Vietnam regarding ICT infrastructure, especially inconsistent internet connectivity. Vu & Doan (2022) highlight the need for continuous ICT training rather than technical knowledge alone if ICT integration in language teaching practice is to be improved. Also, there is a strong demand for ICT-enhanced materials and assessment tools to be available for use in EFL classrooms (Le & Ha, 2021). As for policy and institutional support, universities without robust institutional support, clear strategies, incentives, or professional development programs tend to see lower ICT adoption rates since teachers may not have the required motivation and necessary resources to enhance their digital teaching competencies (Pham & Do, 2021; Le & Nguyen, 2022).

These studies reveal the structural and pedagogical constraints in the context of ICT integration in language education in Vietnam's higher education.

2.4 Research gap

While global research extensively documents ICT benefits and challenges, several gaps emerge in the Vietnamese context, including limited empirical studies on teachers' practical ICT integration experiences in language classrooms; few studies on examining ICT adoption through integrated theoretical frameworks such as TPACK or TAM; limited research on teachers' use of ICT to deliver lessons of specific language skills; and insufficient research connecting institutional policy with everyday teaching practice. These gaps justify the necessity for the present study.

3. Research Method

This section describes the research design, participants, instruments, data collection procedures, data analysis, and ethical considerations adopted in this study.

3.1 Research Design

The study employed a qualitative descriptive design, which is appropriate for exploring teachers' experiences, perceptions, and practices regarding ICT integration in foreign language teaching. According to Creswell and Poth (2018), qualitative approaches are suitable for examining how individuals interpret their experiences, while Denzin and Lincoln (2018) emphasize that qualitative inquiry allows for rich, context-dependent accounts of social phenomena.

Given that the research seeks to understand how teachers integrate ICT in their language teaching, what challenges they encounter, and what support they require, a qualitative descriptive design was selected to capture authentic, nuanced perspectives in participants' own words.

3.2 Participants and Research Setting

The research data was collected from 87 participants, being foreign language teachers from 11 public and private tertiary institutions located in Hanoi and Ho Chi Minh City, Vietnam. With their teaching experience ranging from 5 to 20 years, they were teachers of English ($n = 39$) accounting for nearly 45%, and the rest are teachers of other foreign

languages like Chinese, French, German, Japanese, and Russian, making up around 55%. A majority of participants were female ($n = 67$, approximately 77%).

A purposive sampling strategy was used to select teachers who (1) teach foreign languages at the tertiary level, (2) have at least five years of teaching experience, and (3) have prior exposure to ICT tools in their teaching. This sampling approach is commonly used in qualitative studies to recruit participants who can provide rich, relevant insights (Palinkas et al., 2015).

The research setting consisted of universities with varying levels of ICT infrastructure, allowing for comparative insights across institutional contexts.

3.3 Research Instruments

The primary data collection instrument was a semi-structured interview, comprising 10 open-ended questions focusing on:

- types of ICT tools used in foreign language teaching
- benefits and challenges of ICT integration
- impacts on students' engagement and language skills
- institutional policies and support mechanisms
- barriers and recommended measures for ICT integration

10 OPEN-ENDED INTERVIEW QUESTIONS

1. What ICT tools do you often use in your language teaching?
2. How does the use of ICT tools help you with your foreign language teaching?
3. How do ICT tools help with the development of the four macro language skills?
4. Can ICT use in language teaching help students be more active and interactive in language learning?
5. Do you find using ICT tools in teaching effortless or challenging? Why?
6. Do you notice any differences in the attitude and learning outcomes of students when being taught with ICT integration?
7. Does your institution have a policy to support ICT integration in teaching?
8. Does your institution provide you with any support on how to integrate ICT in your language teaching? If yes, what kind of support?
9. What do you see as barriers to your ICT integration in language teaching?
10. What do you see as necessary measures to promote ICT integration in language teaching?

Interview was used for data collection in this research since it can provide in-depth, detailed insights into participants' beliefs, experiences, and attitudes. According to Cohen, Manion, and Morrison (2018), interviews enable researchers to explore how participants interpret the world in which they live and the meanings of their experiences. Participants being interviewed can express their perspectives in their own words, hence providing rich, qualitative data (Creswell & Poth, 2018). What is more, Kvale & Brinkmann (2015) state that interview allows for flexibility and clarification because researchers can ask follow-up questions to probe deeper into emerging issues. In short, interviews allow the depth,

validity, and interpretive power of the research thanks to the disclosure of participants' experiences behind the data.

