Factors Affecting Teachers' Integration of ICT in Teaching English: A Cross-sectional Study

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Abstract
The ever-shifting educational sector has necessitated the inclusion of Information and Communication Technologies (ICT) to improve language teaching and learning. It is possible to have a more interactive, accessible and personalized instruction through effective use of ICT in language education, thereby meeting the diverse needs of learners. It is important to comprehend reasons behind teachers' utilizing ICT in their pedagogical practices so that its potential can be maximized for both students' benefit as well as educators from this advancement in technology. This study investigates the determinants of adoption of ICT in teaching English among 43 EFL teachers drawn from three universities in Northern Vietnam. It is quantitative research, with the questionnaire adapted from Alghasab et al. (2020) to comprehend the reasons behind teachers' decision to embrace ICT development, learn about the challenges hindering its usage, and identify potential areas make it more effectively. The findings demonstrated that teachers were inspired to apply ICT to boost learning effectiveness, motivate students and diversify their teaching techniques. On the other hand, there existed difficulty in terms of inadequate technical support, lack of confidence when using technology and shortage of relevant resources. Additionally, the investigation recommends that further training should be organized and institutional backing received by teachers for better ICT integration of ICT.

Keywords: *English language teaching, factors affecting ICT integration, quantitative methodology, cross-sectional study.*

1. Introduction

The use of Information and Communication Technologies (ICT) in English Language Teaching (ELT) has a great potential in improving the methods and techniques used in teaching and learning processes (LeTendre, 2022; Li et al., 2022; Seufert et al., 2021). For instance, Pham and Sampson (2022) establish that ICT aid the educators to design the classroom in an interactive, dynamic, and engaging manner, which is highly effective for language development. Teachers can also use modern technological inventions including multimedia, language apps, online, and many more that enhance the beauty and flexibility of the techniques used in class, thus able to address the various learning ability needs. This has the effect of raising student interest and participation thereby making learning a foreign language more successful. Further, ICT enables the provision of a plethora of contextualized language materials such as videos, articles, podcasts and digital books in vivid and real-life application of the language (Wang & Zhao, 2022). It also facilitates student differentiation, which means that students can do as many practice exercises as they want and at a level, they choose for practice in specific language skills. Moreover, Tsegay et al. (2022) also explain that the tools that foster communication, peer engagement, and collaboration including online forums and collaborative writing tools are vital elements in language development. From the teacher's viewpoint, ICT enhances efficiency in the management of learning activities and plugs a gap in assessments of learners' performance (Aidoo et al., 2022). Challenges such as inadequate resources or technical training notwithstanding, ICT integration in ELT is important to provide a rich, inclusive learning environment and equip learners for effective nascent intercultural communication in the context of globalized digital culture.

Studying teacher adoption of ICT in Northern Vietnam is important because there is a push to modernize education and because the area faces certain issues that are unique to the region (Pham & Sampston, 2022). Thus, integrating ICT in language teaching and learning can help effectively engage students and get access to a wide range of resources; however, the use of ICT in learning is not always consistent in any context (Seufert & Sailer, 2021). Similar to other developing regions, Northern Vietnam experiences certain challenges such as; lack of infrastructure, inadequate technical assistance and differential teacher preparedness. Further, they mentioned that teachers may have resistant to change or the confidence level to use technology may not be adequate, this therefore slows the process. Understanding teachers' ICT attitudes and the determinant factors that compel them into adoption are important for learning outcomes (Mannila et al., 2018). Teachers are the implementing agents of ICT and their attitude towards the use of ICT including their perceived self-efficacy has a direct influence on the extent ICT is utilized in classrooms. In other words, the ability of teachers to develop ICT-supported student learning outcome is highly dependent with teachers' motivation, confidence and support. On the other hand, where the teachers feel that they are not getting the support that they require or that they lack the necessary skills the option of ICT may be downplayed this negates the merits of ICT. Therefore, knowledge of these attitudes and factors is crucial to enhancing the effectiveness of ICT use. The objectives of this study were to assess the factors that affect the integration of ICT in teaching English by teachers. Hence, the following research question was addressed:

What are factors influencing teachers' ICT integration in language teaching?

