Factors Affecting ICT Integration of EFL Teachers at a Vietnamese University

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ABSTRACT

Information and Communication Technology (ICT) has increasingly been applied in English teaching, with extensive research on English teachers' ICT integration and the affecting factors. However, little has been known about the impact of the factors. This study was thus implemented to complete the gap. Employing a sequential mixed methods research design, the study recruited 81 English teachers at a Vietnamese university to complete a questionnaire and seven teachers to participate in a semi-structured interview. Drawing upon the innovation diffusion theory, the study found that the most significant impact factors were English teachers' perceptions of ICT benefits in English teaching. The least influential factor was students' prior experience. Other noteworthy factors included the advantage of the teachers' English knowledge, students' motivation to use ICT, and peer support. The study offers theoretical contributions to confirm some innovations in diffusion theory variables and practical implications for the University.

Introduction

Around the globe, Information and Communication Technology (ICT) has increasingly been applied in English as a Foreign Language (EFL) education, especially after COVID-19 (Nguyen, 2024; Tran, Pham & Dinh, 2023). Vietnam is no exception because ICT implementation in EFL education is part of the national agenda on digital transformation (Cand.com.vn, 2024).

The Law on Information Technology Application, which stressed the importance of using ICT in education, was put into effect in 2006. In light of the Law, Chỉ Thị (Directive) 55/2008-CT-BGDDT was issued by the Ministry of Education and Training (MOET), stressing the use of ICT in education in general and in higher education in particular over the period 2008-2012.

National policy efforts to implement ICT in EFL teaching in higher education became one of the foci in Quyết Định (Decision) No 1400/QD-TTG/2008 signed by Prime Minister Nguyen Tan Dung in November 2008. This policy, the National Project on Foreign Language Training,

emphasized the application of ICT in the teaching and learning of EFL. Included in the Project Plan was a list of actions that focused on "more investment into technological infrastructure for the teaching and learning of foreign languages" (Decision No 1400/QD-TTG/2008, p. 5), which involved building multi-media language labs for participating universities. The Plan also indicated that to make the most of ICT in language teaching, professional development on how to use ICT equipment should be considered (Decision No 1400/QD-TTG/2008).

In August 2023, the MOET issued Official Dispatch 4771/BGDDT which detailed the responsibilities of implementing technology and digital transformation of institutions in the country. In response, a nationwide competition on EFL e-lesson plans was organized to attract the participation of schools across 65 provinces and cities and 36,595 lesson plans (Cand.com.vn, 2024).

The University being researched, a public university renowned for its EFL training, is one of the eight participating universities in the National Project on Foreign Language Training. Through such projects, the University has been investing in technological infrastructure. It now has 15 Internet-connected computer labs and 18 language labs, which house nearly 1,000 desktop computers. There are about 45 projectors (Dang, 2012), one Student Access Centre, and one Conference room. In addition, the University has purchased some English language software packages, such as *English Discovery* and *English Discovery Online*, for use in EFL instruction (Pham, Thalathoti, Dakich, & Dang, 2012).

However, political and technological infrastructure conditions are not always synonymous with teachers' use of ICT. As Bax (2003, p. 26) has emphasized if we are "over-optimistic … that technology should be able to do everything …" without proper planning, it is very hard for teachers to use ICT in their practice.

The literature has pointed out that there are a plethora of factors influencing EFL teachers' use of ICT, which centered around the teachers, the students, and the educational institutions (Ahmed, Qasem, Pawar, 2020; Canals & Al-Rawashdeh, 2018; T. X. Dang, 2012; T. X. Dang, 2014; Dang, Nicholas, & Lewis, 2012; Liu, Lin & Zhang, 2017; Noori, 2019; Nguyen & Nguyen, 2021; Zyad, 2016). However, most research seems to focus on identifying the factors rather than investigating the impact of these factors on the teachers' actual use of ICT in their classroom practice. This research study was thus conducted to answer the following research question:

In the view of EFL teachers, what factors influence their ICT integration in their classroom practice?

Literature Review

Conceptualizing the affecting factors

The factors influencing EFL teachers' integration of ICT in classroom practice can be framed in light of the Diffusion of Innovations Theory (Rogers, 2003). This theory considers ICT as an *Innovation* that is adopted by the EFL teacher (The *Adopter- the decision-making unit*), during which process, a number of factors come into play. The factors at the individual level (EFL teacher) can include their characteristics as well as their perceptions of the five attributes of the

technology: *relative advantage, compatibility, complexity, observability and trialability, and communication channels*. At the organizational level, the factors could encompass *prescribed roles, rules and policies of technology use, and the formal and informal structure* of the organization.