The interview questions were developed based on existing literature on ICT in language education. To ensure content validity, a pilot interview with five language teachers was conducted to refine wording, flow, and clarity. Later, adjustments were made to enhance coherence and ensure questions aligned with the research objectives.

3.4 Data Collection Procedures

The data collection followed several steps:

- **Permission and Consent:** Approval was obtained from participants. Teachers received an invitation letter explaining the study's purpose, procedures, confidentiality measures, and voluntary participation. Informed consent was collected prior to participation.
- **Conducting the Interviews:** Interviews were conducted face-to-face or online, depending on participants' availability. Each interview lasted around 15-20 minutes.
- **Recording and Data Management:** With participants' consent, all interviews were audio-recorded and later transcribed verbatim. The audio files were anonymized and securely stored.
- **Organization of Data:** Transcripts were coded and categorized systematically.

3.5 Data Analysis

The data collected were analyzed using thematic analysis, following the six-step procedure proposed by Braun and Clarke (2006):

1. Familiarization with data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the report

This approach is appropriate for identifying patterns in qualitative data, allowing rich interpretation while staying close to participants' actual expressions.

3.6 Ethical Considerations

Ethical standards were strictly observed. Participants were informed about the study's purpose, procedures, and their rights. Participation was entirely voluntary, and participants could withdraw at any time without consequence. Confidentiality was protected by assigning pseudonyms and removing identifiable information. Data were used only for research purposes.

3.7 Summary

These research procedures were designed to address the study's objectives and provide reliable insights into teachers' ICT integration in language teaching practices. By adopting a qualitative descriptive design supported by rigorous data collection, and thematic analysis, the study ensures methodological robustness and meaningful interpretation of teachers' experiences.

4. Results and Discussion

4.1 Teachers' ICT Practices in Foreign Language Teaching

The results revealed that teachers frequently used a wide range of ICT tools to support foreign language teaching. Their practices clustered around six major functional categories.

Learning Management Systems (LMS) such as Moodle, Google Classroom and Microsoft Teams were among the most commonly used platforms. Teachers employed these systems to upload teaching materials, administer assignments and quizzes, manage attendance, and provide structured feedback. LMS platforms were perceived as essential for blended learning, enabling organized interaction and efficient classroom administration.

Communication & Collaboration Tools such as Zoom, Google Meet, Microsoft Teams played a central role in maintaining synchronous communication between teachers and students. Teachers reported using these tools for online discussions, group presentations, real-time feedback, and speaking practice sessions. Several respondents emphasized that these platforms facilitated continuous interaction outside physical classroom time.

Digital Content Creation Tools comprising Canva, PowerPoint and video-editing apps were also frequently integrated into teaching. These tools allowed teachers to design visually appealing slides, infographics, and multimedia materials, which were particularly useful in teaching vocabulary and grammar - areas typically perceived as less engaging to students.

Language-Specific Learning Tools including Duolingo, BBC Learning English, VOA Learning English, Quizlet, ChatGPT were used to help with teaching and learning the four macro-language skills, vocabulary, grammar with the possibility of individualizing the learning process with instant feedback. They were especially beneficial for students of varying proficiency levels.

AI & Adaptive Learning Tools such as ChatGPT, Google Gemini, Elsa Speak were adopted by some teachers to tailor the learning content to personal competence and provide feedback. These tools were perceived as innovative supports for improving pronunciation, speaking fluency, and writing feedback.

Assessment & Feedback Tools including Google Forms, Quizlet Test Mode to help with online testing and Turnitin enabled teachers to diversify assessment formats, detect plagiarism, and conduct reflective learning.

These findings indicate that ICT integration in foreign language teaching is both diverse and purposeful, aligning with global trends reported in the earlier studies.

4.2 Perceived Benefits of ICT Integration

A majority of teacher-respondents agreed that ICT tools could help teachers to deliver the lessons in an entertaining manner and manage large classes more effectively. Many echoed the argument of Hidayat (2022) and Guaña-Moya et al. (2024) that ICT increases learner motivation by introducing multimedia elements and interactive tasks.

One teacher stated: "ICT tools help to make the lessons more engaging to my students and, so, they tend to be more attentive and interested in learning. It is really effective when teaching boring things such as grammar and vocabulary. I can notice that many students appear to be more eager to learn with ICT".

Another teacher emphasized ICT's impact on collaborative learning: "ICT tools can offer interactive practice opportunities for students, so they are more willing to practice using language together and with the tools, without much teachers' requirement or

supervision. This is very useful for teaching large-sized classes when students tend to have a passive learning style”.