2. Literature review

2.1. Roles of ICT in English Language Teaching

ICT plays a transformative role in ELT, offering numerous benefits that enhance the overall learning experience.

Another benefit of incorporating ICT in ELT is the raised interactivity (Beauchamp & Kennewell, 2008; Kennewell et al., 2007). The conventional approaches to learning of languages entails two major ways of learning wherein the learners are mere receivers of information without necessarily being involved in its processing. On the other hand, other ICT tools in language learning include, interactive language application, interactive whiteboard, the use of multimedia in language learning enables the students engage in the material in an active or and creative manner as proposed by Glover and Miller (2001). The interaction assists in the concrete definition of some language concepts and can strengthen the students' retention of content while keeping students active within the learning process. More to the point, ICT opens more opportunities for access to language learning resources. Information technology, in this case, affords learners unlimited opportunity to learn from any location at any given period using a range of resources such as endorsed videos, podcasts, e-books, and language exercises (Mercer et al., 2004; Moss et al., 2007). This accessibility is more helpful in situations where some resources is scarce or where the learners cannot physically go to language classes. For instance, via online classes, learners who stay in remote places or those with little time to attend classes are also taken through quality language education, thus eradicating the gap between rural and urban education. ICT also offers other advantages for ELT, most notably the opportunity for delivering Personalised learning (Shemshack & Spector, 2020). While conventional classes pose a problem with addressing students' differences, integration of ICT opens up opportunities for the delivery of unique and special instructions. Technology-based language learning has the advantages that it can offer individual instructions such as subjecting content to learner's true language level and rate of learning (Lin et al., 2013). Tools like feedback according to student's strengths and weaknesses, language practice applications, self-controlled exercises contribute to an autonomous approach which makes students more motivated to study a language. This is why in such fields as listening, speaking and pronunciation learners engage themselves in multiple practice and demand immediate correction. In addition, according to Mercer et al (2004), ICT improves what is considered critical for language acquisition, collaborative learning. Web based conferencing, discussion forums, wiki and other tools for collaborative writing along with video conferencing enables the students engage and communicate with other students across the world (Liu et al., 2017). Not only do these opportunities help them improve their language proficiency but also allows them to see how English is used in various cultural settings – how it is practiced globally.

2.2. Factors influencing ICT integration

ICT is used in ELT and is defined by technological, personal, and institutional properties that define the level and quality of its implementation in classes.

Technological factors are all associated with the delivery, outputs and efficiency of technology, this includes hardware, software's and the internet. One of them is the acknowledgement of ICT as effective learning aid which helps teachers to develop additional and more effective approaches to learning (Li & Walsh, 2010; Alghasab et al., 2020). In turn, the desire of teachers to incorporate new technologies in their practices gives them a reason to use ICT as they expect this method to make classes more interesting and comprehensible to the target audience. Lifelong learning also implies that creative teachers are more likely to use the technology in their teaching because they look at it as a tool for creating novel approaches that they can apply in their classroom teaching (Afshari et al., 2009).

Personal factors are the teachers' attitudes, perceptions, confidence and their experience in using technology (Kim & Park, 2017). Teachers' use of ICT is still an issue that goes beyond technical functioning since teachers can only be willing to incorporate ICT where they see its benefits in improving the results of the teaching process (Alghasab et al., 2020). Obviously, such teachers are more likely to incorporate ICT into their lessons if they regard it as a worthwhile resource. Confidence also has a role to play here: teachers engaged in assuring that 'new technology' is employed will use that in class. On the other hand, if teachers have low self-efficacy or may be overwhelmed by technology, they may resist its use because they believe it might interfere with their teaching rather than support it. Another consideration is experience: attitude towards technology is influenced by the extent of previous use; teachers who have used certain technologies are more likely to adopt ICT than those who have not.

This has made institutional support another important parameter in the study. Education stakeholders who offer motivation, rewards, or incentives as well as leadership support, compel educators to make technology work (Eickelmann, 2011). This is important because teachers rely on the support of their colleagues in coming up with new ideas and sharing learning material especially in the use of technology in CALL (Computer-Assisted Language Learning). Parent and community support also enhances the teachers' commitment to adoption of technology by relating the instructional objectives to societal standards (Afshari et al., 2009).

