



Integrating ICT Into Collaborative Writing: Are We Ready Yet?

Lan Thi Thu Nguyen
FPT University, Vietnam

Introduction

Collaborative writing, defined as “the joint production or the coauthoring of a text by two or more writers” (Storch, 2011, p. 275), has been valued as a means to develop students’ writing ability both in first language (L1) and second language (L2) (Fong, 2012; Meihami, Varmaghani, & Meihami, 2013; Storch, 2011). In Vietnam, how to improve Vietnamese learners’ English proficiency has been of great concern to many educators and researchers. In addition, Information and Communications Technology (ICT) is attracting increasing attention as a medium for teaching (Li, Razali, Noordin, & Samad, 2018; Mullamaa, 2010). ICT offers opportunities for enhancing the learning of students studying English as a foreign language in Vietnam. The Ministry of Education and Training also has many policies and initiatives to encourage the use of ICT in teaching and learning in schools and universities on a nationwide scale. The use of ICT in teaching and learning has become a trend in Vietnam (Nguyen, 2016).

While a great deal of research has been directed at helping English as a foreign language (EFL) students improve their English language competency, including a number of studies which have made use of computers for computer aided instruction, few of these studies have taken place under classroom conditions. Also, only a few studies have made use of collaborative writing and fewer have combined this with the advantages of ICT. Therefore, there arises the need to examine how ICT can foster collaborative writing in a given context, especially to explore whether the participants in that context are ready to use ICT in their teaching and learning practice.

Research Objective

As a preliminary investigation – a part of a bigger study – the objective of this study was to explore the readiness held by teachers and students to use ICT in collaborative writing in a university EFL learning context in Vietnam. Collaborative writing in this study means students collaborate to do the writing tasks in groups as required by their teachers. Thus, the objective of this study can also be understood as the investigation of whether teachers were ready to conduct ICT-supported collaborative writing among their students and whether students were ready to use ICT for collaborative writing with other students. In order to fulfil this objective, the following research questions were posed:

1. To what extent do teachers and students have access to ICT devices and the Internet?
2. What levels of ICT skills do they perceive to have?
3. To what extent do they use ICT in English language teaching and learning and in collaborative writing?

Literature Review

Factors Influencing ICT Adoption and Integration

A variety of factors that can impact ICT adoption and integration from the policy level to institutional and teacher levels have been identified in the literature. This study has focused on the factors from the perspectives of teachers and students.

The teacher perspective

The emergence of ICT in education may support a change in the role of the teacher from knowledge transmitter to facilitator and scaffolding provider for the learner. A body of literature has identified many factors that influence teachers' ICT integration into their teaching. These can be either external or internal.

The external factors are increased workload, technology availability, technical and administrative support, school curriculum, school culture and pressure to prepare students for exams (Fu, 2013; Le & Vo, 2014; Raman & Yamat, 2014). Many studies show that the implementation of ICT and the further training that demands creates an added burden for teachers who are already overloaded with busy schedules (Abuhmaid, 2011; Neyland, 2011). The availability and accessibility of ICT resources such as hardware and software play a key role in the success of ICT adoption and integration in schools (Plomp, Anderson, Law, & Quale, 2009). Therefore, access to ICT resources for teachers and learners is necessary for effective ICT integration. Besides providing essential ICT infrastructure and accessibility, it is critical to guarantee technical support in case of technical breakdowns (Yilmaz, 2011). Another external factor that determines teachers' ICT use is school culture: the set of vision, plans, norms and values shared by members of school (Maslowski, 2001). This has an impact on the beliefs, attitudes and actions of teachers (Chai, Hong, & Teo, 2009). Ertmer and Ottenbreit-Leftwich (2010) stated that in order to have effective ICT integration in teaching, changes in teachers' knowledge and beliefs and school culture are required. A lack of support regarding ways to integrate technology into the curriculum may also lead to failure among teachers to use ICT (Smerdon et al., 2000). Of these external factors, technology availability and support from technicians, teachers and principals are the strongest factors affecting ICT integration (Al-Ruz & Khasawneh, 2011).

