



EFL STUDENTS' PERCEPTIONS OF ICT-SUPPORTED COLLABORATIVE WRITING ACROSS DIFFERENT GENRES OF ESSAYS

Nguyen Thi Thanh Ha^{1,2}, Pham Thi Hong Nhung^{1*}

¹University of Foreign Languages and International Studies, Hue University, Vietnam

57 Nguyen Khoa Chiem Str, Hue, Vietnam

²University of Economics – Technology for Industries, Vietnam

* Correspondence to **Pham Thi Hong Nhung** < n.pham@hueuni.edu.vn >

(Received: January 19, 2026; Accepted: January 30, 2026)

Abstract: This qualitative research explores EFL learners' perceptions of ICT-supported collaborative essay writing on three different types of essays, specifically descriptive, cause and effect, and comparison. In-depth, semi-structured interviews with ten English-major students revealed that although ICT tended to promote collaboration and writing process, there is a significant difference among students' experiences to specific writing genres. Descriptive essays, in which interaction was more detailed and supported by peers, and cause-effect essays exhibited a superior logical format. Greater confidence in critical assessment was found in comparison essays. Such problems as digital fatigue and resource access were also noted. While these results confirm the significance of integrating ICT in a genre- and learner needs-based approach, differentiated instructional strategies have also shown to bring about positive impacts on genre-specific writing skills among EFL learners.

Keywords. Collaborative essay writing, genre awareness, ICT-supported, qualitative approach

1. Introduction

With the advent of Information and Communication Technology (ICT) in language education, the manner of teaching and learning processes has transformed, especially in the English as a Foreign Language (EFL) case. Research has also shown how ICT has evolved to integrative learning platforms that support autonomy and interaction between learners as opposed to behavioristic learning approaches of drill and practice learning (Bax, 2002; Warschauer & Healey, 1998). Such a shift is associated with the pedagogical transitions that move away from traditional teacher-centered pedagogy to learner-centered and collaborative

pedagogy (Stockwell & Hubbard, 2013). Learning Management Systems (LMS), Google Docs, and Padlet are only a few examples of the ICT tools that have been generally appreciated due to the ability to communicate and collaborate, which provided learners with a chance to interact both synchronously and asynchronously outside of the physical classroom (Al-Kadi, 2018; Nguyen & Pham, 2025; Valtonen, 2011). Such technologies facilitate learning that is socio-constructivist in nature because they support scaffolding and interaction between learners within a Zone of Proximal Development (ZPD) (Vygotsky, 1978), which is instrumental to language acquisition.

As a collaborative approach to writing academic work where the students share responsibility and ownership (Storch, 2013), the collaborative essay writing (CEW) within the EFL practice is a practical example of the integration of these theoretical perspectives. Empirical evidence suggests that CEW has a positive impact on critical thinking as it promotes the reasoning of meaning, testing of ideas and co-construction of knowledge (Gokhale, 1995), and EFL writers have good feedback on the integrations of ICT into CEW (Pham & Nguyen, 2025). The benefits of scaffolding to CEW include the fact that more advanced writers help less skilled writers to develop their language and cognitive skills due to its peer-learning feature (Dillenbourg et al., 1996). Furthermore, CEW results in motivation and engagement levels among learners, as, in this case, the interaction is developed, socially constructive writing experiences are formed (Wang, 2014). However, issues of unequal participation, a lack of technological literacy, and problems with monitoring group work are still common in EFL (Pham, 2019). These problems demonstrate the need for careful instructional design and targeted strategies to successfully integrate ICT and maximise the benefits of collaborative writing.

2. Literature review

2.1. *ICT support in collaborative essay writing process: Theoretical foundations*

The conceptual underpinning of CEW incorporates three significant theories: socio-constructivist theory, socio-cultural theory, and the process-genre approach, all of which contribute to the knowledge about how ICT can help improve collaborative writing and genre awareness. The ZPD is based on the theory of socio-constructivism (Vygotsky, 1978) and focuses on learning as a socially mediated process whereby learners develop through engaging in structured interactions with their peers or teachers. In CEW, communication and sensemaking enable learners to internalize linguistic and cognitive practices more effectively than individual writing (Nguyen, 2019; Storch, 2013). Google Docs is an example of ICT tools that offer scaffolding through the use of real-time collaborative features and feedback, which helps learners engage in the learning process and develop language skills (Pham, 2019).

In further development, socio-cultural theory establishes the knowledge-building context into the wider social and cultural contexts, in which the process of knowledge building is mediated through cultural artifacts, norms, and interactions (Lantolf & Thorne, 2006). EFL also encourages culturally responsive learning which allows the learners to negotiate the linguistic and rhetorical resources between the learners of different backgrounds (Leki, 2007; Swain & Lapkin, 2001). These exchanges are facilitated by ICT-mediated cooperation, which in turn leads to the reciprocation and non-reciprocation of exchanges that enhance the achievement of both language soundness and rhetorical expertise (Hyland, 2007; Valtonen, 2011).

