CHAPTER 8: ENHANCING COLLABORATIVE WRITING OF GRADUATE STUDENTS THROUGH WHATSAPP AND GOOGLE DOCS: AN ACADEMIC WRITING COURSE

Nihan ERDEMİR

Derya COŞKUN

İdil SAYIN

1. Introduction

The proliferation of mobile technologies available today has revolutionized teaching and learning practices in language classes. These technologies afford convenient and beneficial platforms for developing language skills, particularly writing skills, by providing collaborative, interactive, and ubiquitous environments. Through various accessible, synchronous, and asynchronous communication channels, mobile technologies can create more inclusive and flexible writing practices and accommodate diverse schedules and disciplinary backgrounds (Abrams, 2016; Akman Yeşilel, 2022; Castelló et al., 2023; Haythornthwaite, 2005). Accordingly, these technologies not only enhance the accessibility of writing tasks but also promote more collaborative and interactive writing practices. As a result of the increasing use and diversity of mobile technologies, effective pedagogical practices such as collaborative writing (CW) have gained recognition.

Mobile technologies noticeably improve CW, which is a socially, cognitively, emotionally, and academically valued practice and is frequently utilized in language classrooms (Elola & Oskoz, 2010; Fernández Dobao, 2012; Storch, 2011; Wigglesworth & Storch, 2009). Recent studies highlight the effectiveness of mobile technologies, like social media platforms, wikis, and cloud-based tools, in enhancing CW. For instance, tools such as Google Docs and Facebook Messenger provide freedom in terms of time and place, facilitate real-time collaboration, allow multiple users to edit at the same time, share feedback, and build on each other's ideas synchronously or asynchronously (Alonzo & Oo, 2023; Alsahil, 2024; Strobl, 2014).

Moreover, mobile technologies positively affect writing motivation and the quality of writing outcomes in CW. Studies by Alwahoub et al. (2020), Jiang and Eslami (2021), and Tay and Cheung (2019) indicate that the use of mobile technologies for CW enhances students' motivation to engage in writing tasks and improve writing outcomes. Similarly, studies also

displayed that these technologies support the development of writing skills by providing an environment that fosters continuous interaction and feedback (Aldawi & Maher, 2023; Alonzo & Oo, 2023; Bikowski & Vithanage, 2016; Chen, 2019; Ebadijalal & Moradkhani, 2023; Strobl, 2014; Yanguas, 2020). However, despite the clear advantages, only a few studies have explored the affordances of specific mobile technologies for developing writing skills in CW (Alsahil, 2024), particularly in academic publishing.

Furthermore, integrating mobile technologies supports synchronous and asynchronous editing and idea accumulation and accommodates diverse schedules and disciplinary backgrounds. Thus, it addresses the challenges multiple writers might face in shared writing (Castelló et al., 2023; Chen, 2019). As mobile technologies continue to advance, their role in CW is expected to grow by providing new opportunities for enhancing collaboration and improving the written outcome in both educational and professional contexts (Chen, 2019; Ebadijalal & Moradkhani, 2023).

Considering this, the current study aims to explore the benefits and challenges associated with using mobile technology, specifically WhatsApp and Google Docs, among graduate students for academic writing in CW. Additionally, it seeks to determine how these tools enhance CW. Moreover, the study hopes to contribute to a deeper understanding of the potential of mobile technologies for improving writing skills and academic outcomes in language learning contexts by providing insights into how these mobile technologies facilitate CW among graduate students for the purpose of academic writing.

2. Mobile Technology

Integrating mobile technologies into educational settings has changed how learning takes place. Mobile technologies have become a valuable tool, especially in language classrooms, by offering interactive and authentic content and collaborative practices (Burston, 2014; Kukulska-Hulme & Viberg, 2018; Viberg & Grönlund, 2013). This has led to the development of Mobile-Assisted Language Learning (MALL), a subfield of mobile learning that focuses on utilizing mobile technologies to support language acquisition (Viberg & Grönlund, 2013). MALL specifically focuses on the unique advantages of mobile technologies in language learning environments (Thomas et al., 2012). These technologies offer ubiquitous access to learning resources and personalized learning experiences (Kukulska-Hulme & Viberg, 2018; Sung et al., 2016), facilitate a more learner-centered approach, where students can take control of their learning (Stockwell & Hubbard, 2013), and support informal learning by

providing learners with authentic content (Çakmak, 2019). Recent studies have highlighted the efficacy of MALL in improving language skills (Duman et al., 2014). Additionally, many studies have explored the advantages and disadvantages of various mobile technologies in language learning.