Internal influences on the integration of ICT in teaching include aspects such as technology skills, readiness to use ICT and technology self-efficacy, self-confidence, attitudes and beliefs (Dang, 2013; Fu, 2013). First, poor ICT skills can be an obstacle for teachers (Knezek & Christensen, 2002; Raman & Yamat, 2014). Their competence as well as their intentions towards ICT determines effective use (Vanderlinde, Van Braak, & Hermans, 2009). Thus, teacher training should focus on both ICT skills and strategies to integrate ICT into the curriculum. Teachers' ICT competence relates directly to their confidence in using ICT while computer self-efficacy is described as teachers' confidence in their ability to use a computer (Christensen & Knezek, 2006). In other words, Compeau and Higgins (1995) described teachers' computer self-efficacy as a judgement of how well they are able to use a computer. Teachers' self-efficacy in this regard is important as lack of confidence would likely make teachers reluctant to use ICT. To recap, there are a variety of external and internal factors that can influence teachers' ICT integration. According to Bingimlas (2009), there are many barriers to teacher integration of ICT in teaching, but the major ones are teacher confidence, teacher competence and teacher access to ICT resources. These external and internal factors do not exist in isolation; there is a causal relationship

between them. Jones (2004) showed a relationship between a lack of access to ICT resources (external factor) and a lack of teacher competence (internal factor) in determining teacher confidence (see Figure 1).

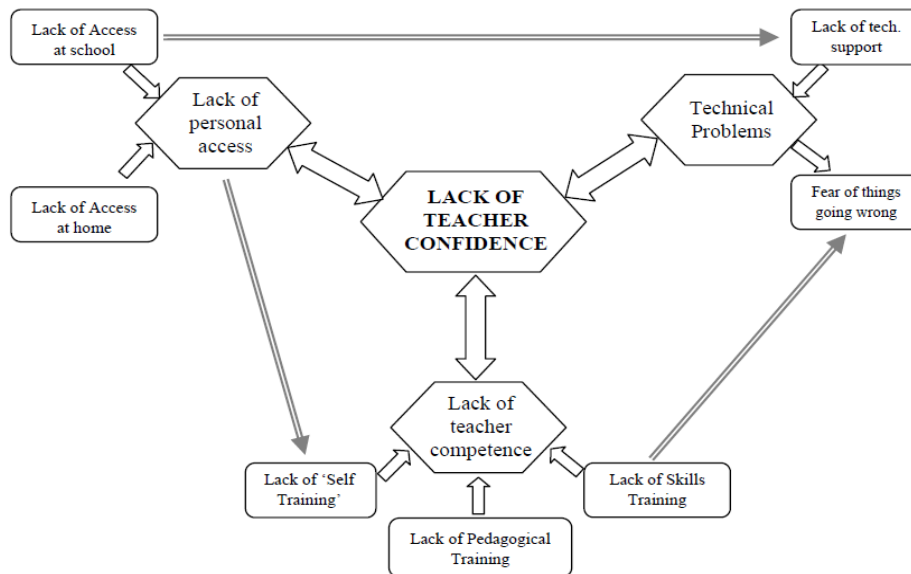


Figure 1. Factors affecting teachers' confidence in ICT integration.

Figure 1 suggests that making teachers confident in using ICT in their teaching requires adequate access to ICT resources at school and at home, access to technical support and ICT competence enhanced by skill and pedagogical training.

The student perspective

Teachers and students are equally involved in the teaching and learning process. Therefore, the success of any teaching practice relies on both. The use of ICT in collaborative writing, with the emphasis on a student-centred learning approach, finds its success in meaningful engagement of learners. While there is a large body of literature about the factors that influence teachers' adoption and use of ICT in their teaching, little literature about learners' experiences exists. Skills, support, and facilities are factors that influence students (Pouratashi & Rezvanfar, 2010). However, Pouratashi and Rezvanfar conclude that support and facilities impose indirect effects while skills have both direct and indirect effects; "given the direct effect on application of ICT, we infer that when students' skills improve, they are more likely to use ICT" (Pouratashi & Rezvanfar, 2010, p. 81).

Research Design

As a part of a mixed methods case study with two phases, this article was based on Phase 1 in which quantitative data were collected through online surveys.

