PERCEPTIONS OF EFL STUDENTS IN NORTHERN VIETNAM TOWARD USING TECHNOLOGY FOR LEARNING ENGLISH IN URBAN UNIVERSITY SETTINGS

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Abstract. This study explores the role of Information and Communication Technology (ICT) in enhancing English language learning among students from three universities in Hanoi. Data were collected through a survey with 488 students, covering various aspects of the participants' academic background, English proficiency levels, and perceptions of ICT in language learning. The respondents provided insights into the effectiveness of ICT tools in learning English, especially in writing skills, and preparing for their future careers. The study also specifically highlights students' attitudes toward online learning platforms, the use of multimodal tools, and the challenges they face in applying technology to language education. Results show that students acknowledge the positive impact of technology in accelerating learning and providing access to diverse resources, although challenges related to practical application remain. The findings offer implications for educational institutions to optimize the integration of ICT into English curricula, ensuring alignment with both academic requirements and industry demands.

Keywords: ICT, multimodal, English language learning, writing.

1. Introduction

In recent decades, technology has transformed educational practices worldwide, altering conventional learning methods and offering new opportunities for language acquisition. This transition is especially important in English as a Foreign Language (EFL) education, where technology provides students with enhanced access to materials, interactive learning platforms, and chances for independent learning beyond the classroom (Le, 2021; Lee, 2022) [1], [2].

In line with this growing trend, Northern Vietnam has seen significant progress in integrating technology into English language instruction at urban universities (Gruba & Nguyen, 2019) [3]. This advancement is largely propelled by the Ministry's commitment to reshaping language education through modern technological integration, particularly in computer-assisted language learning (CALL) and multimedia learning. Indeed, the National Foreign Languages Project 2020 has implemented numerous training courses to improve teachers' ability to incorporate technology into language instruction. As a result, CALL has been extensively employed for a variety of purposes in language education and language teaching methodology to accomplish learning objectives (Lodhi et al., 2019; Nguyen, 2021) [4], [5], through the use of multimedia,

including video, voice, graphics, and texts. Furthermore, CALL has played a critical role in enhancing digital skills towards career readiness in global contexts (Nong et al., 2024; Javed et al., 2023) [6], [7].

Nonetheless, despite the increasing use of digital tools in educational environments, limited research concentrates on the specific attitudes and opinions of Vietnamese EFL students concerning the varied usability of these technologies. Since research suggests that students' positive perceptions of ease of use often correlate with higher engagement and more effective learning outcomes (Sivo et al., 2018) [8], comprehending their perceptions is essential for enhancing computer-assisted learning and multimedia integration and matching it with students' requirements and anticipations. Thus, this study aims to explore how Vietnamese university students from an urban setting perceive the role of technology in their English language learning experience, specifically regarding the barriers and facilitators of technology adoption among EFL students in the region of Northern Vietnam.

2. Content

2.1. Literature Review

Gunuç & Babacan (2018) [9] define what it means by implementing technology into education. Firstly, technological integration with educational purposes should promote active and cooperative learning, encouraging students to engage critically with content. It accommodates various learning styles, which supports personalized educational experiences for diverse learners.

Additionally, according to Kalyani (2024) [10], technology fosters individual growth and motivation, enhancing students' learning journeys. The integration of technology needs to ensure that it strengthens the interaction between teachers and students, leading to a more dynamic educational environment. Moreover, it improves communication skills, which are essential for both academic and professional success. Technology must serve as a tool for building cultural bridges, promoting understanding and collaboration among students from different backgrounds. Integrating technology into English language education is vital for skill acquisition, and the learning environment must be tailored to support these efforts. Teachers should continuously assess their own technological competencies and stay updated with relevant technologies to effectively enhance their teaching methods. Lastly, while teachers play a critical role, students' positive psychological and emotional perceptions can be said to be important and a priori in showing the behaviors of their engagement in technological utilization. When those conditions are met, it is undeniable that integrating technology into EFL education in higher education, such as through CALL and multimedia learning, offers several benefits.