This representation of factors in the study first considers the EFL teachers' background (*Adopters' characteristics*-Rogers, 2003), such as age, gender, teaching experience, the subject taught, and highest qualification, as factors influencing their ICT use. Other factors related to the teachers are their beliefs in the benefits of ICT to EFL teaching (*relative advantage of an innovation*-Rogers, 2003), their knowledge and skills, and their commitments. During the ICT use process, the *EFL teacher* comes into interaction with their Colleague through channels such as peer support/willingness to share resources/commitment (*observability of an innovation*-Rogers, 2003). As for the Student, students' motivations to use ICT, technical knowledge and skills, technical assistance, prior experience, and commitments are also considered influencing factors. The *EFL teacher* also interacts with the Technician through technical support (on-site and after-hours) and with the Administrator through policies, approaches to implementing change, professional development, and support (*prescribed roles, regulations, and authority structure*, 2003). The *teacher* also comes into contact with technology innovation through such channels as their perceptions about the relevance of the technology to the curriculum and their teaching practice (*compatibility of innovation,* Rogers, 2003) and their perceptions about the complexity of using technology in teaching (*complexity of an innovation*-Rogers, 2003).

Related Studies

Teacher-related factors

Teachers' background – Adopters' characteristics (Rogers, 2003)

Previous research suggests that EFL teachers' gender, years of teaching experience, age, main area of specialization, and highest qualifications have a role to play in their use of ICT in their classroom teaching, though the findings are somewhat contradictory.

Topkaya (2010), Mahdi and Al-Dera (2013), and Dinh (2015) argued that male teachers tended to have more self-confidence in using computers than females. In contrast, Mollaei and Riasati (2013) concluded that there was no gender difference in Iranian EFL teachers' attitudes toward the use of computers for classroom teaching. Noori (2019) and Tran, Pham, and Dinh (2023) found that there was no relationship between teachers' gender and their use of ICT.

When it comes to teaching experience and teachers' use of technology, Alkahtani (2011), Mahdi and Al-Dera (2013), Noori (2019), Tran, Pham, and Dinh (2023) proved that there was no relationship between teachers' teaching experience and their use of ICT. However, Li and Walsh (2011) and Rahimi and Yadollahi (2011) found a negative correlation between the two variables.

Similarly, age was found to have no relationship between teachers' age and their use of ICT in Alkahtani's (2011), Madhi and Al-Dera's (2013), and Zyad's (2016) studies. Meanwhile, Boulter's (2007) and Li and Walsh's (2011) research studies established a relationship between the EFL teachers' uptake of instructional technology and

Teachers' main subject content or skills related to their ICT use**.** Nguyen, Le, Nguyen, and

Nguyen (2025) found that EFL teachers claimed that interpretation skills could be enhanced with the use of ICT. Also, as Alkahtani (2011) pointed out, teaching listening, pronunciation, reading, writing, and vocabulary rather than other subjects could be best enhanced by ICT. Additionally, Celik (2013) reported that more Turkish EFL teachers used the Internet to teach reading and writing skills than those who used the Internet to teach listening, speaking, and writing.

Contrasting findings regarding teachers' highest qualifications and ICT use are also reported. Noori(2019) found no difference, while Sadeghi, Rahmany, and Doosti (2014) found that EFL teachers from Iran who hold a PhD have more positive attitudes towards using ICT in their practice.

Teachers' beliefs in ICT benefits – Perceived relative advantage (Rogers, 2003)

As far as teachers' beliefs are concerned, if EFL teachers in the benefits of technologies in their teaching, they tend to integrate ICT (Dang, 2014; Park & Son, 2009; Zyad, 2016; Noori, 2019; Tran, Pham & Dinh, 2023). This is because, to many of them, computers are perceived "as a motivator" (Kim, 2008, p. 250) for students' learning.

Teachers' knowledge and skills

Teachers' skills and knowledge are seen as important to EFL teachers' use of ICT (Chen, 2008a; Hu & McGrath, 2012). Several reasons are put forward to support this view, such as that it is a pre-requisite for their ICT use because even if teachers have a positive attitude towards using technology in their classroom, they cannot do so without relevant knowledge and skills (Hu & McGrath, 2012). Next, "the effectiveness of language instruction depends on the knowledge, skills and teaching methods of those who incorporate them" (Chen, 2008a, p. 555).

In contrast, a lack of knowledge and skills could be a barrier to the integration of ICT among EFL teachers. This "second-order barrier" (Galvis, 2012, p. 108) could make the teacher feel uncomfortable about using technology, requiring the teacher to invest more time and effort in their instruction (Park & Son, 2009), and could eventually add more pressure to the teachers' already heavy workload. It is, therefore, very difficult for EFL teachers to integrate ICT if no support is provided (Galvis, 2012).

Teachers' commitment to use ICT

Another factor that influences teachers' use of ICT in classroom practice is their commitment to using ICT. Chen (2008b) suggested that EFL teachers in Taiwan will stop being committed to using ICT in their instruction if they feel isolated and lack peer support.