In this study, two sets of electronic surveys adapted from an electronic instrument developed and used in research done in the Center for Schooling and Learning Technologies at Edith Cowan University (ECU) (Gulatee, Vonganusith, Pagram, & Cooper, 2016; Pagram & Cooper, 2011) were translated into Vietnamese and administered to English language teachers and students at FPT University. The surveys collected information about participants' demographics, ICT access, and ICT competence. In addition, suitable ICT tools that could be used in collaborative writing were also explored through the surveys.

Findings

Teachers' and Students' Access to ICT

Access to devices

Results showed that almost all teachers and students owned laptops and smartphones with a high percentage of them using these devices in teaching and learning. All teachers surveyed had laptops and 88% of them owned smartphones. As expected, the number of teachers using laptops and smartphones to aid them in teaching English was also high. They all used laptops when teaching and 38% of them used smartphones, compared with 13% of the teachers who used desktop computers and 6% who used tablets.

At FPT University, laptop ownership is compulsory and this explains why the largest percentage of students had laptops (98%). Of the students who owned laptops, the highest ownership (33%) was in the category of having owned a laptop for less than one year. A surprising result is that few students possessed tablets. About 86% of the students indicated that they used laptops daily, and approximately 76% indicated daily use of smartphones. Regarding students' use of these devices in their studies, desktop computers and tablets were the least popular. All these devices were reported to be used at different frequencies in students' studies. Many of the students used laptops (91%) and smartphones (63%) while a few (6%) used desktop computers and tablets in their daily class work. To recap, the vast majority of the students owned laptops and smartphones, and they used these devices for study purposes daily.

Access to the Internet

Participants were surveyed about using four different types of Internet access: home Internet, mobile Internet, university wireless and Internet cafés. The results indicate that both teachers and students had adequate access to the Internet since 100% of the teachers had access to both home Internet and university wireless and nearly 100% of the students had access to university wireless. As most of the students lived on campus and came back home only at the weekend, the percentage of students using home Internet (57%) was much lower than that of the teachers (100%). The percentages of teachers and students using mobile Internet was not high: 50% for teachers and 44% for students respectively. It was probable that they had to pay for using that type of Internet access. It was interesting that no teachers and only a few students (8%) used Internet cafés.

Teachers' and Students' ICT Competence

The results of the surveys showed that teachers and students perceived their skills in using word processing, file management, Internet browsing, social networking, blogs and wikis and cloud applications at different levels. ICT skills among teachers and students such as their ability to use social networks, email, blogs and wikis, and cloud applications, were very similar. Both the teachers and the students were competent in social networking, word processing and Internet browsing, which are important skills for ICT-supported collaborative writing. By contrast, both the teachers and students were less competent in using blogs, wikis and cloud applications. These skill levels were reflected in the usage of ICT in teaching and learning English because most of the teachers and students used word processing, file management, social networking and email to aid them in teaching and learning.

The use of social media was also similar for teachers and students (see Figure 2). Facebook was the most popular application with all the teachers and 97% of the students using it. The second most used application was Google Docs with 75% of the teachers and 60% of the students using this application. iMessage/Facetime ranked third with 62% of the teachers and half of the students using it.

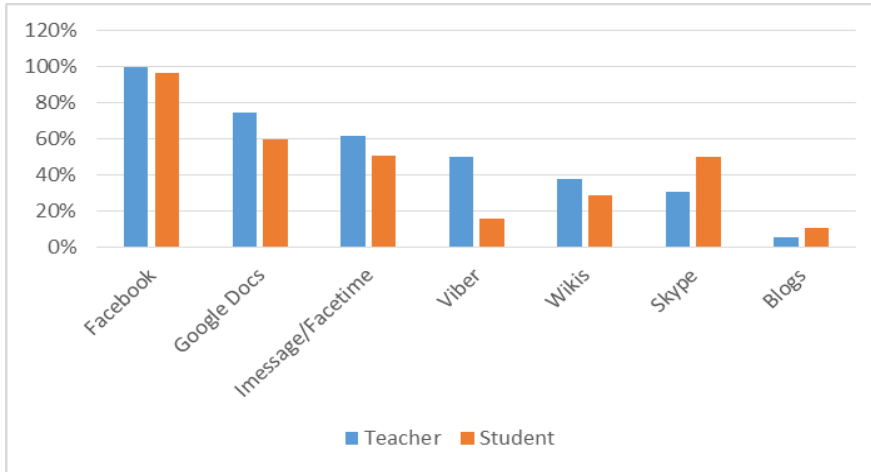


Figure 2. Teachers' and students' technological application use.