2.3. Challenges in ICT integration

Certainly, one the most critical issues is that there are no technical infrastructure and equipment (Bariu, 2020). In many learning institutions; especially those found in the developing world are challenges of obsolete or limited technology. According to Flores et al. (2017), lack of resource utilities such as computers, projectors, interactive whiteboards and especially, effective connectivity hinders the integration of ICT in class practices. In the institutions which partially apply technologies, there can be a problem of outdated software or a lack of other digital means that allow the teacher to prepare exciting lessons. Furthermore, problems like slow internet

connection and faulty teaching aids are a thorn in the side of the classroom and decrease teachers' trust in technology used in teaching (Lu et al., 2015).

Another major concern is that teachers often do not believe they are able to integrate ICT into their practice meaningfully or will not engage with ICT at all (Jamieson-Proctor et al., 2006). Unfamiliarity with technology and fear of using technology is one of the main reasons why the majority of teachers avoid integrating the application of technology into the learning process. Many teachers may view technology as an invasive element rather than as an aid as this study found; most of the teachers had little experience with ICT. A teacher who has a typing difficulty or is paralyzed by the prospect of the student watching him or her make mistakes on a keyboard may never use typing even when typing is allowed. Also, concern that ICT is time-consuming may develop; they believe that integrated use of technologies contributes to the increased time needed to prepare lessons, as well as potential technical difficulties that could lead to further reluctance.

Organizational and structural factors are also one of the reasons for which integration of ICT is hampered (McMahon et al., 2024). Schools and universities may not have adequate guidelines, or requisite assistance in integrating ICT in teaching and learning (Touray et al., 2013). In the absence of these institutional mechanisms' teachers do not get adequate training or technical assistance to hone their technological competence. However, due to scarcity of funds, and other competing projects within the educational settings the number of resources channeled to implement and enhance digital literacy often comes out deprived (Touray et al., 2013). In addition, bureaucratic constraints including prescribed syllabi or examination models which are not suited for ICT instruction will deny teachers the opportunity to integrate ICT into learning strategies.

3. Methodology

3.1. Participants

The participants of the study were 43 EFL teachers from three Northern Vietnam's universities, both public and private. Out of the participants 18 were males (41.9%) and 25 were females (58.1%) and their age ranged between 27 and 50 years. As for teaching experience, 20 teachers reported having 3 to 8 years of experience which is 46.5%; 17 teachers reported having 9 to 15 years of experience, which is 39.5% and 16 teachers stated having 15 or more years of experience, 34.8%. Among these, 13 teachers (30.2%) taught English for Specific Purposes (ESP), and thirty teachers (69.8%) taught basic English. In the study, all participants have teaching experience of utilizing ICT in their teaching for not less than five years especially with the advent of COVID-19 that has promoted online and virtual education.

3.2. Data collection instrument

The study used quantitative approach of research with the principal data collection instrument being the questionnaire. One of the reasons for using questionnaires in educational research is because they allow for the collection of a vast amount of data in a relatively short amount of time, and usually at a relatively low cost (Creswell, 2013). They contain several advantages Among them, the advantages of standard questions since they make it easy to compare

responses across multiple groups due to the fact that the questions posed are standard. Moreover, questionnaires can be delivered to a large pool of users; this means that the researcher can access the participants in various locations easily. It is especially useful in research designs wanting to obtain information from a huge number of participants thus increasing the external validity of the research. Besides, questionnaires allow combining different kinds of questions, numerical for quantitative approach and narrative or descriptive for qualitative insight, which give a complete picture of the subject of research.

Pertaining to the current study, the questionnaire addressed the use of ICT in English classroom teaching and learning. The 5-point Likert questionnaire was built from two major parts. The first concerns basic demographic data, such as gender, years of age, number of years teaching English, and years using ICT in teaching. These findings aid in their meaning-making as well as to establish whether or not there are demographical disparities regarding ICT adoption. The second part involves nine items addressing the promotion and barriers to the use of ICT by teachers including 12 items on technological, personal and institutional factors. The questionnaire was taken online through Google forms.