Teachers also found ICT integration helpful as they can tailor their teaching to the varying learning needs of students thanks to the employment of ICT tools. Platforms like Quizlet, Duolingo, and AI-based tools allowed learners to practice at their own pace, which was difficult to achieve with solely traditional tools such as textbooks, blackboards and cassette players. This saves teachers a lot of burden when teaching classes with students of different levels of language proficiency. The finding aligns with literature highlighting ICT’s capacity to support individualized learning pathways (Du Plooy et al, 2024, Contrino et al., 2024).

Teachers further noted that ICT facilitated real-time monitoring of learners’ comprehension. Interactive exercises created using Google Forms or LMS-based quizzes could provide teachers with immediate insights into students’ performance, allowing them to adjust their teaching and materials to ensure that most students can acquire what they are taught. Such adaptive teaching practices reflect the pedagogical benefits identified in Neo and Neo (2009).

4.3 Role of ICT in Developing the Four Macro Language Skills

Across the dataset, teachers consistently acknowledged the positive effects of ICT tools on the teaching and learning of the four language skills: listening, speaking, reading, and writing skills. For listening, tools such as YouTube, VOA, BBC Learning English, and AI-based speech analysis applications helped transform listening from a passive reception process into an active, personalized learning activity. Teachers appreciated that ICT provides authentic exposure to native speakers’ pronunciation, intonation, and accents, which is consistent with the communicative language teaching perspective. Also, teachers could, with the help of ICT tools, design listening materials which matched with students’ proficiency levels, hence, boosting the learning motivation of students when students could listen and understand most of what they heard.

Speaking skills were also reported to improve when ICT was integrated meaningfully. Teachers noted that online platforms and AI-powered speaking apps offered students additional speaking opportunities beyond the classroom. This could help to improve students’ speaking confidence and fluency when they speak the language. One respondent remarked: *“As practice makes perfect, more opportunities to practice speaking without the restriction of class time make it possible for students to speak more confidently and fluently.”* ICT tools could also provide students with chances to pick up native-like speaking styles. Many teachers noticed the improvement in students’ speaking skills after learning with the aid of ICT.

Regarding reading skills, teachers highlighted that digital platforms offer a vast repository of texts covering diverse topics and proficiency levels. Students were benefited from integrated dictionary functions, hyperlinked explanations, and interactive reading tasks. Moreover, teachers could resort to ICT-enabled reading materials to support both extensive and intensive reading practices for students of different proficiency levels without relying on printed textbooks.

As for writing, teachers emphasized that ICT tools transformed writing into an active process with instant feedback, modification and correction. With access to online sample texts, collaborative writing platforms, grammar-checking tools, and teacher feedback via LMS, students could revise their work more effectively for their self-study and self-practice.

These findings reinforce the claims in earlier scholarship that ICT encourages learner autonomy and reflective writing practice.

4.4 Challenges and Institutional Support Needs

Despite the numerous benefits, teachers faced several barriers that constrained their ICT integration efforts. A notable proportion of respondents indicated limited ICT knowledge and insufficient confidence in applying technology in alignment with curriculum requirements. While some teachers could troubleshoot minor technical issues, others expressed frustration with unfamiliar software and limited technical support.

Increased workload concerns were also prominent. One teacher admitted: *"For me, using ICT tools initially requires more time and effort compared to traditional teaching methods. I often do not have enough time to prepare ICT-based lessons alongside my other teaching responsibilities. In order to acquire necessary knowledge and skills to apply ICT tools to my teaching, I have to spend extra time & efforts and I also have to prepare back-up plan in case there is technological breakdown without higher payment."* This echoes broader concerns in the literature regarding teachers' technology-related workload (Prestridge et al., 2012).

Another barrier was the inconsistency in institutional policies. Some institutions provided teachers with training, guidelines, and technical assistance, while others left ICT use optional to teachers. Teachers in the latter context felt discouraged as they neither received adequate training on how to use ICT tools effectively in the classroom nor received sufficient technical support in case of ICT tool malfunction during lessons. In many cases, teachers had to manage by themselves. One teacher stated: *"The available ICT tools to me are not user-friendly and I do not receive enough encouragement or support from the school administration to use ICT in the lessons so I am reluctant to apply technology as long as I can fulfil my teaching duty as required"*. To remove this barrier, according to Prestridge et al. (2012) and Abedi (2023), clear policies, professional development programs, and incentives for teachers are required so as to gain effective ICT integration.