Building on these views, the process-genre approach combines recursive writing phases, planning, drafting, revising, editing, and publishing, with a conscious awareness of the genre (Badger & White, 2000; Rose & Martin, 2012). CEW focuses on a collaborative approach to help learners discuss genre conventions (e.g., cause-effect, descriptive, and comparison essays) and develop more coherent, cohesive, and rhetorically suitable writing (Hyland, 2003; Storch, 2013). Process- and genre-based learning may also be supported with the help of ICT as it enables the receipt of feedback and the repeated improvement of works (Nguyen & Pham, 2025a, 2025b). On the whole, these structures demonstrate that CEW facilitated with the help of ICT promotes linguistic development, critical thinking, and genre competence based on socially and culturally mediated collaboration.

2.2. *Genre awareness in essay writing*

Genre awareness is a critical aspect in the task of building the academic competence of EFL students in writing in terms of communicative intents, structural restrictions, and linguistic characteristics of various textual types (Hyland, 2007). Genre awareness is explicitly taught so that learners can respond to the expectations of a given discipline and meet the needs of the audience (Coffin et al., 2003). It enhances their mental capacity to articulate ideas in a logical order, use appropriate language, and create logical, cohesive, and contextual texts (Rose & Martin, 2012). Its coherence is carried out by logical sequencing, which is in line with expectations of the genre, and cohesion is achieved through the application of transitional devices (Halliday & Hasan, 1976). A number of empirical studies have validated that the genre-based instruction improves the organization and linguistic correctness of the writing (e.g., Badger & White, 2000; Rose & Martin, 2012).

As three basic genres of EFL academic writing, descriptive, comparison, and cause-effect essays should have different rhetorical and linguistic skills that should be taught and developed. Descriptive essays are intended to show vivid descriptions of people, places, or objects in a sensory and imagery detail, and are usually arranged spatially or topically and are usually supported by adjectives, adverbs, and sensory verbs to create a better understanding and interest (Hyland, 2003; Raimes, 1983). Comparison essays are also persuasive because they require analytical thinking; they involve pointing out the similarities and differences between

the subjects and serve to introduce the matter as well as hold them together by the use of cohesive devices, which may include, however, simply and on the other hand (Connor, 1996; Hyland, 2007). Cause-and-effect essays are logical arguments based on inquiry on cause-and-effect relationships or effect-to-cause relationships among events, which make use of connectors of cause-and-effect relationships including: because, therefore, and as a result, and so on (Swales & Feak, 2012). For EFL students, understanding the genres will reinforce their genre awareness and literary competence as it helps them develop the skill of organizing ideas logically, applying relevant linguistic devices, and writing rhetorically effective essays in accordance with academic rules (Hyland, 2007; Rose & Martin, 2012).

2.3. *ICT tools supporting collaborative essay writing*

Learning Management System (LMS) refers to thorough solutions, which provide an option of planning collaborative writing exercises and instructor and peer feedback within the EFL learning context. LMS systems allow instructors to design systematic writing exercises, assign learning resources, and monitor learners in an organized way (Almusharraf & Bailey, 2021). They facilitate asynchronous learning by providing discussion room and submission systems, which allow learners to review feedback and make revisions to their work (Sun & Gao, 2020). Research has shown that learners are more autonomous and accountable when using LMS, as task management and communication can be centralized, which is especially helpful in developing genre awareness through scaffolded writing assignments (Rahimi & Yadollahi, 2011). Moreover, LMS analytics services assist an educator in detecting common linguistic or structural problems with genre conventions to enable the educator to engage in specific pedagogical intervention.

There are social and visual collaboration tools, such as Padlet, that provide flexible online environments where learners can brainstorm, organize ideas, and co-build knowledge, followed by formal writing (Valtonen, 2011). These platforms enable multimodal input, including text, pictures, and links, which fosters a deeper understanding of the related information and structure. Consequently, it allows learners to create a mapping of connections between ideas (Chen, 2017). Padlet has been observed to be effective as a scaffolding support for pre-writing elements of essay production, allowing learners to collaboratively brainstorm and formulate ideas, and sequence them according to the requirements of a particular genre, such as a cause-and-effect or comparison essay (Nguyen, 2019). Such tools are also visual and interactive, which promotes engagement and a motivational effect on learners, essential for maintaining collaborative work and mastering the genre (Wang & Wen, 2020).