3.3. Data analysis

In this study, data analysis was done using SPSS version 27.0 which is considered one of the best statistical software that is used in educational research on account of its capacity in efficient handling and analysis of data. Considering the objective of the study as an explorative and descriptive research study, the two main quantitative descriptive measures of central tendency, namely mean scores and standard deviations, were used to summarize the positive and negative experiences that the teachers had as results of integration of ICT in teaching English. Additionally, an assessment of the internal consistency reliability for the completed questionnaire was completed using the Cronbach alpha coefficients. Reliability analysis was done to determine the internal consistency of the questionnaire in which Cronbach's alpha was 0.74, thus acceptable. This implies that the developed questionnaire items are related and deliver stable and consistent outcomes across different participants.

4. Findings and discussion

The overall mean scores for the factors affecting ICT integration reveal distinct differences among the three categories, which is illustrated in Table 1. Technology factors have the lowest mean score (M=2.72), indicating moderate satisfaction and highlighting challenges related to the availability and support of ICT tools. In contrast, personal factors boast the highest (M=3.72), reflecting teachers' confidence and positive attitudes towards using ICT in their teaching practices. Institutional factors (M=3.12) suggest some level of support but also point to the need for improvement in training, policies, and infrastructure.

Table 1. Descriptive statistics about teachers' attitudes towards factors affecting ICT integration in language learning.

	N	Mean	Std. Deviation	Overall mean
The necessary ICT tools and platforms are readily available for teaching.	43	3.63	0.618	2.72
There is reliable access to the internet in the classroom.	43	2.84	0.433	
There is a wide range of ICT tools and software available for different teaching needs.	43	2.23	0.427	
Adequate technical support is available to resolve any ICT-related issues promptly.	43	2.19	0.394	
I feel confident in my ability to use ICT tools effectively in teaching.	43	3.33	0.474	3.72
I have sufficient knowledge about integrating ICT into my teaching practices.	43	3.72	0.454	
I have the skills necessary to develop and implement ICT-based activities for my students.	43	3.56	0.502	
I have a positive attitude towards using ICT in my teaching.	43	4.26	0.621	
There is strong encouragement from university leaders to integrate ICT into teaching.	43	2.56	0.502	3.12
The institution provides regular training and professional development opportunities for ICT integration.	43	3.07	0.737	
The university has invested in the necessary infrastructure to support ICT in classrooms.	43	4.30	0.513	
There is a clear institutional policy or strategy promoting ICT integration in education.	43	2.53	0.505	

Analyzing the effectiveness of ICT integration in language classrooms based on the technological factors, the level of satisfaction among teachers varies greatly. Among the necessary ICT tools and platforms, the one that gets the highest mean score (M=3.63) is teachers 'report that these resources are easily available and sufficient. This has suggested that schools have done commendable job to supply basic socio-technological capital to support teaching practices. , technical support is highlighted as the area that needs increased attention and more support where the mean score is the lowest (M= 2.19). Such lack of support may impede teacher practices in using information technology in their practices by experiencing long periods of time before receiving assistance. Such discrepancies between corresponding faculties urgently call for balanced developments for comprehensively distinct technological aspects to achieve the optimum

goals for integrated ICT. These support deficiencies should be effectively dealt due to the poor upliftment of teachers and to make the educational experience better.

Personal factors about which teachers have been questioned regarding ICT integration in their teaching show how prepared the teachers are and their stand about ICT in teaching. Indeed, the mean score of having a positive attitude that teachers were willing to use ICT in their classroom (M=4.26) clearly shows that the teachers have positively inclined towards technology integration in teaching and learning. This positive attitude is critical as it opens students to try out new tool and approach thus improving dynamics and effectiveness of learning. Regarding knowledge and skills, teachers express having adequate knowledge regarding the integration of ICT into their practices (M =3.72), and sufficient skills on how to develop ICT based activities (M = 3.56). These scores reveal a satisfactory general knowledge and a satisfactory general ability of teachers although there is still potential development. Strengthening course related to professional development may further support these areas to encourage the teachers to use ICT in their classrooms. The related sub dimension for confidence in using ICT tools is however slightly lower (M=3.33), suggesting that teachers could be knowledgeable and skilled but may occasionally experience difficulties in being very confident. This gap shows that so much more needs to be provided in terms of support and professional development in order to promote the effective use of ICT to teach with confidence. If these personal factors are taken into consideration schools can ensure better support for the teacher and in turn teacher will be able to implement use of technology within the teaching-learning process successfully.