Teachers' and Students' ICT Use

In English language teaching and learning

Both the teachers and the students showed that they had experienced using ICT in teaching and learning English. All teachers reported that they used ICT in their teaching. The teachers tended to use ICT mostly when they were teaching vocabulary, listening skills and grammar. As can be seen from Figure 3, more than 81% of the teachers used ICT in teaching vocabulary on a daily basis and 75% used it daily for teaching listening and grammar. Nearly 63% reported using ICT for teaching speaking daily. The use of ICT in teaching reading or writing was the less popular. Only 56% used ICT to teach these skills every day.

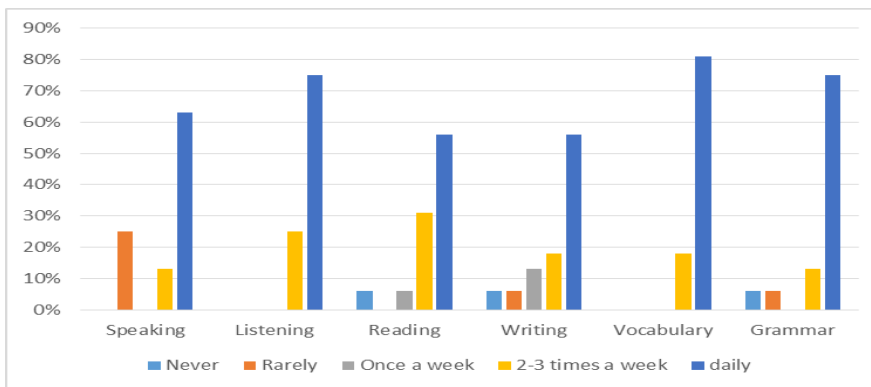


Figure 3. Teachers' ICT use in teaching English.

The majority of students (97%) indicated they used ICT in English language learning. Most of the students used laptops (89%) and smartphones (52%) daily to study English. Tablets and desktop computers were rarely, if ever, used. Only about 5% of the students used tablets and 4% used desktop computers to study English on a daily basis.

How ICT is used by students to learn English and the frequencies of these different uses are shown in Figure 4. Students used ICT to study vocabulary the most frequently (nearly 60% of students on a daily basis). Less frequently, students used ICT to study reading (44%), grammar (43%) and listening (40%). Only 21% of the students used ICT to support learning to speak English and only 33% indicated that they used ICT to help them write.

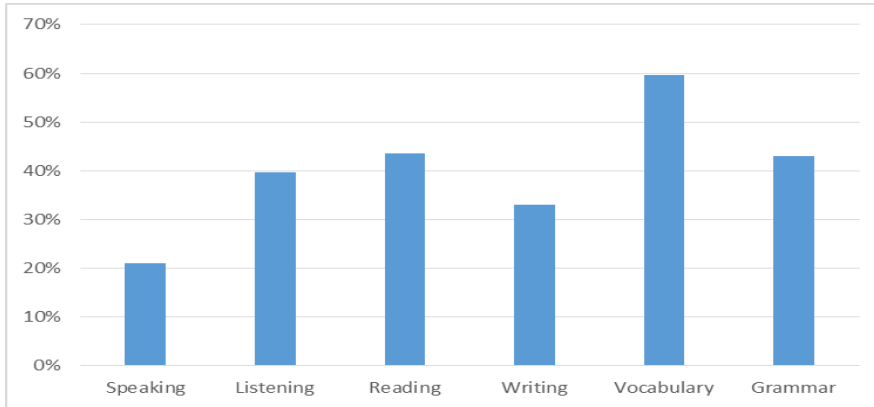


Figure 4. Students' ICT use in learning English on a daily basis.