In urban language education settings, EFL students are claimed to utilize technology as an effective tool for various purposes regardless of their primary language, with notable applications in blogging, information retrieval, and social interaction (Zeng, 2020) [11], bringing learning experience to the learners' world (Gilakjani, 2017) [12], having access to much information beyond instructed knowledge, and developing their higher-order thinking skills via English input (Solikhah, 2023) [13]. Rahayu (2023) [14] also contends that the utilization of technology can establish a learning environment that prioritizes the learner over the teacher, thereby driving positive transformations where the learning environment is filled with meaningful assignments and the learners are accountable for their learning. It is reported that using technology at school makes learning more enjoyable and effective, contributing to a more interesting and interactive learning environment, while the research also found that technology enhances learners' motivation, social interactions, and overall engagement in the learning process (Haidir, 2023) [15]. Furthermore, technological integration in English learning effectively strengthens EFL

learners' career-related skills and primes them for career development later when technological abilities are required (Ansyari, 2015) [16].

Despite these advancements, challenges remain. For example, a lack of digital literacy among some EFL students leads to discomfort and disengagement with tech-based learning. Similarly, frequent technical issues disrupt lessons, negatively impacting students' experiences and perceptions of technology (Ja'ashan, 2015; Liton, 2015) [17] [18]. Inadequate classroom resources - such as the absence of internet and up-to-date tools - restrict effective tech integration, while high costs associated with digital resources create financial barriers for schools (Behroozian & Sadeghoghli, 2017) [19]. Some students also find tech-integrated learning overly complex and time-consuming, further limiting its perceived value (Milon & Iqbal, 2017) [20]. Excessive reliance on digital tools can lead to passive learning and reduce opportunities for meaningful communication in English (Chen, 2016) [21].

Therefore, given the varied findings of the previous studies on a similar topic in various urban settings, it is essential to conduct more research to leverage students' perceptions for improving instruction. Specifically, according to Kormos (2022) [22], urban language teachers need further support and professional development to effectively integrate students' opinions and attitudes toward technology into their teaching. This is particularly important in addressing challenges such as inadequate high-quality Internet access, which is the primary barrier to technology implementation. This study aims to gain more contextual insights into Vietnamese higher education with the following guiding questions:

(1) What are the students' attitudes toward the use of technological integration, specifically multimedia learning, for learning English?

(2) How do students perceive the educational value and applicability of such technological and multimodal tools across different academic disciplines?

(3) What are the perceived benefits and challenges of technology and online learning?

2.2. Methodology

2.2.1. Research design

This study was an exploratory study which is an investigation into a study topic to find something novel and fascinating in a specific context (Elman et al., 2020) [23]. Furthermore, using a quantitative research methodology is justified for this study because it allows for the systematic collection and analysis of data on the participants' attitudes, proficiency levels, and perceptions regarding multimodal communication tools and their application in language learning and future careers. By employing Likert-scale questions, the study ensures that complex constructs such as attitudes toward technology and online learning can be measured consistently and compared across a diverse sample. The quantitative approach also enables the identification of patterns, trends, and potential correlations between the participants' backgrounds, computer usage, and their attitudes, providing a robust framework for generalizing findings. Additionally, this methodology aligns well with the study's goal of capturing both the breadth and depth of the participants' experiences while maintaining objectivity and reliability in analyzing the data.

2.2.2. Participants of the study

The participants include 488 students from three universities located in Hanoi, Vietnam. These participants represent diverse academic backgrounds, with varying levels of English proficiency and future career aspirations involving English usage. To be more specific, of the 470 participants, 233 of them are from Hanoi National University of Education, accounting for nearly a half. The number of students from the other two universities, namely University of Commerce and University of Pharmacy, make up 23% and just over 27% respectively. The survey also revealed a significant gender disparity among participants. Out of the total respondents, 82.0% are female, with 400 students, while only 18.0%, or 88 students, are male. This highlights a

predominant female participation rate, suggesting either a higher level of interest or availability among female students in taking part in the survey.