4.5 Implications for Practice and Policy

The findings suggest that successful ICT integration in foreign language teaching hinges on three main conditions: consistent training, adequate infrastructural support, and pedagogical guidance. Tertiary institutions should provide structured professional development programs that focus not only on technical skills but also on pedagogical strategies for using ICT effectively. Additionally, administrators are required to ensure reliable ICT infrastructure and timely technical assistance. Clear institutional policies and recognition mechanisms can further motivate teachers to engage with ICT meaningfully. These implications reinforce the broader educational discourse that ICT integration should be supported at systemic, not merely individual, levels.

5. Conclusion

This study revealed that foreign language teachers at the tertiary level in Vietnam generally demonstrated positive attitudes toward ICT integration and employed a wide range of digital tools to support teaching, learning, and assessment. The findings addressed the research objectives by showing that ICT not only enhanced classroom interaction and language-skill development but also reshaped pedagogical practices in ways consistent with contemporary digital teaching frameworks. Specifically, the study indicated three core

outcomes: firstly, teachers commonly used LMS platforms, communication tools, language-learning applications, and AI-based systems to support instruction; secondly, ICT integration was perceived to increase learner engagement and promote personalized, collaborative learning; and thirdly, institutional and technical constraints—particularly limited training and insufficient support—continued to hinder optimal ICT use.

The results aligned with established theoretical perspectives such as the TPACK model and technology acceptance frameworks, which emphasize the interplay between technological knowledge, pedagogical design, and contextual factors. The study's findings confirmed that teachers' digital competence, combined with supportive institutional policies, played a decisive role in moving ICT integration from basic use toward more transformative forms of technology-enhanced pedagogy.

These findings carry several educational implications. The usage of ICT in language teaching is proved to be fruitful and applicable but to promote ICT integration in language teaching, certain measures are supposed to be undertaken. Higher education institutions should invest in continuous professional development programs that strengthen teachers' digital skills and pedagogical confidence. Policy frameworks must prioritize not only infrastructure but also technical support mechanisms and incentives to sustain meaningful ICT adoption. For language teachers, these results suggest the importance of designing learning activities that leverage ICT integration to maximize the potential of ICT in language education.

This study is not without limitations. Its sample was confined to a specific group of tertiary-level language teachers from universities in 2 big cities in Vietnam only, which may restrict the generalizability of the findings across diverse Vietnamese institutions. Data were also limited to teacher perspectives; student viewpoints and objective measures of learning outcomes were beyond the scope of the present investigation. Hence, future research could examine learners' experiences with ICT-supported instruction, evaluate long-term impacts of teacher training in digital pedagogy, or compare ICT integration practices across different institutional types. Such studies would broaden understanding of the conditions necessary for sustainable and meaningful technology use in foreign language education.

Overall, this study contributes to the ongoing discussion of ICT integration in Vietnamese higher education by highlighting both progress and persistent challenges. The findings underscore the importance of institutional leadership, digital competence development, and coherent policy support in advancing innovative, effective, and equitable ICT-enhanced language teaching.

References

- Albashtawi, A. H., & Al Bataineh, K. B. (2020). The effectiveness of Google Classroom among EFL students in Jordan: An innovative teaching and learning online platform. *International Journal of Emerging Technologies in Learning*, 15(11), 78–88. <https://doi.org/10.3991/ijet.v15i11.12317>
- Abedi, E. A. (2023). Tensions between technology integration practices of teachers and ICT in education policy expectations: Implications for change in teacher knowledge, beliefs and teaching practices. *Journal of Computers in Education*, 11(4), 1215–1234. <https://doi.org/10.1007/s40692-023-00296-6>
- Almusharraf, N., & Khahro, S. H. (2020). Students' satisfaction with online learning experiences during the COVID-19 pandemic. *International Journal of Emerging Technologies in Learning*, 15(21), 246–267. <https://doi.org/10.3991/ijet.v15i21.15647>

- Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 5(3), 235–245.
- Bond, M., Bedenlier, S., & Zawacki-Richter, O. (2021). The role of higher education institutions in digital transformation: A systematic literature review. *International Journal of Educational Technology in Higher Education*, 18(1), 1–23. <https://doi.org/10.1186/s41239-021-00273-z>
- Cabero-Almenara, J., Gutiérrez-Castillo, J. J., Barroso-Osuna, J., & Rodríguez-Palacios, A. (2023). Digital teaching competence according to the DigCompEdu framework: Comparative study in different Latin American universities. *Journal of New Approaches in Educational Research*, 12(2), 276–291. <https://doi.org/10.7821/naer.2023.7.1452>
- Chapelle, C. A. (2020). *Argument-based validation in testing and assessment*. Springer.
- Chapelle, C. A., & Sauro, S. (Eds.). (2017). *The handbook of technology and second language teaching and learning*. Wiley-Blackwell.
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.
- Contrino, M. F., Reyes Millán, M., Vázquez Villegas, P., & Membrillo Hernández, J. (2024). Using an adaptive learning tool to improve student performance and satisfaction in online and face to face education for a more personalized approach. *Smart Learning Environments*, 11(1), Article 6. <https://doi.org/10.1186/s40561-024-00292-y>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The Sage handbook of qualitative research* (5th ed.). Thousand Oaks, CA: SAGE.
- Dudeney, G., & Hockly, N. (2016). ICT in ELT: How did we get here and where are we going? *ELT Journal*, 70(4), 401–409. <https://doi.org/10.1093/elt/ccw059>
- Du Plooy, E., Casteleijn, D., & Franzsen, D. (2024). Personalized adaptive learning in higher education: A scoping review of key characteristics and impact on academic performance and engagement. *Heliyon*, 10, e39630. <https://doi.org/10.1016/j.heliyon.2024.e39630>
- Egbert, J., & Shahrokni, S. A. (2022). *CALL theory applications for online second language learning and teaching*. IGI Global.
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2019). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education*, 42(3), 255–284.
- García, A., Mirra, N., Morrell, E., Martínez, A., & Scorza, D. (2021). The digital learning equity conversation: A research agenda for PK–12. *Review of Research in Education*, 45(1), 142–173. <https://doi.org/10.3102/0091732X21999011>
- Golonka, E. M., Bowles, A. R., Frank, V. M., & Richardson, D. L. (2014). Technologies for foreign language learning: A review of technology types and their effectiveness. *Computer Assisted Language Learning*, 27(1), 70–105. <https://doi.org/10.1080/09588221.2012.700315>

- Guaña Moya, J., Arteaga Alcívar, Y., Criollo C, S., & Cajamarca Carrazco, D. (2024). Use of interactive technologies to increase motivation in university online courses. *Education Sciences*, 14(12), 1406. <https://doi.org/10.3390/educsci14121406>
- Henderson, M., Selwyn, N., & Aston, R. (2022). What works and why? Student perceptions of 'useful' digital technology in university teaching and learning. *Studies in Higher Education*, 47(3), 556–569. <https://doi.org/10.1080/03075079.2020.1821184>
- Hew, K. F., & Brush, T. (2007). Integrating technology into K–12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational Technology Research and Development*, 55(3), 223–252.
- Hidayat, D. N., dkk. (2022). Digital technology supporting English learning among university students: Roles of digital media literacy and online engagement. *Research and Practice in Technology Enhanced Learning*, 17, 23. <https://doi.org/10.1186/s41039-022-00198-8>
- Howard, S. K., & Mozejko, A. (2015). Considering the history of digital technologies in education. In M. Henderson & G. Romero (Eds.), *Teaching and digital technologies: Big issues and critical questions* (pp. 157–168). Cambridge University Press.
- Hubbard, P., & Levy, M. (Eds.). (2016). *Teacher education in CALL*. John Benjamins Publishing.
- Jang, S.-J., & Tsai, M.-F. (2021). Exploring the TPACK of Taiwanese secondary school English teachers with varying ICT competencies. *Australasian Journal of Educational Technology*, 37(1), 68–83. <https://doi.org/10.14742/ajet.6234>
- Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, 49(2), 207–218. <https://doi.org/10.1111/bjet.12580>
- Kvale, S., & Brinkmann, S. (2015). *InterViews: Learning the craft of qualitative research interviewing* (3rd ed.). SAGE Publications.
- Le, X. N., & Do, H. N. (2021). Teachers' digital literacy and pedagogical challenges in ICT-supported EFL teaching. *VNU Journal of Foreign Studies*, 37(3), 45–63.
- Le, A. T., & Nguyen, Q. T. (2022). Policy implementation and institutional readiness for ICT integration in Vietnam's higher education. *Education and Information Technologies*, 27, 11287–11306.
- Li, Q., & Cummins, J. (2019). Effectiveness of AI-powered language tutors: A case study of English language learners. *Language Learning & Technology*, 23(1), 1–21. <https://doi.org/10.10125/44784>
- Li, L., & Deng, L. (2020). Understanding teachers' TPACK for ICT integration in classrooms: A systematic review. *Journal of Educational Computing Research*, 58(3), 695–718. <https://doi.org/10.1177/0735633119854037>
- Li, Y., & Hafner, C. A. (2022). Mobile-assisted vocabulary learning: Investigating receptive and productive vocabulary knowledge of Chinese EFL learners. *ReCALL*, 34(1), 66–80. <https://doi.org/10.1017/S0958344021000161>
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.
- Neo, M., & Neo, T.-K. (2009). Engaging students in multimedia-mediated constructivist learning: Students' perceptions. *Educational Technology & Society*, 12(2), 254–266.
- Nguyen, T. M., & Le, T. T. (2021). Digital competence of university lecturers in Vietnam: Awareness, practices, and influencing factors. *International Journal of Emerging Technologies in Learning*, 16(24), 125–142. <https://doi.org/10.3991/ijet.v16i24.26915>