In collaborative writing

The vast majority of the teachers (94%) said that they had asked their students to compose collaboratively with each other while only 68% of the students claimed that they had done collaborative writing. This difference can be interpreted in terms of variation in teaching methods used across classrooms because a number of teachers may not be currently using collaborative writing in their classes. In general, the results indicated that both teachers and students had positive opinions about collaborative writing.

Regarding ICT tools used in collaborative writing, Facebook was used extensively by the students (see Figure 5). However, Facebook was not reported by the teachers as the main ICT tool used in collaborative writing. Only one out of nine teachers used Facebook for collaborative writing in his/her class. This difference suggests that students used Facebook informally or that their collaboration using Facebook was unplanned. The second tool the students used for collaborative writing was Google Docs.

Among the 16 teachers, 12 had received ICT training. Of these teachers, eight were trained in using Google Docs and these teachers used Google Docs in teaching English writing. However, only two of them said that they conducted collaborative writing using Google Docs among their students, i.e. students did the writing tasks in collaboration with each other via Google Docs. Therefore, it would appear that teachers normally used Google Docs for teaching writing, but not for students' collaborative writing.

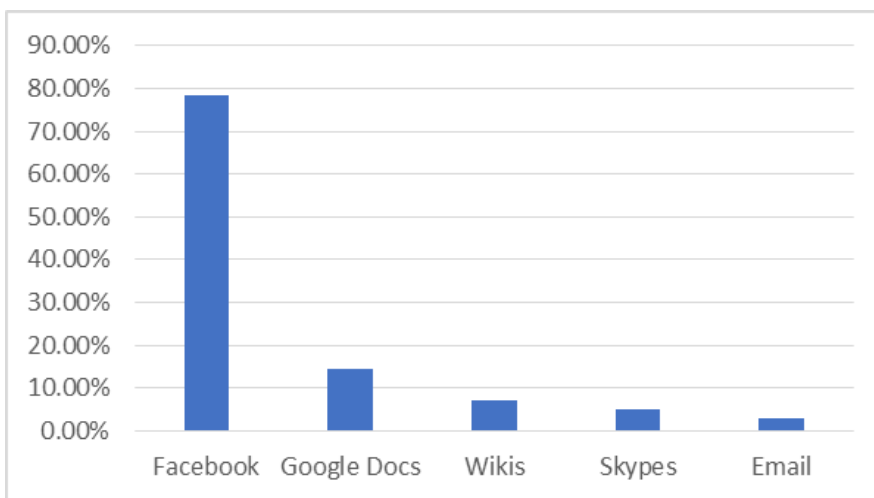


Figure 5. Tools used in ICT-supported collaborative writing by the students.

In comparison to the students who showed a positive attitude toward collaborative writing, the teachers' opinions about students' writing collaboration were not as positive, either with the face-to-face mode or the ICT-supported mode. It is possible that the teachers encountered more challenges with managing students' collaborative work. However, two thirds of the teachers wanted to continue students' collaborative writing using ICT. This may mean that they still valued the use of ICT in fostering students' collaboration in writing more than face-to-face collaborative writing.

Discussion

The data from both the teacher and student surveys indicated that there was potential to use ICT to foster collaborative writing for students at FPT University. First, the teachers were ready to conduct this learning method among their students and students were ready to use ICT in collaborative writing with each other. They owned the necessary devices (mostly laptops and smartphones) and had access to the Internet because the university provides wireless Internet on the campus. Second, both the teachers and students had adequate ICT skills (word processing, Internet browsing, and social networking) for collaboration. Last but not least, they also showed positive attitudes toward collaborative writing using both a conventional mode (face-to-face) and a non-conventional mode (ICT-supported).

The data from the surveys revealed that both teachers and students used social media and that the most popular applications were Facebook and Google Docs. Facebook and Google Docs are considered to be beneficial for improving students' writing performance (Ahmed, 2016; Alsubaie & Ashuraidah, 2017; Yu, 2014). Thus, the selection of Facebook and Google Docs as technological tools used for collaborative writing was suitable. Use of this combination of technologies contributes to the existing research on collaborative writing using ICT since, until now, there have been very few studies examining the potential of combining several technologies to foster students' collaborative writing. Although Facebook and Google Docs have been identified as useful tools for students to improve their writing skills, there have been few empirical investigations into their uses in fostering EFL students' collaborative writing in the Vietnamese higher education context.