Google Docs is also a well-known and influential ICT tool that enables real-time collaborative writing, allowing multiple users to work on a text simultaneously and comment and make suggestions in real-time (Pham, 2019). Its live editing possibilities contribute to the active interaction with peers, providing the possibility to negotiate and make decisions together

which is consistent with the concept of socio-constructivism and promotes the ZPD (Vygotsky, 1978). Studies have shown that Google Docs makes iterative revision processes more streamlined and efficient, as well as developing learners' genre awareness, since they can view and discuss how genre-specific structures and linguistic features are applied in the draft (Storch, 2013; Nguyen, 2019). Creating critical thinking and metalinguistic sensitivity is also supported by the commenting and suggestion functions of the platform because learners are involved in a feedback conversation that upholds genre conventions (Wang, 2010).

Such automated writing evaluation software, like Grammarly, offers direct feedback on grammar, punctuation, writing style, and vocabulary use for EFL learners who wish to write in a style that meets the linguistic demands of academic writing (Chen & Cheng, 2008). Grammarly will help learners self-monitor and improve their texts based on genre requirements by pointing out mistakes and providing corrections (Bitchener & Ferris, 2012). These tools themselves cannot substitute for human feedback. However, they represent an affordable additional tool that helps one build linguistic accuracy and stylistically appropriate genre competence, which are important elements of genre competence. Studies also show that the inclusion of automated devices in group writing processes encourages learners not only to concentrate on micro-level language features but also on macro-level structural features, leading to more sophisticated and genre-specific final writing.

2.4. Research gaps

Despite the positive results of ICT-supported CEW in EFL settings (Nguyen & Pham, 2025a, b; Pham, 2019), there has been limited research on students' perceptions of using ICT to write various essay types, including cause-and-effect, descriptive, and comparison essays. The majority of works consider CEW as a general practice that is not genre-specific (Hyland, 2007; Storch, 2013). Furthermore, the genre awareness of learners and their capacity to utilize genre-specific features of rhetoric and linguistics have not been studied extensively regarding the effect of ICT tools (Connor, 1996; Rose & Martin, 2012). Studies also do not provide any feedback on how the motivation and engagement of students in different types of essays can differ with the use of ICT (Pham, 2019). Lastly, although automated writing aids like Grammarly can promote linguistic accuracy among students (Bitchener & Ferris, 2012), there is still limited information regarding student perceptions of using automated writing aids in group writing to improve genre competence. Therefore, these raise the need to investigate how students perceive ICT-supported CEW in various essay types by answering the following research question:

What are EFL students' perceptions of ICT-supported CEW in writing different genres of essays?

3. Methodology

3.1. Research design

The study employed a qualitative approach, expanding on students' perceptions of ICT-supported CEW in various types of essays. Qualitative methods are suitable when one wants to understand the experiences, attitudes, and meanings that participants attribute to particular phenomena in great detail (Creswell & Poth, 2018). Semi-structured interviews are selected as the primary data collection tool because they provide the flexibility to explore participants' opinions without altering the structure, consistent with the research questions (Kvale & Brinkmann, 2015). This approach will enable the participants to share their ideas openly, at which point abundant and detailed information on the impact of ICT tools on their group writing experience and genre awareness will be obtained. Additionally, semi-structured interviews enhance deeper insight into the perceptions which include emotional reactions, difficulties, and contextual considerations that influence ICT use. Hence, the interaction among ICT, CEW and genre awareness in an EFL environment could be investigated thoroughly.

3.2. Participants

The sample consisted of ten students majoring in English at a public university established in 1956. The sample consisted of three male and seven female students who voluntarily participated. The sample population had already completed the introductory writing courses, namely Writing 1 and Writing 2, and were taking the Writing 3 classes. The textbook on which this program of teaching these courses is based, is *Great Writing 3 - From Paragraphs to Essays* by the National Geographic, which aims to improve students' abilities to write an essay on a specific topic through systematic training and genre awareness. The intended group of participants will include students at the middle levels of academic writing learning. Hence, they can provide relevant information on their views of ICT-mediated CEW at higher education.

3.3. Data collection instrument

Semi-structured interviews could be used to gain insights regarding the perception of the students on the use of ICT to generate different essay types because they allowed both informative and open-ended discussions (Kvale & Brinkmann, 2015). The interview questions were developed based on the objectives of the research, as they emphasized students' experiences with ICT tools, their perceived advantages and disadvantages, interaction patterns, and attitudes towards the genres. The strategy facilitated the production of detailed and significant analysis in cause-and-effect, descriptive, and comparative essays. Ten interviewees were scheduled at a time convenient via Google Meet. Their interviews were recorded with their voluntary permission for further analysis.