For instance, WhatsApp has been investigated as a tool for language learning due to its widespread use and ability to support synchronous and asynchronous communication. Many studies reported positive effects of WhatsApp on listening skills (Fauzi & Angkasawati, 2019), speaking skills (Albogami & Algethami, 2022; Andújar-Vaca & Cruz-Martínez, 2017), reading skills (Tümen Akyıldız & Çelik, 2022), and writing skills (Andujar, 2016). Studies showed that WhatsApp provided a place for negotiation of meaning, authentic interaction, and immediate feedback (Andújar-Vaca & Cruz-Martínez, 2017; Naghdipour & Manca, 2022). Kartal (2019) also noted that WhatsApp reduces the affective filter and language anxiety, making learners more comfortable and willing to participate.

Google Docs is another mobile technology that has been investigated for its advantages for language learning. Google Docs provides an environment for learning opportunities, especially for writing skills, with its ability for synchronous and asynchronous collaboration (Bikowski & Vithanage, 2016). This allows learners to work together regardless of time and space (Alsahil, 2024; Canham, 2018; Suwantarathip & Wichadee, 2014). Moreover, features such as comments and suggestions enable teachers and peers to provide immediate feedback for refining the writing (Alsahil, 2024; Yim et al., 2016). Several studies highlighted Google Docs' effectiveness in developing writing skills. For example, studies by Bikowski and Vithanage (2016), Nergiz Kartepe and Atmaca (2024), and Suwantarathip and Wichadee (2014) showed that EFL learners using Google Docs significantly improved in content, organization, and grammar. Additionally, Alharbi (2020) notes that the platform's collaborative features facilitate peer feedback, which leads to overall writing improvement. However, a balanced approach to error correction and skill development by combining these mobile technology tools with traditional teacher feedback yields the best outcomes (Nergiz Kartepe & Atmaca, 2024).

3. Collaborative Writing

Collaborative writing is a complex and dynamic process that is difficult to define (Lowry et al., 2004). The definition of CW can vary depending on its desired purpose in its realization, such as social interactions (Gimenez & Thondhlana, 2012), final products (Rice & Huguley, 1994), cognitive processes (Galegher & Kraut, 1994), and many other aspects. Lowry

et al. (2004) proposed a definition in an attempt to cover significant aspects, and they defined CW as "…an iterative and social process that involves a team focused on a common objective that negotiates, coordinates, and communicates during the creation of a common document" (p.72). Being a complex process, CW necessitates utilizing diverse strategies and steps (Galegher & Kraut, 1994; Lowry et al., 2004). Generally, the starting and ending points are predictable; however, steps in between vary depending on the purpose and often are iterative (Lowry et al., 2004).

As a social process, CW is informed mainly by Sociocultural Theory (SCT) (Li, 2018). SCT suggests that human thinking is shaped by cultural tools, activities, and concepts (Vygotsky, 1978; 1987). Within this perspective, language is a mediator for learning in social interaction and is central to the CW process. In SCT, the concept of the zone of proximal development (ZPD) is particularly relevant. ZPD represents the gap between what a learner can do alone and what they can achieve with guidance or collaboration with more skilled peers (Vygotsky, 1978). This is believed to encourage learners to engage in interactive activities, like working with peers, to improve their targeted skills. CW, where individuals co-construct texts with others, is an example of such interactive activities. This collaborative process allows individuals to develop a pooling of knowledge about language (Donato, 1994). This theoretical framework also supports the idea that CW practices can foster language learning and improve the written outcome by providing opportunities for learners to engage in meaningful interaction, share knowledge, and co-construct written texts (Li, 2018).