Peer-related factors – Perceived observability (Rogers, 2003)

In an educational institution, teachers' use of ICT tends to be influenced by their peers' support, willingness to share resources, and commitment. Regarding resource sharing, Li and Walsh (2011) established that EFL teachers were willing to adopt new technology when sharing resources with their peers because it would be easier to learn how to use ICT in their specific contexts. Peer commitments can even help teachers' continuous use of ICT as an EFL teacher in Chen's study (2008b, p. 1023) claimed that other "tech-savvy" teachers helped her create learning materials online; accordingly, she continued to do so later.

Student-related factors – Prescribed roles (Rogers, 2003)

Research studies have shown that when EFL teachers perceived that students were motivated to use ICT, they were likelier to adopt ICT use. This is true for EFL teachers in different countries such as Vietnam (Dinh, 2009), Iran (Mollaei & Riasati, 2013), and Turkey (Celik, 2013). As confirmed by Celik (2013, p. 478) "a shared understanding about technology's value for student learning among the EFL instructors enhances the diffusion of using Internet-assisted language resources".

Students' knowledge and skills are also regarded as an influencing factor. The varied levels of students' technical knowledge and skills resulted in EFL teachers' "managerial difficulty, necessitated [teachers'] guidance in autonomous learning and differentiated teaching" (Hu & McGrath, 2012, p. 160). Also, if students lack knowledge and skills, they may have limited use of "high-order computer tasks" (Alharafsheh & Pandian, 2012, p. 10), which negatively affects the EFL teachers' full ICT integration.

Another student-related factor is the possibility that students provide technical assistance to their teachers in classes. In fact, a number of EFL teachers in China acknowledged that they asked for assistance from students with better technical skills and knowledge when attempting to use ICT in their classroom teaching (Hu & McGrath, 2012). Additionally, student prior experience is identified as a factor influencing teacher use of ICT. For example, Hong and Samimy (2010) found that students who had experience in blended learning had a more positive attitude toward their teachers' use of computers in language learning.

Finally, students' commitment to ICT use is identified as an influencing factor. If students found that teachers' computer integration motivating, they wanted their teachers to use computers more frequently (Ilter, 2009). In contrast, if the students were not committed, the EFL teachers would be demotivated to integrate ICT (Li & Walsh, 2011).

Technician-related factors – Prescribed roles (Rogers, 2003)

Technicians were identified in previous research studies as influencing teachers' use of ICT (Dinh, 2009; Hu & McGrath, 2012; Zhao et al., 2002). Often, technical support provided by technicians was seen as a "key factor" (Hu & McGrath, 2012, p. 160) because this directly affected the "effective use of ICT resources" (Hu & McGrath, 2012, p. 160) and could save teachers time because they did not have to solve technical problems and could focus on their teaching. Without technical support, EFL teachers might experience difficulties such as losing control in classroom management (Bordbar, 2010) or having to improvise the lessons by relying on their creativity and quick-mindedness (Dinh, 2009).

Administrator-related factors – Prescribed roles (Rogers, 2003)

Within a university/school context, administrator-related factors can encompass approaches to implementing technology, support, and professional development (Carr, 2013). For example, in China, it is often claimed that "school leaders and local educational authorities are important in motivating teachers to use technology in their teaching" through support and encouragement (Li & Walsh, 2011, p. 115).

There should also be clear guidelines on ICT implementation that should be clearly communicated with the teachers because this will result in higher chances for success of ICT

integration (Dinh, 2015). Another important factor is support provided to teachers, which can take the form of financial support /continuous funding or administrative support (Chen, 2008b, p. 1025). In contrast, a lack of support from schools/universities could result in teachers' negative perceptions of technology compatibility with their teaching practice (Aydin, 2013; Bordbar, 2010).

Technology-related factors – Prescribed roles (Rogers, 2003)

ICT relevance – Perceived relative compatibility (Rogers, 2003)

Research has shown that EFL teachers decide to use ICT in their classroom teaching only when they perceive that such use is relevant to their teaching curriculum/textbooks and teaching practice. For example, Shin and Son (2007) found that EFL teachers in Korea reported the need to develop Internet resources that are more relevant to their textbooks so as to be able to use the Internet more often. Similarly, Park and Son (2009) point out that some of the EFL teachers in their study were not willing to use ICT because not many ICT teaching resources were relevant to the classroom textbooks as these textbooks were normally designed for traditional activities with no room for ICT.