Validity refers to the degree to which the interview questions accurately measure the construct they are designed to assess. Here, the perception of students regarding the use of ICT when composing different genres of essays was examined (Creswell & Poth, 2018). To achieve content validity, interview questions were developed through an in-depth analysis of the literature related to ICT-based CEW and genre awareness. This theoretical background justified the fact that the questions are aimed at addressing all the major aspects of the construct under investigation. Further, content validity was promoted through the review of experts, which means that the questions were checked by language education and educational technology specialists and corrected the existing problems of clarity, relevance, and completeness. The researchers were aided by two other educator-researchers of the same university who have published international studies to examine the interviewing questions. This process supported the identification and revision of ambiguous and irrelevant items, thereby improving the match between the questions and the research objectives. There was also a pilot study which was conducted with a small sample. Outputs of this pilot testing were used to make changes on the phrasing and formatting of the questions and make them more transparent so the participants could comprehend them and meet the intent of responding meaningfully. This played a critical role in determining the face validity and enhancing the validity of the instrument in general.

Reliability is an aspect related to the consistency and stability of the interview questions applied to various participants or events (Patton, 2015). To ensure maximum reliability, a standardized interview protocol was used, so that all participants were asked the same core questions in a similar sequence. This standardization reduces the biases and differences in the procedures of data collection by the interviewers. Moreover, each interview was not only audio-taped but also transcribed word for word, providing a chance to analyze the data thoroughly and accurately. Verbatim transcription minimizes the chances of data loss or misinterpretation, which can occur when only notes are taken, thereby increasing the reliability of the data. To increase the degree of reliability, two researchers independently coded the interview transcripts and subsequently compared the results to reach a consensus as Creswell and Poth (2018) recommended. Such inter-rater agreement is used to ensure that the interpretation of participants' responses is consistent and valid.

3.4. Data analysis

The qualitative data analysis in the present study was based on Creswell's (2013) Data Analysis Spiral Model, which consists of six interrelated subprocesses: data collection, data management, data reading and memoing, coding and classification, data interpretation and representation, and visualization. This cyclical procedure ensures a thorough and methodical analysis of the data. To be more rigorous and efficient in analyzing data, MAXQDA™ Analytics Pro 2020 software was utilized, which helps organize, code, and retrieve large qualitative datasets (Kuckartz & Rädiker, 2019).

The data analysis was based on several major themes that represent important dimensions of the students' experience, and their sub-themes represented the perceptions, which included descriptive, cause-and-effect, and comparison essay genres. Firstly, "Giving and providing comments in CEW" involved sub-themes that involve experiences of learners with peer reviewing, such as the faith in peers' comments, their confidence in providing feedback, being more accurate, receiving specific and instant feedback, facilitating revision work, supporting feedback provision, enabling brainstorming and idea generation, giving more access to learning material, and being motivated. Moreover, the second theme is "Collaboration in CEW with ICT," which entailed perceptions regarding collaborative writing experiences in the minds of learners. ICT might assist in achieving this using sub-themes such as better writing performance, greater engagement, and better awareness of strengths and weaknesses. The last theme, "Expectations", had one sub-theme, continuity with ICT, which pointed to the demand of students to continue using technology-based CEW when future genre-based writing assignments are to be done. Combined these themes depicted the influence of ICT tools on feedback practices, collaborative behavior, and the perpetuation of expectations among students in CEW across different essay genres.

4. Results

The perceptions of students regarding the ICT-supported collaborative writing were significantly different in the three types of essays (Figure 1), cause-effect, descriptive, and comparison essays, because of the different cognitive and collaborative requirements of the different writing genres.