CW offers several social, cognitive, affective, and academic benefits. Socially, CW strengthens interpersonal relationships (Rice & Huguley, 1994) and provides networking opportunities (Chen & Yu, 2019). Cognitively, it supports learning (Trimbur, 1985; Yang, 2017), enables tackling more complex questions, creates a pool of knowledge, fosters language proficiency (Jiang & Eslami, 2022), and helps maximize efficiency from limited resources (Berndt, 2011). Affectively, it fosters positive emotions (Chen & Yu, 2019) and motivates individuals to be critical (Chen & Zhang, 2023; Kırmızı, 2024). Academically, it enhances academic productivity (Alonzo & Oo, 2023; Du et al., 2023), increases citations and visibility (Wang et al., 2024), creates a fertile environment for generating new ideas (LeFevre, 1987), and produces a higher-quality final product (Ede & Lunsford, 1990; Elabdali, 2021; Fernández Dobao, 2012).

There are also risks and challenges associated with CW. Some of the challenges are determining authorship (Berndt, 2011) and defining the responsibilities of members (Rhodes & Lin, 2019).

Potential risks include the negative impact on individual autonomy and the possibility that some members may fail to fulfill their responsibilities (Berndt, 2011). Other risks are longer production times, personal conflicts (Colen & Petelin, 2004), conflicts on personal writing styles (Kırmızı, 2024), and heavy dependence on individuals' previous affective experiences (Chen et al., 2023). These experiences, which are shaped by beliefs about the task, sense of responsibility, and group dynamics (Alsahil, 2024), can have a long-term effect on both the process and the final product. Thus, careful planning and execution are crucial for minimizing these risks and ensuring a successful CW process.

As CW continues to evolve, integrating mobile technologies in the process has become a must. Mobile technologies enable participants to contribute synchronously or asynchronously. These technologies offer several benefits that are often unattainable through traditional, non-digital means. For instance, mobile technologies foster a more inclusive writing environment by providing diverse and ubiquitous communication channels that allow participants to connect and collaborate regardless of their location or time zone (Abrams, 2016; Haythornthwaite, 2005; Zeybek et al., 2023). These technologies also enable the creation of shared documents in real-time and continuous updates and instant feedback, which is known to be crucial for maintaining the momentum of collaborative projects (Strobl, 2014).

In summary, mobile technologies significantly contribute to CW by offering new opportunities for collaboration, feedback, and real-time document sharing. Technologies like WhatsApp and Google Docs create flexible and interactive environments that enhance CW, especially in language learning. Although mobile technologies such as WhatsApp and Google Docs are increasingly used in educational contexts, more comprehensive studies are needed to examine their effects, benefits, and challenges for CW in academic writing. This study addresses this gap and hopes to lead to more effective writing practices. The following research questions led the study:

1. What are the benefits and challenges of using mobile technologies, *WhatsApp* and *Google Docs*, among graduate students?

2. To what extent do mobile technologies, *WhatsApp* and *Google Docs*, improve collaborative writing in an academic writing course?

4. A Sample Evaluation of Academic Writing Course

The purpose of this study is to explore how graduate students consider using mobile technology, specifically WhatsApp and Google Docs to enhance collaborative writing in an academic writing course at a graduate level. The study adopted the qualitative research design since it enables researchers to thoroughly examine the viewpoints and experiences of the participants, which is crucial in a novel and mostly uncharted field of study (Merriam & Tisdell, 2015). Focus group interviews (FGIs) were determined as the data collection method.

The study was conducted on a Turkish public university's "Academic Writing Course" for graduate students, delivered as a 14-week elective 6-ECTS (European Credit Transfer System) course in the English Language Teaching (ELT) Department in the 2023-2024 Academic Year. This course seeks to help students recognize academic writing conventions through exposure to and examination, practice, and peer and teacher feedback. The first half of the course focuses on graduate-level texts and analysis of academic papers in numerous genres while the second half of the course comprises mainly workshop activities with students designing, developing, and writing each subsection of the research or review paper they have chosen. Students comply with the assignments each week with their mentors' supervision and peers' observation on Google Docs whose links have been shared with all the classmates. In addition, WhatsApp groups created by the researchers were used to enhance interaction and collaborative writing.