Access to technology resources, time, ICT supporting curriculum, and teaching resources– Perceived complexity (Rogers, 2003)

Access to technology resources is commonly acknowledged to influence EFL teachers' use of ICT (Dang, 2014; Dashtestani, 2012; Park & Son, 2009). Furthermore, time is commonly cited as an important factor affecting the EFL use of technology in the classroom. (Li & Walsh, 2011). This is because EFL teachers find it very time-consuming to search for, select, and adapt instructional materials to find a fit for the materials in the class schedule and for their students' levels and needs. Also, if there is a rigid curriculum, it would be hard for the teachers to integrate ICT because they have to "follow the teaching plan and prepare for tests based on textbooks" (Park & Son, 2009, p. 91) and the allocated teaching blocks with no flexibility to use ICT (Dashtestani, 2012). Finally, locating teaching resources with ICT is also an important factor that affects the EFL teachers' ICT use because, with difficulties locating appropriate teaching materials, the EFL teachers would not be willing to integrate ICT into their practice (Park & Son, 2009).

As can be seen from the review of previous research on the factors influencing EFL teachers' ICT integration, most research done in both developed and developing countries has focused on identifying the factors from different perspectives. Little research has explored the perspectives of EFL teachers on the level of impact of these factors on their integration of ICT into their classroom practice. This gap needs to be filled, and this is the rationale for this research study.

Methods

Research context

The study was conducted at a public university in Hanoi, Vietnam. The University has a history of more than 60 years of training in foreign languages. 81 EFL teachers from the English Department and the Foundation Studies Department took part in the study.

The English Department, the largest Department in the University, prepares English major students to become teachers of English, interpreters, or translators upon graduation. In line with its training focus, the Department has five divisions: Language Skills, English Literature, Interpretation and Translation, Language Theories, and English Culture Divisions. In this study, the teachers from all five divisions are referred to as EFL teachers. The students participate in programs to enhance their language skills of listening, speaking, reading, and writing in the first two years of their four-year training course, which the Language Skills Division delivers. In the remaining two years, students attend regular lectures and tutorial sessions carried out by teachers from the English Literature, Language Theories, and Culture Divisions, as well as classes and lab sessions to develop their interpretation and translation skills conducted by teachers from the Interpretation and Translation Division.

The Foundation Studies Department was established in 2005 to provide a one-year English training course for non-English major students majoring in English as a Medium of Instruction (EMI) in Computer Sciences, Business administration, Tourism and International Studies departments. At the Foundation Studies Department, students are trained to develop their four language skills (listening, speaking, reading, and writing), IELTS test-taking, and research skills. There are three main Divisions in the Department, which are the GET (General English Training) and BEL (Basic English Language) Divisions, the EAP (English for Academic Purposes) Division, and the ESP (English for Specific Purposes) Division. All the teachers from the three divisions in this Department were also referred to as EFL teachers in this study.

Research design and procedures

The study employed a mixed methods methodology; that is, both quantitative and qualitative methods were used. Mixed methods research can provide "more comprehensive evidence for studying a problem [than] either quantitative or qualitative research alone" (Creswell & Plan-Clark, 2011, p. 12). As the study used a sequential mixed methods approach (Creswell, 2018), a quantitative questionnaire was first designed to gauge quantifiable information about EFL teachers' views on the impact of the factors influencing their use of ICT. The participants were asked to rate the impact on a four-point Likert scale from No impact (1), Little impact (2), Moderate impact (3) to High impact (4). The four-point Likert scale was decided upon with no Neutral option to avoid the possibility that the participants might automatically choose this alternative without reading the questionnaire items carefully. A qualitative semi-structured interview schedule was then used to gain insight into their experience and practice.

The questionnaire was designed based on previous studies on the factors affecting EFL teachers' ICT integration. A pilot was conducted to check the validity and reliability of the questionnaire. First, the questionnaire was sent to two experts to seek their comments on its face validity. Some changes were made in the wording of the questionnaire items. Then, the questionnaire was sent to 22 EFL teachers to complete, and the reliability of the questionnaire was obtained vìa Cronbach alpha. The Cronbach alpha was .917, proving internal consistency among the items.

Based on some outstanding findings of the questionnaire, a list of semi-structured interview questions was designed to collect data on the impact of teachers, students, administrators, and peers on the teachers' use of ICT. The wording of the questions was checked with two EFL

teachers before the actual interviews, and "member checks" (Mertens, 2005), that is, the interview transcripts were sent to the interviewees for their consent, were used to increase the validity of the interview data collected.

81 EFL teachers at the University answered the questionnaire, and seven participated in semi-structured interviews. Questionnaire data were analyzed using SPSS software to obtain descriptive statistics (means core and standard deviation), and interview data were coded using analytical coding (Richards, 2009). The participants' identities were protected because they remained anonymous in the questionnaire. In addition, pseudonyms such as Valerie and Mark were used for the seven interviewees.