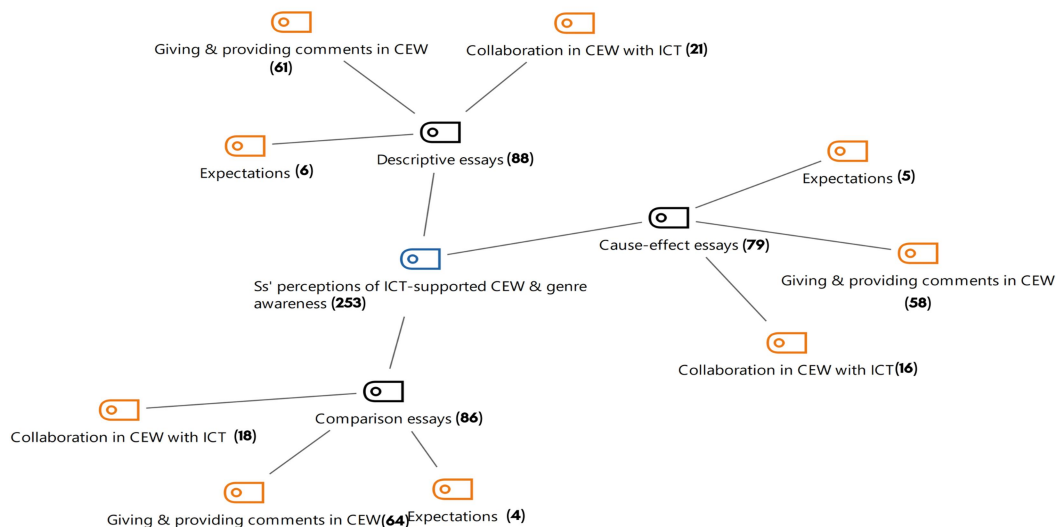


Figure 1. Students' perceptions of ICT-supported collaborative writing in different genres of essays

In most cases, descriptive essays produced the best response in terms of student engagement and cooperation because ICT tools provided a vivid sharing of ideas and detailed peer feedback, which is important in ideal sensory description. Cause-and-effect essays, in turn, were closely linked to the ICT's contribution to the logical organization of ideas, and students found it easy to utilize brainstorming capabilities and the timely feedback to interpret causality. Comparison essays were unique in that they fostered confidence in providing and receiving peer feedback, and as a result, enhanced the effectiveness of ICT in providing a critical assessment and thorough discussion of similarities and differences.

4.1. Students' perceptions of ICT-supported collaborative writing and cause-effect essays

The overall assumption of the students was optimistic, as they mentioned that ICT-based collaborative writing in cause-effect essays has several advantages concerning collaboration and feedback. In terms of collaboration in CEW with ICT, 16 cases of positive responses were observed, in particular, students reported being more engaged and more aware of their strengths and weaknesses. A few comments noted were *"I realized my weakness when I got a low score [...], and [...] I kept track of my progress."* (Ss.1, Ss.8) Although some mentioned better performance in general writing in a lower number, the more engaging aspect indicates that ICT tools empowered retention of their interest and active involvement in the writing process.

Most noticeable was the theme of giving and offering comments during collaborative cause-and-effect writing. The students also appreciated the opportunity to participate in brainstorming and idea generation, which is crucial for structuring unambiguous causal relationships in their essays. Another point they made was the need for instant and specific feedback, which enabled them to detect and correct mistakes promptly; thus, enhancing the quality of their writing. Additionally, the students cited confidence in providing feedback and trust in their peers' comments to demonstrate that ICT tools have created a conducive environment for engaging in constructive criticism. Other descriptions included that it is easier to do revision work, easier to motivate, and easier to obtain learning materials. However, these were not mentioned as frequently. Data have also shown the learners may find it hard to concentrate due to screen fatigue in long time. For instance, Ss.4 explained:

"[...] I found cause-effect essays hard to organize on the computer after long time. I became tired and didn't feel like continuing, and [...] I lost interest sometimes."

Predictions of further ICT usage in future writing exercises also existed, indicating that students wanted to see more integration of technology. Nevertheless, several students reported:

"... sometimes I want a balance between using ICT and traditional methods, so I don't get tired of staring at screens..." (Ss.5)

“... I expect more training on how to use ICT effectively because sometimes I don’t know all the features...” (Ss.8)

Reasonably, they additionally emphasized the role of traditional teaching approach because they needed face-to-face space for mutual interaction or intensive technology training instead of communicating via ICT tools all the time.

4.2. Students’ perceptions of ICT-supported collaborative writing and descriptive essays

The students’ perception of using ICT to aid collaborative writing in descriptive essays was highly positive, with a significant focus on engagement and peer commenting. Regarding collaboration, they most emphasized the need for more engagement and a better understanding of personal strengths and weaknesses. Some students emphasized their fear of acknowledging weaknesses, so embarrassment could prevent them from honestly recognizing areas they needed to improve. A participant (Ss.8) said “[...] I don’t like to admit my weaknesses because it makes me feel bad [...]” and Ss. 4 and Ss.5 respectively added: “[...] sometimes I ignore my mistakes because it’s embarrassing to face them [...]”, and “[...] it’s easy to get discouraged when I only see what I can’t do [...]”. Although only a few students mentioned direct improvements in writing performance, the increased level of engagement suggests that the ICT tools successfully encouraged their students to become active participants and put effort into the process of descriptive writing.

The theme of giving and providing comments was the most noticeable among students. The students also received high ratings in the remarks of their fellow students. They demonstrated confidence in their ability to provide feedback, indicating that ICT platforms created an encouraging and interactive learning environment. Increasing accuracy was also most commonly mentioned such as “[...] I replace ‘beautiful’ with more precise words like ‘serene’ or ‘vibrant’, which made my description more vivid [...]” (Ss.2), which demonstrates that peer-reviewing assisted students in making corrections related to language and content details of a vivid and accurate descriptions. Other important advantages included the facilitation of brainstorming and idea generation, which is necessary for developing rich sensorial imagery and detailed descriptions. Ss.6 highlighted that:

“For descriptive essays, I use Padlet to map out senses and details about the place or object [...]”