A prerequisite importance of institutional factors has been stressed in literature to support the integration of ICT in education. The analysis reveals several main domains that should be developed to provide more support for institutions. On average, it obtains a moderate value of 4.30, which reflects considerable attention to the investment in necessary infrastructure for ICT integration by universities. This is an initial investment in a way as it establishes the provision of technical capacity to support teaching and learning. However, these results suggest that the perception of encouragement from university leaders in improving the quality of students is moderate (M=2.56) while the clarity of institutional policies or strategies (M=2.53) is moderate. Such scores imply that there is a leadership and strategic direction void crucial for faculty motivation and direction in the adoption of ICT. However, with leadership support and effective policies, there is evidence that such organizational factors can promote innovations in practice. Concerning the provision of regular training and professional development (Mean=3.07) the level of support revealed moderate support and is an area that institutions should consider a priority. Professional-development programmes should be conducted frequently so that teachers and trainers can learn new technologies, as well as fresh best practices. If universities help to improve the professional development of teachers, ICT tools will become more effective and used more confidently.

The study accredits that ICT improves interactivity and work accessibility in teaching languages and collates Beauchamp & Kennewell (2008) and Mercer et al. (2004). The employment of multimedia aids and materials available on the www enables the teacher and the learner to cover

a wider range of teaching and learning needs. Writing in this way supports what could be argued about ICT – that it can enhance traditionalist language teaching methods to become richer and more focused on the students. However, the information concerning technological, personal and institutional enablers andнойpliers is similar to the one presented by Al-Awidi & Aldhafeeri (2017) and Afshari et al. ICT tools are an important technological factor, while the absence of technical support is a major challenge (Flores et al., 2017). An analysis of personal factors showed that the level of teachers' attitudes and confidence were higher, and this research reaffirms that a willingness to use ICT must come from both within the teacher and is consistent with the literature review the competency and motivation of teachers (Mannila et al., 2018). In addition, with regard to Institutional factors, for example, infrastructure investment, support is strong, while leadership and policy gaps remain. This is in line with Touray et al. (2013) who aptly noted the fact that institutions support and noble strategies that govern the integration of ICT are lacking. The level of support received was only moderate regarding professional development pointing to the fact that there is still scope for improvement profound training for the improvement of teachers' competencies along with the increased confidence when utilizing different technologies (Zheng et al., 2006); (Jamieson-Proctor et al., 2006). However, there are major issues like; lack of infrastructure and or the lack of willingness on the part of teachers to adopt technology as pointed out by Bariu (2020) and Jamieson-Proctor et al. (2006). This research draws awareness to these barriers to recommend sufficient funding, ICT assistance, and professional development for improving the teachers' skills to incorporate ICT appropriately.

5. Conclusion

This research aimed at examining the factors that influence the incorporation of ICT in EFL for 43 teachers in three universities in Northern Vietnam. Employing a quantitative research design, data was gathered using a structured questionnaire developed from the study of Alghasab et al. (2020). The research shows that teachers are willing to use ICT to improve learning outcomes, interest students, and variety the approaches. However, the study reveals some challenges associated with technology, such as a lack of hardware support, the researchers' low self-efficacy of using technology, and limited resources in this field. However, the study has its own limitations In this study, data was collected at one point in time and therefore is cross-sectional, which does not allow for detection or analysis of changes in ICT integration over time. Further, the sample-based study is small and limited to three universities located in Northern Vietnam, thereby possibly may not have presented the wide range of ICT integration in different region and context of education. Subsequent studies could increase the size of the sample and consider quantitative studies for analysis of synchronic and diachronic changes in the integration of ICT in the teaching of languages. To support the integration of ICT for ELT, it is recommended that schools and colleges should ensure that the required technical support is available and also offer faculty development programs constantly. It is on this basis that elaboration of clear institutional policies and provision of robust leadership affirmation can factor forward the use of ICT. Furthermore, even though more and more teachers are guided to use technology in language learning, such as

using Wiki, there is lack of discussion space that teachers can exchange the most effective methods and good resources, and therefore, improve the self-confidence and proficient use of technology in language learning.

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