Results/Findings

Questionnaire findings

EFL teachers' demographic information

The questionnaire first asked the EFL teachers to give information on their demographics. Table 1 presents findings on their sex, qualification, and main expertise, and Table 2 presents findings on their age and years of teaching experience.

Table 1

EFL Teachers' Sex, Qualification, and Main Expertise

	Sex		**Highest qualification**			**Main expertise (teaching areas)**	
	Female	Male	Bachelor's	Master's	PhD	Reading, Writing, Listening & Speaking skills	Other subjects (Literature, Language Theories, Interpretation & Translation)
Number	63	18	12	67	1	60	14
	78%	22.%	15%	84%	1%	81%	19%
Total	81		80			74	

As seen from Table 1, most of the teachers were female (around 78%) and the remaining 22% were male. When it comes to their highest qualification (n=80), a big proportion (84%) held a Master's degree. Only 1% had a PhD and roughly 15%- a Bachelor's degree. Also, most of them taught four language skills (81%), while only one-fifth taught other subjects.

Table 2

EFL Teachers' Age and Years of Teaching Experience

	Age	**Years of teaching experience**
Mean (SD)	31.74 (7.0)	8.71 (7.0)
Minimum-Maximum	24 - 59	2 – 38
Number	76	78

Table 2 clearly shows that the average age of the EFL teachers (n=76, missing 5 cases) in this study was 31.74 (SD=7.0) and the average number of years of teaching experience (n=78, missing 3 cases) was 8.71 (SD=7.0). However, the teachers' ages varied from the minimum of 24 to the maximum of 59. Similarly, the number of years of teaching experience differed considerably, with the lowest being two years and the highest being 38.

Thus, most of the EFL teachers in this study were female, held a Master's Degree, taught four language skills (Reading, Writing, Speaking, and listening), and varied considerably in age and years of teaching. Only a small ratio were male and taught other skills such as Literature, Language Theories, Interpretation, and translation.

Impact of the factors influencing EFL teachers' ICT integration

Next, the questionnaire asked the EFL teachers to provide information on their ratings of the impact of factors on their use of ICT. A four-point scale from *No Impact (1), Little Impact (2), Moderate Impact (3) to High Impact (4)* was used. The calculation of the ratings' mean score (M) and standard deviation (SD) was implemented. The findings can be seen in Table 3.

Table 3 demonstrates that the EFL teachers viewed all of the listed factors as impacting their use of ICT in classroom instruction (no mean scores below 2, SD varied).
The EFL instructors ranked "Teachers' beliefs in ICT benefits to EFL teaching" as having the highest mean influence on their use of ICT in classroom instruction out of the 27 factors (M=3.57, SD=0.61). In second place were factors such as "Teachers' knowledge and skills to use ICT to teach English," "ICT relevance to curriculum," and "Students' motivation to use ICT" (all three had M=3.28, SD=0.7, 0.5, and 0.6, respectively).

The teachers then rated that the three factors that had the third-highest influence on their usage of ICT were "Having enough time to prepare lessons to teach with ICT," "ICT relevance to teaching practice," and "Teachers' knowledge of where to look for support." The ratings for these three factors were M=3.27 (SD=0.6), M=3.25 (SD=0.6), and M=3.21 (SD=0.6), respectively.

Moreover, factors such as 'Having access to reliable technology', 'Having enough computers for students', 'Having a supporting syllabus for ICT use', 'On-site technical support', 'Access to a computer lab when needed', and 'Provision of teaching resources by the department' had the fourth highest impact rating (with a mean score of approximately around 3, although the corresponding standard deviations were different).

A wide range of factors, including "Easy access to teaching resources," "Professional development opportunities," "Students' ICT knowledge," "Colleagues' sharing of teaching resources," "Students' assistance," "Clear guidelines," and "Teachers' commitment," were rated similarly, with the mean score falling between 2.8 and 2.9 (with varying corresponding SDs)

Finally, the factors that were rated for their lowest impact were 'University financial support' (M=2.54, SD=1.0), and 'Students' prior experience' (M=2.54, SD=0.7). 'After-hours technical support' was rated to have the second lowest impact (M=2.64, SD=0.8). This was followed by 'Colleagues' commitments to using ICT' (M=2.69, SD=0.7), 'Administrative assistance' (M=2.79, SD=0.8) and 'Colleagues' help in using ICT' (M=2.80, SD=0.8).