- OECD. (2021). *Digital Education Outlook 2021: Pushing the frontiers with AI, transforming education*. OECD Publishing. <https://doi.org/10.1787/8a7679a8-en>
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533–544.
- Pelgrum, W. J. (2001). Obstacles to the integration of ICT in education: Results from a worldwide educational assessment. *Computers & Education*, 37, 163–178.
- Pham, H. H. (2023). Barriers to ICT integration in higher education: A study of institutional constraints and digital resource limitations in Vietnam. *Education and Information Technologies*, 28(2), 1599–1617. <https://doi.org/10.1007/s10639-022-11329-0>
- Pham, H. T., & Do, T. M. (2021). Institutional support and ICT adoption in Vietnamese universities. *International Journal of Education and Development using ICT*, 17(2), 45–63.
- Pham, T. H., & Nguyen, H. T. (2020). Digital competence of EFL lecturers in Vietnam: Issues and implications. *Asian EFL Journal*, 27(4), 150–175.
- Prestridge, S., Albion, P., & Edirisinghe, S. (2012). Responding to challenges in teacher professional development for ICT integration in education. *Educational Technology & Society*, 19(3), 110–120.
- Puentedura, R. R. (2014). *SAMR: A contextualized introduction*. Ruben Puentedura's Weblog.
- Selwyn, N. (2022). *Education and technology: Key issues and debates* (3rd ed.). Bloomsbury Academic.
- Sun, Y., & Yang, F. (2015). Learner perceptions of a mobile application for EFL listening and speaking practice. *Language Learning & Technology*, 19(2), 21–36. <https://doi.org/10.10125/44642>
- Teo, T. (2011). Factors influencing teachers' intention to use technology: Model development and test. *Computers & Education*, 57(4), 2432–2440.
- Tran, Q. T., & Hoang, M. T. (2020). Barriers to ICT adoption among Vietnamese EFL teachers. *TESOL International Journal*, 15(1), 120–138.
- Tran, T. T., & Nguyen, T. M. (2021). ICT integration in Vietnamese higher education: Current practices and challenges. *International Journal of Learning, Teaching and Educational Research*, 20(4), 188–204.
- UNESCO. (2018). *ICT Competency Framework for Teachers*. UNESCO Publishing.
- UNESCO. (2019). *Information and communication technology (ICT) in education: A global perspective on opportunities and challenges*. Paris: UNESCO Publishing.
- UNESCO. (2023). *Digital Competency Frameworks for Teachers: Supporting Technology-Enhanced Teaching and Learning*. UNESCO Publishing.
- Vietnam Ministry of Education and Training (MOET). (2020). *Program for Digital Transformation in Education in the 2020–2025 period*. Hanoi: MOET.
- Vietnam Ministry of Education and Training (MOET). (2022). *Guidelines for Digital Transformation in Education and Training*. Hanoi: MOET.
- Vu, H. M., & Doan, T. T. (2022). Enhancing teachers' ICT competence: The need for continuous professional development in Vietnam. *AsiaCALL Online Journal*, 13(1), 59–76.
- Wang, L. (2023). The impact of student-centered learning on academic motivation and achievement: A comparative research between traditional instruction and student-

centered approach. *Journal of Education, Humanities and Social Sciences*, 22, 346–353. <https://doi.org/10.54097/ehss.v22i.12463>

Warschauer, M., & Liaw, M. L. (2020). Emerging technologies for autonomous language learning. *Language Learning & Technology*, 24(3), 1–13. <https://doi.org/10.10125/44705>

Zou, D., & Thomas, M. (2023). Recent developments in technology-enhanced and CALL learning: Innovations and emerging trends. Springer.