2.2.3. Data collection

Data were collected through an online survey questionnaire, which comprises both Likert-scale questions and short-answer questions. The questionnaire is modified from the classic study of Davis (1989) [24] to suit the context of the study. The questionnaire is divided into six parts. The first part collects respondents' background information including demographic details, current English proficiency, required English proficiency standards, involvement in online communities, and plans for using English in future careers. The second part consists of questions related to students' familiarity and proficiency with computer usage. The third, fourth, and fifth parts concern participants' attitudes toward using computers, attitudes toward multimodal communication, and attitudes toward online learning, respectively. The last part explores insights into the advantages of multimodal tools in enhancing language skills, with a focus on writing, and their application in future careers. A pilot survey was carried out with a small group of students in three universities prior to disseminating the survey to the entire sample. This helped to identify any issues regarding the questions' clarity and the scale's appropriateness. Based on the feedback from the pilot group, the researchers decided on the adjustments to ensure that the survey was easy to understand.

2.2.4. Data analysis

The collected data were analyzed using SPSS (Statistical Package for the Social Sciences). Descriptive statistics were employed to summarize demographic information and overall trends, while inferential statistical methods were used to examine relationships between variables and assess students' attitudes in detail.

2.3. Findings

2.3.1. Number of hours spent on the Internet

* Number of hours spent on the Internet

Table 1. Number of hours spent on the Internet

	Frequency	Percent	Valid percent	Cumulative percent
Valid under 1 hour	4	.8	.8	.8
1-2 hours	24	4.9	4.9	5.7
2-3 hours	56	11.5	11.5	17.2
3-4 hours	115	23.6	23.6	40.8
Over 4 hours	289	59.2	59.2	100.0
Total	*488*	*100.0*	*100.0*	

Based on the data provided in the table, the survey results show the distribution of time spent on the internet by the participants. The majority of respondents (59.2%) spend more than 4 hours online daily. Following that, 23.6% of participants spend 3 to 4 hours online each day. Another 11.5% use the internet for 2 to 3 hours. Meanwhile, 24 respondents (4.9%) reported using the internet for 1 to 2 hours, and only a small minority, 0.8%, spend less than 1 hour online daily. This indicates that most respondents are heavy internet users, with cumulative percentages showing that over 80% of them spend more than 3 hours online daily.

* Number of hours spent on the Internet by gender

Table 2. Number of hours spent on the Internet by gender

The crosstabulation of internet usage by gender reveals distinct patterns between male and female participants. Among male students, 51.1% spend more than 4 hours online daily, while 23.9% use the internet for 3 to 4 hours, and 15.9% spend 2 to 3 hours online. Only a small fraction (5.7%) of male respondents use the internet for 1 to 2 hours, and 3.4% spend less than 1 hour. In

contrast, 61.0% of female students reported spending more than 4 hours online, a higher percentage than their male counterparts. Additionally, 23.5% of female students use the internet for 3 to 4 hours, and 10.5% for 2 to 3 hours. A small group (4.8%) spends between 1 to 2 hours online, and only 0.2% of female participants use the internet for less than 1 hour.

		Number of hours					Total
		<1	1-2	2-3	3-4	>4	
Male	Count	3	5	14	21	45	233
	Percentage	3.4%	5.7%	15.9%	23.9%	51.1%	100.0%
Female	Count	1	19	42	94	244	129
	Percentage	0.2%	4.8%	10.5%	23.5%	61%	100%
Total	Count	4	24	56	115	289	488
	Percentage	0.8%	4.9%	11.5%	23.6%	59.2%	100%

Overall, both genders show a trend toward heavy internet usage, but female students report spending more time online than males, especially in the category of more than 4 hours per day.