Table 3

Ratings on Impact of Factors on Teachers' Use of ICT

(1= No Impact, 2= Little Impact, 3= Moderate Impact, 4= High Impact)

	Item (N=81)	M	SD
1	Teacher beliefs in ICT benefits	3.57	0.6
2	Student motivation to use ICT	3.28	0.7
3	ICT relevance to curriculum	3.28	0.5
4	Teacher knowledge of ICT to teach English	3.28	0.6
5	Having enough time to prepare lessons	3.27	0.6
6	ICT relevance to teaching practice	3.25	0.6
7	Teacher knowledge of where to look for support	3.21	0.6
8	Access to reliable technology	3.20	0.8
9	Access to enough computers for students	3.12	0.9
10	Having on-site technical support	3.11	0.8
11	Knowing that the Department has a supporting syllabus	3.11	0.8
12	Access to computer lab when in need	3.07	0.8
13	Provision of teaching resources by the Department	3.01	0.8
14	Teaching resources are easily located	2.98	0.8
15	Having access to professional development	2.96	0.8
16	Student technical knowledge	2.96	0.6
17	Knowing ICT use required by the Department	2.93	0.7
18	Knowing colleagues willing to share technological resources	2.91	0.8
19	Teachers believe in students' assistance	2.90	0.8
20	Having access to clear guidelines	2.88	0.9
21	Teacher commitment to using ICT	2.84	0.6
22	Knowing colleagues will help use ICT in instruction	2.80	0.8
23	Having administrative assistance	2.79	0.8
24	Knowing colleague's commitment to using ICT	2.69	0.7
25	Having after-hours technical support	2.64	0.8
26	Student prior experience	2.54	0.7
27	University financial support	2.54	1.0

Interview findings

The interview findings seem to provide further explanation for some of the important questionnaire findings.

Teachers' beliefs about ICT benefits

It was found from the questionnaire that in the EFL teachers' view, their beliefs in ICT benefits had the biggest influence on their ICT-integrated lessons. The interview with seven teachers further explained this finding. All of the seven EFLs mentioned the benefits of ICT. However, their perceptions of the benefits were different. While three teachers commented on such benefits as ICT making lessons more engaging and motivating students to learn English, the other teachers emphasized the supporting role of ICT in their lesson preparation and teaching delivery. These findings can be illustrated in the following quotes.

ICT plays a big role in English language teaching…. First, it makes the lessons more interesting and professional. Second, students could be more motivated to learn because I think they prefer a bit of ICT in a lesson to the traditional way of teaching, where there is only the teacher, the students, talking, writing, and a text book (Mary).

... ICT would be more interesting than paper-based lessons. With ICT, not only the teacher but also the students could engage more into the lesson to make it more interesting, for example, through the use of some software packages, movies or recording software. These will make the instruction process much more effective ... (Daisy).

…Not all textbooks are current, so teachers could look for online teaching resources and electronic lesson plans to help engage students more in classroom lessons (Cindy).

ICT helps me to prepare lessons at home.. (Judy)

ICT brings new ways of teaching English. (Valerie)

…The use of ICT has helped bring about more quality teaching and made the teaching job less time-consuming ... All these will bring a more authentic context for students to learn English (Mark)

In modern times, …ICT helps us a lot in teaching four language skills: listening, speaking, reading, and writing. …in teaching pronunciation, if teachers use some software or pronunciation websites for students, it would be much easier for them to learn properly if they are provided with some visual aids on the structure of vocal organs such as mouth and nasal cavities, or the proper positions of the vocal organs, they can imitate more easily (Cindy).

Some teachers provided their views on the communication aspect of ICT, such as with their students, as commented by Helen and Judy.

I think ICT assists in communication between teachers and students in terms of assignment marking and correcting… the teacher will need to use email and Skype or a chatting software to communicate with students whose work has not been marked/corrected in class... (Helen)

I think ICT is assisting both teachers and learners … it facilitates communications between both teachers and students, for example, …on an online forum (Judy)

Two teachers (Judy and Mary) pointed to their voluntary use of ICT as a result of their perceptions of ICT advantages. They emphasized that they seized every chance to integrate ICT, although the University did not mandate it.

No one forces me to use ICT in teaching English. I have been using ICT because I see the positive impact of ICT on my teaching, … my lessons would be more interesting and ICT could assist both teachers and students ... In my opinion, we can't say why we must use ICT; instead, why we should use ICT in teaching. (Judy)

I sometimes take my students to the projector room during the speaking lesson, although I am not officially required to do so. Learning with projectors … is an advantage, students could feel more motivated to study… because projectors can bring about audio-visual effects, which makes students like the lessons better. (Mary)

Students' motivation

The questionnaire findings show that the factor 'Students' motivation' had the second biggest impact. The interview findings then provide further explanations on this aspect, directing the emphasis on students' better technical knowledge as a benefit.

Cindy believed that better technical knowledge of students would even inspire her to pursue ICT learning. She claimed that she would be "happy to learn from her students" because this would be "a good chance for her to know her students' learning needs", so she "could design lessons with ICT to meet their expectations". Also, despite expressing worries about "losing her managerial position in class," Judy believed that if students were more technically proficient, she would need more expertise in ICT expertise.