Instant and specific feedback was also highlighted. For example, “[...] fix errors immediately, revise right away” and “[...] if a peer notices a missing sensory detail in a descriptive essay, I can add it before continuing to the next paragraph” were respectively reported by Ss. 3 and Ss. 7 among other students. It was also voiced by other students that the tools helped them to make timely revisions and increase motivation. Learning materials and facilitation of feedback provision were reported at low level.

Lastly, the perceived continuity of ICT in writing tasks was moderate as it was not frequently mentioned by the students. However, it still indicates that students would like to continue using ICT in their future work. Furthermore, they expected to get more training on using ICT platform and tools.

4.3. *Students' perceptions of ICT-supported collaborative writing and comparison essays*

Students indicated that they have positive views about the application of ICT in facilitating CEW using comparison essays, in relation to peer feedback and interaction. Regarding the area of collaboration, the students indicated that they were more engaged and more aware of their own strengths and weaknesses. Although the number of students who stated that they directly improved their writing performance was very low, the active engagement provided by ICT supports the idea that students were more engaged and motivated during the writing process. Ss.1 shared that, *"I feel more involved because I can see everyone's work in real time. It feels like teamwork"*. In addition, Ss.5 added: *"I can interact with peers, leave comments, and immediately see changes in their work."*

The most prominent theme was related to giving and offering comments reflecting the appreciation of the feedback process among ICT-enabled students. Learners demonstrated high levels of trust in their peers' comments. Some interviewees commented with consistent sharing such as *"useful, reflective, helpful but in different way, help me see my mistakes more clearly"*. In addition, they gained the confidence to provide feedback themselves, which suggests the presence of an environment that fosters positive peer feedback. Ss.3, for example, reported:

"Using ICT makes me more confident. On Google Docs or Padlet, I can highlight sentences and suggest changes without worrying about making mistakes [...]. In a comparison essay, I could suggest rephrasing sentences for clarity, and my peer could immediately see it."

Additionally, students reported improvements in writing accuracy, which were facilitated by access to specific comments and instant, detailed feedback. Enabling revision work and feedback provision also played a significant role in terms of the constant development of their essays. Brainstorming and idea generation were noted as one of the main benefits, as they assist students in creating more coherent and definite comparisons. Others were improved motivation and convenience in accessing learning materials, which facilitated the general writing experience. The low frequency among those dimensions might be explained by several participants' challenges in obtaining the vast quantity of online materials for comparison genre. Ss.2 complained about his overwhelming feelings since it was difficult to select relevant and reliable sources for comparison essays:

"[...] sometimes I got lost because there are too many websites and examples online. It's hard to know which ones are really useful for comparison essays."

The anticipation of ICT usage in future writing activities was not high, as indicated by just a few participants. Some interviewees confirmed their expectation of implementing ICT in writing comparison essays with peers to promote critical thinking.

5. Discussion

The favorable attitudes towards ICT-aided CEW in most genres, particularly the increased interaction with peers and the feedback provided by the instructor in descriptive essays, are solid evidence of the socio-constructivist view of learning as mediated through social interaction within the ZPD (Vygotsky, 1978). This aligns with previous studies that focus on the idea that technological tools, such as Google Docs, support real-time scaffolding and interaction among students (Pham, 2019; Storch, 2013). The importance of instant and specific feedback among students is reminiscent of the effect of ICT, which supports iterative revision of texts and enhances metalinguistic awareness among students (Wang, 2014)

Besides, the results related to cause-effect essays indicated the impact of ICT on logical structuring and concept generation, which is also consistent with the process-genre approach, which united recursive writing phases with genre awareness (Badger & White, 2000; Rose & Martin, 2012). The fact that students were able to use brainstorming features and send feedback in a timely manner to clarify causal relationships assists in developing the concept that ICT tools are beneficial in scaffolding genre-specific writing (Nguyen, 2019). Nevertheless, the fatigue and the craving for balance between ICT and traditional approaches described indicate the concerns of technological literacy and continued engagement, which have already been outlined by Pham (2019).

Furthermore, the increased confidence in offering and receiving peer feedback, which was associated with the socio-cultural theory of culturally responsive learning and the bargaining of linguistic resources among various learners, is also consistent in the case of comparison essays (Lantolf & Thorne, 2006; Swain & Lapkin, 2001). The fact that the students were able to critique similarities and differences by using ICT to enhance collaboration led Hyland (2007) to claim that genre awareness is a means of improving rhetorical expertise. However, the sourcing problems associated with the availability of the relevant materials demonstrated the current issues reported in the literature about the successful implementation of ICT and learner agency (Rahimi & Yadollahi, 2011).