The findings also identified gaps between ICT access and skills among teachers and students and their limited use of ICT in teaching and learning writing skills. The results of the surveys showed that although both the teachers and students owned a high range of technological devices, especially laptops and smartphones, they mainly used ICT in learning and teaching input skills such as vocabulary, grammar, and reading, but not output skills such as speaking, and writing. Moreover, among nine teachers who conducted ICT-supported collaborative writing in their classes, only two used Facebook and one used Google Docs, although the results of the surveys showed that Facebook and Google Docs were the two most familiar applications. Therefore, there should be better exploitation of these applications in the learning context in institutions with a strong ICT foundation like FPT University.

Conclusion

This preliminary study has shown that the teachers and students at FPT University were ready to use ICT in collaborative writing when learning English in terms of ICT access and skills. A high percentage of them owned technological devices such as laptops and smartphones. They used different types of Internet access and mostly used the university wireless. They also had high levels of the skills needed for collaborative writing such as word processing, Internet browsing and social networking. It was found that Facebook and Google Docs seemed to be the most suitable tools for collaborative writing since the majority of teachers and students used them in their daily life. Further research should be conducted on the use of these particular tools in practice to examine whether or not teachers and students are willing to use ICT-supported collaborative writing when they are ready in terms of ICT access and skills.

Acknowledgements

This paper is based on my dissertation (Nguyen, 2019) which was supported by Edith Cowan University, Australia. I would like to express my sincere thanks to my supervisors, Dr. Jeremy Pagram and Dr. Alistair Campbell for their great guidance and support.

The Author

Lan Thi Thu Nguyen is an English language lecturer at FPT University, Vietnam. She earned her PhD in Education from Edith Cowan University, Australia. Her academic interests are second language acquisition, language teaching methodology, and Information and Communications Technology integration in English language teaching and learning.

English Language Department
FPT University
Hoa Lac High Tech Park, Hanoi, Vietnam
Tel: +84 24 7300 5588
Mobile: + 84 37 885 0900
Email: lanntt2@fe.edu.vn

References

- Abuhmaid, A. (2011). ICT training courses for teacher professional development in Jordan. *Turkish Online Journal of Educational Technology-TOJET*, 10(4), 195-210.
- Ahmed, M. A. E. A. S. (2016). Using Facebook to develop grammar discussion and writing skills in English as a foreign language for university students. *Sino-US English Teaching*, 13(12), 932-952.
- Al-Ruz, J. A., & Khasawneh, S. (2011). Jordanian pre-service teachers' and technology integration: A human resource development approach. *Journal of Educational Technology & Society*, 14(4), 77-87.
- Alsubaie, J., & Ashuraidah, A. (2017). Exploring writing individually and collaboratively using Google Docs in EFL contexts. *English Language Teaching*, 10(10), 10-30.
- Bingimlas, K. A. (2009). Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, Science and Technology Education*, 5(3), 235-245.
- Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS Quarterly*, 23(2), 145-158.
- Chai, C. S., Hong, H.-Y., & Teo, T. K. G. (2009). Singaporean and Taiwanese pre-service teachers' beliefs and their attitude towards ICT use: A comparative study. *The Asia-Pacific Education Researcher*, 18, 117-128.
- Christensen, R., & Knezek, G. (2006). Pathway for preparing tomorrow's teachers to infuse technology. *Computers in the Schools*, 23(3-4), 1-21.
- Dang, X. T. (2013). *ICT in foreign language teaching in an innovative university in Vietnam: Current practices and factors affecting ICT use* (Doctoral dissertation). La Trobe University, Australia.
- Divaharan, S., & Ping, L. C. (2010). Secondary school socio-cultural context influencing ICT integration: A case study approach. *Australasian Journal of Educational Technology*, 26(6), 741-763.
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education*, 42(3), 255-284.
- Fong, L. S. (2012). Benefits of collaborative writing for ESL advanced diploma students in the