2.3.2. Students' perceptions towards the use of multimodal tools in learning

* Student attitudes towards multimodal tools in learning

Table 3. Student attitudes towards multimodal tools in learning

No.	Statements	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
1	Multimodal tools on the computer do not scare me.	3.1	1.2	32.8	43.6	19.3
2	I am happy that there are more multimodal tools on the computer and social media applications today.	3.1	0.8	25.2	45.1	25.8
3	Multimodal tools on the computer save time and effort.	2.3	1.6	26.0	43.9	26.2
4	Multimodal tools on the computer are a fast and efficient means of gathering information.	2.5	1.2	23.0	47.1	26.2
5	I want to learn more about using social media and multimodal tools on the computer effectively in my major.	1.8	2.3	29.7	44.7	21.5

The survey results indicate generally positive student perceptions of multimodal computer tools for learning. A large portion of students found these tools unthreatening (43.6% agree, 19.3% strongly agree) and engaging for English learning (45.1% agree, 21.9% strongly agree). Many also viewed them as time-saving (43.9% agree, 26.2% strongly agree) and efficient for information gathering (47.1% agree, 26.2% strongly agree). However, 15.4% agreed that such tools may harm English writing. Despite these concerns, a notable group (44.7% agree, 21.5% strongly agree) was interested in learning more about effective multimodal tool use in their field, showing an overall openness to technology.

These findings align with the studies aforementioned (cf. Ansyari, 2015; Gilakjani, 2017; Haidir, 2023; Solikhah, 2023) [16], [12], [15], [13], affirming the strengths of integrating technology, specifically computer usage and multimedia, in English language teaching. Several key perceptions of Vietnamese EFL students in Northern Vietnam highlight students' positive outlooks that these tools enhance their learning experiences by making English classes more interactive, accessible, and tailored to modern learning preferences. Notably, in Vietnamese contexts, students tend to use technology for learning purposes up to four hours, which is still shorter than the global average of eight to ten hours (Roberts et al., 2014) [25]. Still, they found

these tools interesting and beneficial for learning English, with a significant portion mentioning the enhanced motivation and efficiency in gathering information in English and writing skills development. However, some concerns, as echoed in previous studies, highlight potential downsides; in this context, the students showed a slight preference for traditional books and hold the belief that technology might complicate learning tasks as Chen (2016) argues [21]. Interestingly enough, EFL students in Vietnam are practical about the relationship between technology and their career readiness, claiming that they realize the application of technology in learning is relevant to and necessary for their future career. This trend of tailoring technological uses to the students' needs to prepare them for a career indicates that Vietnam should be joining a global movement toward integrating digital skills in education, equipping students not only with language proficiency but also with essential technological competencies that enhance their readiness for the increasingly digitalized workforce.

* Perceptions of educational value and applicability of multimodal tools

Table 4. Student perceptions of educational value and applicability of multimodal tools

No.	Statements	Attitudes (%)				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Multimodal tools on the computer improve education.	2.3	1.4	24.2	49.4	22.7
2	Learning with multimodal tools on the computer offers real advantages compared to traditional learning methods.	2.3	2.5	29.1	46.7	19.5
3	Using computer technology makes the subject more interesting.	2.3	2.5	27.3	47.5	20.5
4	Multimodal tools on the computer have no place in my field of study.	23.0	29.9	25.8	14.3	7.0
5	The use of multimodal tools on the computer is relevant to my academic and future career goals.	2.5	2.0	31.8	40.6	20.1

The results show that most students acknowledged a positive impact of multimodal tools on their learning experience. A notable portion (49.4% agree, 22.7% strongly agree) saw these tools enhance education, with 46.7% agreeing and 19.5% strongly agreeing that they offer clear advantages over traditional methods. Additionally, 47.5% agreed and 20.5% strongly agreed that these tools make subjects more engaging. However, opinions are mixed on their relevance to specific fields, as 23.0% strongly disagreed and 29.9% disagreed that these tools belong in their area of study, and 31.8% remained neutral or undecided about their effectiveness. Overall, the findings reveal positive attitudes toward multimodal tools, though some concerns about field relevance persist.