Altogether, the study's findings validate past research, which has shown that ICT tools, including LMS, Padlet, and Google Docs, can promote collaborative writing, as well as the development of genre competence and critical thinking (Al-Kadi, 2018; Storch, 2013; Valtonen, 2011). The fact that students expressed their desire for further training and the use of ICT in a

balanced manner also highlights the importance of a responsible design of instructions to maximize the benefits of technology-supported CEW (Nguyen, 2019; Pham, 2019).

However, the study has multiple limitations in spite of the learned valuable information. To begin with, the sample was not very large as it existed of only ten English majors in one public university. This restricts the applicability of the findings to the bigger EFL cohorts since students in different institutions or with varying levels of prowess might hold diverse perceptions towards ICT-assisted CEW. Second, although the qualitative method offers rich and detailed information through semi-structured interviews, it can also introduce subjectivity in the interpretation of the data. Although protocols were used to standardize the interviews and assess inter-rater agreement, the results still rely on the self-reported experiences of the participants, which may be influenced by social desirability or recall bias. Third, the research concentrated on three particular types of essays: descriptive, cause-and-effect, and comparison. Although these types are representative, they do not encompass the complete range of academic essay types to which EFL students are exposed. Therefore, the extent to which the research can be applied to other genres is unclear. Finally, the study did not focus on observing students' perceptions but did not triangulate them with actual observations of shared writing work or achievement results. This restricts the possibility of evaluating the full effect of ICT tools on the actual quality of writing and group dynamics.

6. Conclusion

The study indicates that to EFL learners learning writing different genres in English, ICT-supported CEW improves interaction, feedback, and genre awareness among EFL students. Students had a positive attitude towards using tools like Google Docs, Padlet, and LMS to support the writing of descriptive, cause-and-effect, and comparison essays. The level of engagement and effectiveness was found to differ according to the type of essay. The results demonstrated how ICT played a crucial role in facilitating collaborative learning and enhancing genre-specific writing skills in EFL settings. The use of technological tools must be incorporated appropriately to suit the nature of each essay genre and the level of proficiency of the learners, in order to achieve the most outstanding results in instruction. It has been advised that educators should provide students with extensive training on the successful use of ICT tools as a way of alleviating challenges and fostering confidence in group writing activities. Teachers should also create a balance between the conventional way of teaching and using technology so that they do not create digital fatigue. The authors should use larger and more diverse samples, and discuss a wider range of writing types in the future, as this approach is necessary to obtain a more comprehensive picture of the influence of ICT as a factor on group writing.

REFERENCES

1. Al-Kadi, A. (2018). A review of technology integration in ELT: From CALL to MALL. *Language Teaching and Educational Research*, 1(1), 1-12.
2. Almusharraf, N. M., & Bailey, D. (2021). Online engagement during COVID-19: Role of agency on collaborative learning orientation and learning expectations. *Journal of Computer Assisted Learning*, 37(5), 1285–1295. <https://doi.org/10.1111/jcal.12569>
3. Badger, R., & White, G. (2000). A process genre approach to teaching writing. *ELT Journal*, 54(2), 153-160. <https://doi.org/10.1093/elt/54.2.153>
4. Bax, S. (2002). *CALL – Past, present and future*. Unpublished Master thesis. Canterbury Christ Church University College, United Kingdom.
5. Bitchener, J., & Ferris, D. (2012). *Written corrective feedback in second language acquisition and writing*. New York: Routledge.
6. Chen, E., & Cheng, E. (2008). Beyond the design of automated writing evaluation: pedagogical practices and perceived learning effectiveness in EFL writing Classes. *Language Learning & Technology*, 12, 94-112.
7. Chen, C. (2017). Science mapping: A systematic review of the literature. *Journal of Data and Information Science*, 2, 1-40. <https://doi.org/10.1515/jdis-2017-0006>
8. Connor, U. (1996). Contrastive rhetoric: Writing in professional settings. *Multilingua*, 15, 3.
9. Coffin, C., Curry, M. J., Hewings, A., Lillis, T. M., & Swann, J. (2003). *Teaching academic writing*. Routledge: Taylor & Francis group.
10. Creswell, J.W., & Poth, C.N. (2018). *Qualitative inquiry and research design choosing among five approaches*. 4th Edition, SAGE Publications, Inc., Thousand Oaks.
11. Creswell, J.W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th edition). SAGE Publications, Inc
12. Dillenbourg, P., et al. (1996). The evolution of research on collaborative learning. In E. Spada & P. Reiman (Eds.), *Learning in humans and machine: Towards an interdisciplinary learning science* (pp. 189-211). Oxford: Elsevier.