- production of reports. *US-China Education Review*, 4, 396-407.
- Fu, J. S. (2013). ICT in education: A critical literature review and its implications. *International Journal of Education and Development using Information and Communication Technology*, 9(1), 112-125.
- Gulatee, Y., Vonganusith, V., Pagram, J. E., & Cooper, M. G. (2016). Examining student ICT ownership, use and preferences towards electronically delivered learning resources in Nakhon Phanom University and Sakon Nakhon Rajabhat University. *Nakhon Phanom University Journal*, 6(2), 7-15.
- Jones, A. (2004). *A review of the research literature on barriers to the uptake of ICT by teachers*. British Educational Communications and Technology Agency (BECTA). Retrieved from www.dera.ioe.ac.uk/1603
- Knezek, G., & Christensen, R. (2002). Impact of new information technologies on teachers and students. *Education and Information Technologies*, 7(4), 369-376.
- Le, X. M., & Vo, K. H. (2014). Factors affecting secondary-school English teachers' adoption of technologies in southwest Vietnam 1. *Language Education in Asia*, 5(2), 198-215.
- Li, K. L., Razali, A. B., Noordin, N., & Samad, A. A. (2018). The role of digital technologies in facilitating the learning of ESL writing among TESL pre-service teachers in Malaysia: A review of the literature. *The Journal of Asia TEFL*, 15(4), 1139-1145.
- Maslowski, R. (2001). *School culture and school performance: An explorative study into the organizational culture of secondary schools and their effects*. Enschede, the Netherlands: Twente University Press.
- Meihami, B., Varmaghani, Z., & Meihami, H. (2013). The effect of collaborative writing on EFL students' grammatical accuracy. *International Letters of Social and Humanistic Sciences*, 11, 47-56.
- Mullamaa, K. (2010). ICT in language learning-benefits and methodological implications. *International Education Studies*, 3(1), 38-44.
- Neyland, E. (2011). Integrating online learning in NSW secondary schools: Three schools' perspectives on ICT adoption. *Australasian Journal of Educational Technology*, 27(1), 152-173.
- Nguyen, T. T. L. (2019). *Using ICT to foster collaborative writing for EFL university students in Vietnam* (Doctoral Dissertation). Edith Cowan University, Australia.
- Nguyen, V. L. (2016). Ứng dụng công nghệ thông tin trong dạy học ngoại ngữ: Từ kinh nghiệm quốc tế đến thực tại Việt Nam. *VNU Journal of Science: Education Research*, 32(2), 36-47.
- Pagram, J., & Cooper, M. (2011). *E-YEARNING: An examination of the use and preferences of students using online learning materials*. Paper presented at the 19th International Conference on Computers in Education, Chiang Mai, Thailand.
- Plomp, T., Anderson, R. E., Law, N., & Quale, A. (2009). *Cross-national information and communication technology policies and practices in education*. Charlotte, NC: Information Age.
- Pouratashi, M., & Rezvanfar, A. (2010). Analysis of factors influencing application of ICT by agricultural graduate students. *Journal of the American Society for Information Science and Technology*, 61(1), 81-87.
- Raman, K., & Yamat, H. (2014). Barriers teachers face in integrating ICT during English lessons: A case study. *The Malaysian Online Journal of Educational Technology*, 2(3), 11-19.
- Smerdon, B., Cronen, S., Lanahan, L., Anderson, J., Iannotti, N., & Angeles, J. (2000). *Teachers' tools for the 21st century: A report on teachers' use of technology*. Statistical Analysis Report. Washington, DC: National Center for Education Statistics.
- Storch, N. (2011). Collaborative writing in L2 contexts: Processes, outcomes, and future directions. *Annual Review of Applied Linguistics*, 31, 275-288.
- Vanderlinde, R., Van Braak, J., & Hermans, R. (2009). Educational technology on a turning point: Curriculum implementation in Flanders and challenges for schools. *Educational Technology Research and Development*, 57(4), 573-584.
- Yilmaz, N. P. (2011). Evaluation of the technology integration process in the Turkish education system.

Contemporary Educational Technology, 2(1), 37-54.

Yu, L. T. (2014). A case study of using Facebook in an EFL English writing class: The perspective of a writing teacher. *JALT CALL Journal*, 10(3), 189-202.