Interestingly, the teachers viewed their students' higher technical skills as advantageous in that those students could help their peers in class, as Mark commented.

> … If teachers could ask students who are better technically to assist those who are weaker, or to teach their teachers some tricks to use ICT, I think students would be willing to do so because their skills are highly appreciated ... Teachers should not think that they must always be better than their students, especially when it comes to ICT….

Teachers' knowledge of the English language

The questionnaire findings showed that the factor "Teachers' knowledge and skills" had the second biggest impact on their ICT usage. The interviews further clarified this, detailing the impact of teachers' knowledge of English.

Three out of the seven interviewed teachers commented on the positive impact of their knowledge of the English language on their ICT use in relation to professional development and access to resources. Mary remarked that since technical manuals were typically written in English, the teacher's proficiency in the language made it easier for them to comprehend technical instructions.

Furthermore, Daisy believed that thanks to their fluency in English, they could self-learn technical features of various software packages, test them, and attempt to incorporate them into their classroom practice without the technicians' help.

Helen added that "the teachers' English language knowledge" also made it easier for them to access and comprehend actual English publications on the Internet, such as when they searched for teaching and professional development materials. She believed that by doing this, the teachers would be able to comprehend the materials more precisely than they would if they were reading translations.

Students' prior experience

It was established in the questionnaire findings that the EFL teachers rated "Students' prior experience" as having the lowest impact on their use of ICT. In the interview, the teachers' comments confirmed the questionnaire findings:

> I think my students have a small impact [technical skills] because the subject I am teaching does not require me to use much ICT. As stated earlier, I use ICT applications such as email or chat software to correct and mark students' writing work. I think 99% of the students could use those

applications, even at the expert level (Helen).

… The application of ICT into teaching is not too hard for teachers. In my lectures on the Culture of English-speaking countries, if my students need to use projectors for their presentation, they can have weeks of preparation, so they can seek technical assistance from me or from the technicians immediately… thus [the impact of their prior experience to ICT use] is not very considerable (Judy).

University support

The questionnaire found that the factor "University financial support" had the smallest impact on the EFL teachers' use of ICT. Coincidentally, no teachers mentioned this type of assistance throughout the interview; instead, they described in detail the University's lack of assistance with regard to professional development, administration, and clear guidelines.

First, three teachers mentioned a lack of administrative support. Mark, for example, remarked that the only support is posting announcements on websites. According to Helen, training provided to teachers only focused on using software to keep students' marks. Cindy disclosed that the Department provided only some portable projectors for the teachers to use.

Four teachers claimed they were unaware of any explicit rules or regulations about using ICT in the classroom. This viewpoint is demonstrated by the following remarks made by Helen, Daisy, Judy, and Valerie.

There are no clear regulations on ICT use in English teaching (Helen).

I don't think that any regulations are widely known to the teachers (Daisy).

ICT use in teaching practice is not compulsory; it is impulsive and totally up to the teachers. But in my opinion, even if there is encouragement, there should be clear guidelines and proper assessment to make ICT use more effective in teaching and learning (Judy).

I don't know of any policies that require teachers to incorporate ICT into their teaching. I think this is impossible because of a lack of facilities and coordination, so even if teachers are forced to do so, they cannot do it (Valerie).

Lastly, two teachers (Mary and Valerie) reported a lack of support for professional development, stating that there was essentially no "official" professional development other than a few "minor" workshops or seminars that did little to help them gain the confidence they needed to use ICT in their practice. This is because those workshops or seminars did not meet the teachers' expectations as they only focused on the technical aspects rather than the pedagogies. As a result, some teachers, such as Mary, Daisy, and Cindy, stated that the primary sources of their professional development were their friends and colleagues who could give them prompt responses.

Peer support

Despite the fact that the questionnaire's "Colleague commitments" item was regarded as having one of the smallest effects on EFL instructors' use of ICT, all seven participants gave positive feedback on peer support. Comments about the teachers' chances to share resources and discuss ideas for using ICT in the classroom with their colleagues echoed this. To illustrate, Daisy

shared how her colleague assisted her in setting up *Audacity*, a recording program, on her laptop and gave her usage instructions. This allowed her to use *Audacity* to record talks and edit audio files from conferences and seminars as teaching resources for her Interpretation classes. Helen mentioned that teachers teaching the same language skills shared their lesson plans and teaching materials, such as video clips.

The other four teachers-Cindy, Valerie, Judy, and Mary-also mentioned that if they needed assistance with ICT, such as modifying audio files or downloading instructional materials from the Internet, they could ask their peers for it "through chatting during breaks" (Judy) in between sessions.

Mark and Mary stressed the importance of peer support by mentioning that "it is normal practice for teachers to seek help from their colleagues for those things that they don't know and to offer assistance to their colleagues on aspects that they are good at." (Mark) because "being helpful is one typical feature of peers at the university" (Mary).