13. Gokhale, A. A. (1995). Collaborative learning enhances critical thinking. *Journal of Technology Education*, 7, 22-30.
14. Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. *English Language Series*. London: Longman.
15. Hyland, K. (2003). Genre-based pedagogies: A social response to process. *Journal of Second Language Writing*, 12(1), 17-29. [http://dx.doi.org/10.1016/S1060-3743\(02\)00124-8](http://dx.doi.org/10.1016/S1060-3743(02)00124-8)
16. Hyland, K. (2007). Genre pedagogy: Language, literacy and L2 writing instruction. *Journal of Second Language Writing*, 16(3), 148-164. <http://dx.doi.org/10.1016/j.jslw.2007.07.005>
17. Kuckartz, U., & Rädiker, S. (2019). *Analyzing qualitative data with MAXQDA*. Springer Nature.
18. Kvale, S., & Brinkmann, S. (2015). *Interviews: Learning the craft of qualitative research interviewing* (3rd edition). CA: Sage Publications
19. Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford: Oxford University Press
20. Leki, I. (2007). *Undergraduates in a second language: Challenges and complexities of academic literacy development*. Lawrence Erlbaum Associates.
21. Nguyen, T. T. L. (2019). *Using ICT to foster collaborative writing for EFL university students in Vietnam*. Unpublished doctoral thesis at Edith Cowan University.
22. Nguyen, T. T. H., & Pham, T. H. N. (2025a). Enhancing students' performance on cause-effect essays through ICT-supported collaborative writing. *International Journal of TESOL Studies*, 250904, 1-23. <https://doi.org/10.58304/ijts.250904>
23. Nguyen, T. T. H., & Pham, T. H. N. (2025b). The impact of ICT-supported collaborative writing on Vietnamese EFL students' descriptive essay performance: a quasi-experimental study. *Computer Assisted Language Learning*, 1-24. <https://doi.org/10.1080/09588221.2025.2599155>
24. Patton, M. Q. (2015). *Qualitative evaluation and research methods*. Thousand Oaks, CA: Sage.
25. Pham, Q. N. (2019). *EFL student collaborative writing in Google Docs: A multiple case study*. Unpublished Doctoral dissertation. University of South Florida.

26. Pham, T. H. N., & Nguyen, T. T. H. (2025). EFL learners' metaphorical perceptions of peer feedback in ICT-mediated collaborative writing. *Arab World English Journal*, 11, 81-95. <https://dx.doi.org/10.24093/awej/call11.5>
27. Rahimi, M., & Yadollahi, S. (2011). ICT use in EFL classes: A focus on EFL teachers' characteristics. *World Journal of English Language*, 1(2), 17-29. doi:10.5430/wjel.v1n2p17
28. Raimes, A. (1983). *Techniques in teaching writing*. New York: Oxford University Press.
29. Rose, D., & Martin, J. (2012). *Learning to write, reading to learn: Genre knowledge and pedagogy of the Sydney School*. Equinox Publishing.
30. Stockwell, G., & Hubbard, P. (2013). *Some emerging principles for mobile-assisted language learning*. Monterey, CA: The International Research Foundation for English Language Education.
31. Storch, N. (2013). *Collaborative writing in L2 classrooms*. Bristol, UK: Multilingual Matters.
32. Sun, Y., & Gao, F. (2020). An investigation of the influence of intrinsic motivation on students' intention to use mobile devices in language learning. *Educational Technology Research and Development*, 68(3), 1181-1198.
33. Swain, M., & Lapkin, S. (2001). Focus on form through collaborative dialogue: Exploring task effects. In *Researching pedagogic tasks: Second language learning, teaching, and testing*, pp. 99-118.
34. Swales, J. M., & Feak, C. B. (2004). *Academic writing for graduate students: Essential tasks and skills* (2nd ed.). Ann Arbor, MI: The University of Michigan Press.
35. Vantonen, T. (2011). *An insight into collaborative learning with ICT: Teachers' and students' perspectives*. Dissertations in Education, Humanities, and Theology, 12. Publications of the University of Eastern Finland.
36. Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
37. Wang, Y. C. (2014). Using wikis to facilitate interaction and collaboration among EFL learners: A social constructivist approach to language teaching. *System*, 42, 383-390.

38. Wang, M. J. (2010). Online collaboration and offline interaction between students using asynchronous tools in blended learning. *Australian Journal of Educational Technology*, 26(6), 830-846. <https://doi.org/10.14742/ajet.1045>.
39. Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching*, 31(2), 57-71.