In general, Vietnamese EFL students perceive improvements in education quality and subject engagement as the advantages of multimodal tools, once again finding those tools highly relevant, aligning well with their academic interests and career objectives, and contextualizing English intake. This means tailoring technology use to align with specific disciplines is necessary, where English teachers might focus on selective, purpose-driven uses rather than comprehensive integration (Simonsen, 2022) [26].

* Views on technology and online education: benefits, challenges, and preferences

The survey results on online education attitudes show a mix of positive and neutral responses. A majority of the respondents (43.4% agree, 20.7% strongly agree) believed online education saves time and effort. Opinions on effectiveness are divided, as 47.5% remained neutral, while

26.8% agreed and 11.3% strongly agreed that online education is more effective than traditional methods. Concerns include the lack of face-to-face interaction (35.2% agree) and difficulties in monitoring students (39.1% agree). Despite these issues, interest remains, with 34.6% agreeing nd 13,7% strongly agreeing that online education captures their interest, and a notable 40.8% agreed and 24.8% strongly agreed that blended instruction is preferable. Issues of internet accessibility (43.0% neutral) and heavy workloads (52.9% neutral) are also highlighted, suggesting that while online education offers flexibility, challenges in interaction, monitoring, and workload remain (Table 5).

Table 5. Students' views on technology and online education

No.	Statements	Attitudes (%)				
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Online education saves time and effort in teaching.	1.8	3.9	30.1	43.4	20.7
2	Online education is more effective than traditional teaching methods.	3.7	10.7	47.5	26.8	11.3
3	Online education does not provide a face-to-face interaction experience.	3.9	9.6	39.5	35.2	11.7
4	Monitoring students is quite difficult in online education.	3.3	7.4	36.1	39.1	14.1
5	Online education captures my interest.	2.5	3.1	46.1	34.6	13.7
6	It would be better if the course included both online and face-to-face components.	1.8	1.8	3.7	40.8	24.8
7	Online courses create issues with internet accessibility.	4.5	7.6	43.0	34.2	10.7
8	The workload is too heavy in online courses.	3.3	9.0	52.9	26.2	8.6

Unlike other studies that lean towards an increasing use of technology, the surveyed EFL students in Vietnam expressed mixed feelings about online education. While they acknowledged its efficiency in saving time and effort, many were concerned about the lack of face-to-face interaction and the challenges of student monitoring. There was also a preference for hybrid models combining online and in-person components, and students highlighted issues like internet accessibility and heavy online coursework as areas of concern. Such mixed feelings of Vietnamese EFL students suggest that while online education offers convenience, it does not fully meet their needs for interaction and engagement. To enhance the effectiveness of English online education, implementing hybrid models and addressing the workload challenges for students could better align with their preferences.

3. Conclusions

This study seeks to enhance the larger debate on digital learning in language education by analyzing the opinions of Northern Vietnam's EFL students. It offers insights on optimizing technical improvements to assist EFL learners, eventually seeking to reconcile the disparity between technological provisions and accessible educational experiences. This research's findings can be a significant resource for educators and technology developers dedicated to improving language learning outcomes in Northern Vietnam and comparable situations.

This study provides valuable insights into Vietnamese EFL students' perceptions of the technological transformation in English language teaching, with a particular focus on innovating integration by aligning it with career readiness and professional preparation. It is found that technology integration offers university EFL students benefits like increased access, engagement, and personalized learning, but also poses challenges such as inequality, pedagogical inconsistencies, and distractions. Thus, understanding student perceptions is crucial for enhancing the effectiveness of these tools and addressing their limitations. By considering student perspectives, educators and policymakers in similar contexts can ensure technology supports and empowers EFL students in the 21st century rather than hinders their language learning experience. To be more specific, institutions should invest in targeted professional development for English language teachers, emphasizing the pedagogical use of digital tools, especially for multimedia learning. Moreover, school administrators can adopt blended learning policies in their curriculum to promote both in-person and online modalities to meet students' various needs. Future policies should also address infrastructure inequalities, such as internet connectivity and equipment shortages to enhance the experience of using technology in EFL among learners.

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