Discussion

It was established in this study that, in the view of EFL teachers, those factors that were related to them had the biggest impact on their classroom ICT integration. Teachers' ICT use in this study was most influenced by their "Beliefs in ICT benefits in EFL teaching" and "Knowledge and skills in using ICT to teach EFL." The results thus support earlier research on the importance of their attitudes and beliefs (Dang, 2014; Saglam & Sert, 2012; Zyad, 2016; Noori, 2019; Tran, Pham & Dinh, 2023). The findings also help confirm the relative advantage element in Rogers's Diffusion of Innovation Theory (2003).

It would be interesting to investigate why the teachers stated that they played the most significant role in using ICT, even though this was not the focus of the study. It would also be interesting to explore whether there were any other explanations or if a teacher-centric perspective that mirrored the larger Confucian tradition of the teacher's central role comes into play (T. X. Dang, 2014).

The results demonstrate that when using ICT for classroom education, several EFL teachers exhibited a welcoming attitude toward their students. This was reflected in the fact that those students with superior technical knowledge and skills inspired them to learn in order to catch up with their students. These educators don't seem to have viewed themselves as the "expert" (Lam & Lawrence, 2002, p. 296), which was typically thought of as the conventional role of EFL teachers.

Furthermore, according to interview data, several teachers, such as Mark, have mentioned using students who are proficient in ICT as a tool. The idea that teachers "need to realize that students should play an active part" (Li & Walsh, 2011, p. 117) in their use of ICT for classroom instruction is expanded upon by this study. Additionally, several of the teachers interviewed thoroughly explained why "Students' prior experience" had a minor influence. Students had time to prepare ICT-related assignments, they could ask teachers and technicians for help throughout the preparation process, and the subject they taught did not need them to utilize a lot of ICT. Therefore, it appears that the subjects they taught affected how they used ICT.

In terms of the EFL colleagues, although according to the questionnaire results, colleagues did not appear to have a significant influence on the EFL instructors' use of ICT in the classroom, all the seven teachers interviewed claimed that their peers were open to exchanging ideas, and ICT resources for use in the classroom. Even when some teachers believed that peer usage of ICT would put pressure on them, they tended to view the pressure as an incentive to study and use ICT in the classroom. The majority of the instructors who participated in the interviews also mentioned using their peers for informal ICT-related professional development. The findings were in alignment with Aydin's (2013) research studies in that colleagues are commonly cited as a source for idea exchange by teachers. The findings also confirm the *observability* variable and "interpersonal channels" for communication of an innovation (technology) in the form of talks during the breaks among the teachers in the Theory of Innovation Diffusion by Rogers (2003).

The results of the questionnaire show that, with regard to administrator-related factors, the EFL teachers were worried about knowing "where to look for support," but they were not worried about "financial support from the university." The interviews with seven teachers supported the questionnaire results on this topic by revealing information regarding a lack of administrative support, clear guidelines, and professional development possibilities. As a result, some EFL teachers turned to their friends and coworkers as their primary source of professional learning. The teachers also saw their English language knowledge as an advantage that helped them in self-learning about ICT. This study, therefore, adds to the literature that the EFL teachers' knowledge of the English language might be an enabler to their ICT use.

Lastly, the interviews' results show that almost no ICT-related policies or procedures are currently in place at the University. The results highlight a recurrent problem found in earlier research studies: whereas implementing government ICT-related policies in particular school or university contexts is a crucial component of leadership support, this is often "underperformed" (Carr, 2013, p. 179).

Conclusion

This study has proved that ICT implementation is a "complex and messy process" (Zhao et al., 2002, p. 482). Based specifically on the perspectives of EFL teachers at a public university in Hanoi, Vietnam, the study found that many factors, albeit with varying degrees of effect, affected these teachers' usage of ICT. The study also revealed that the influencing factors originated from a variety of sources, including the teachers themselves, their colleagues, students, and administrators. This suggests that the EFL teachers in this study had an understanding of "the social dynamics" (Zhao et al., 2002, p. 494) at the institution.

This study also established that the most significant factor influencing instructors' use of ICT is the EFL teachers-related factors. Thus, policymakers should pay attention to teachers and consider the kinds of support that could be offered to accomplish policy goals. For instance, a stronger emphasis on professional learning and professional learning practices may benefit teachers.

Also, the study's findings imply that the University being researched could benefit more from

providing clear guidance for teachers about implementing national and institutional policies on ICT through monthly forums or meetings between EFL teachers and administrators.

In conclusion, despite some limitations, such as the small sample size, which affects the generalisability of the findings, or the sole reliance on the EFL teachers' perspectives, the study has provided the voice of the most important EFL teachers in the process of ICT integration in their classroom practices.

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