The study participants were eight graduate students enrolled in the course. Six of the participants were female, while two of them were male. Since two males did not follow the schedule and task completion of procedural writing, they were excluded from the study. The other participants (n=6) collaborated in groups during the study. The demographic information of the graduate students is seen in Table 1.

Table 1. Demographic information of the participants

Participants	Teaching Experience	University Graduated
S1	2 years	Süleyman Demirel University
S2	7 years	Boğaziçi University
S3	8 years	Anadolu University
S4	3 years	Osmangazi University
S5	-	Ufuk University
S6	-	Uludağ University

They graduated from mostly state universities (Anadolu University, Boğaziçi University, Osmangazi University, Süleyman Demirel University, and Uludağ University) and one private university (Ufuk University). Their ages ranged from 22 to 33 years of age, and their professional experience ranged from 0 to 8 years in English language teaching, which comprises inexperienced and experienced teachers.

As a data collection method, focus group interviews were chosen for an in-depth analysis of students' viewpoints and experiences of collaborative writing through WhatsApp and Google Docs among mobile technologies. According to Krueger (2014), FGIs are structured group discussions that are centred on a single topic and are particularly useful for "exploring people's knowledge and experiences and can be used to examine not only what people think, but how they think and why they think that way" (Kitzinger, 1995, p. 299). Other reasons for choosing FGIs are related to their characteristics in nature including synergism for allowing wider data through group discussion in a short time, and, snowballing for initiating interaction through one participant and encouraging other group members (Vaughn, 2004). First, the researchers drafted the questions in English (see Appendix A) and then obtained expert opinions from two researchers in the field. Following that, the English questions were translated into Turkish (see Appendix B). FGI questions were revised, the Turkish version was utilized for data collection, and the translated version's language was reviewed by a linguist and a translator.

The first half of the course focused on academic writing conventions and analysis of academic papers in various genres through exercises. The second half of the course comprised hands-on activities after class, in which students were expected to write each subsection of the research or review paper they chose weekly on Google Docs. Table 2 outlines the week-by-week general course structure.

Table 2. Weekly course syllabus

Week	Topic	In-class	After-class
1	Course introduction	Lecture/Discussion	Determine your research topic
2	Understanding EAP, discourse community, genre analysis, and rhetorical analysis	Lecture/Discussion	Write your research questions
3	An approach to the conventions of academic writing	Lecture/Discussion	Conduct a detailed literature review
4	Writing in academic style	Lecture/Discussion	Design your research & Apply for Ethical Committee
5	Types of journal publication	Lecture/Discussion	Conduct your research & Collect data
6	Referencing, citing, and quoting	Lecture/Discussion	Conduct your research & Collect data
7	Analyzing abstract	Lecture/Discussion	Write an abstract section
8	Analyzing introduction sections	Lecture/Discussion	Write an introduction section
9	Analyzing literature reviews	Lecture/Discussion	Write a literature review section
10	Analyzing methods sections	Lecture/Discussion	Write a methods section
11	Analyzing results sections	Lecture/Discussion	Write a results section
12	Analyzing discussion sections	Lecture/Discussion	Write a discussion section
13	Analyzing conclusion sections	Lecture/Discussion	Write a conclusion section
14	Revising paper	Lecture/Discussion	Revise the paper

Four students chose to write a systematic review article and two students to write a research paper. Announcements and reminders were sent on time, and all the students were given access to Google Docs through the WhatsApp group. In particular, students received frequent reminders via WhatsApp to monitor their peers' progress in Google Docs and were urged to ask mentors and peers questions at any time. To help other participants benefit from one student's experience, mentors published a summary of their Google Docs feedback after each student finished writing a section of their paper.

The focus group interview was first recorded. The *Transkriptor* software program was then used to transcribe this interview. Thematic text analysis was utilized by the researchers to examine the qualitative information gathered from the focus group interview. According to Creswell (2016), this method "involves identifying meaningful segments of text that have meaning and assigning codes to those segments" (p. 365). Consequently, MAXQDA 24.0, a qualitative software program, was used to code the transcriptions as is seen in Figure 1.

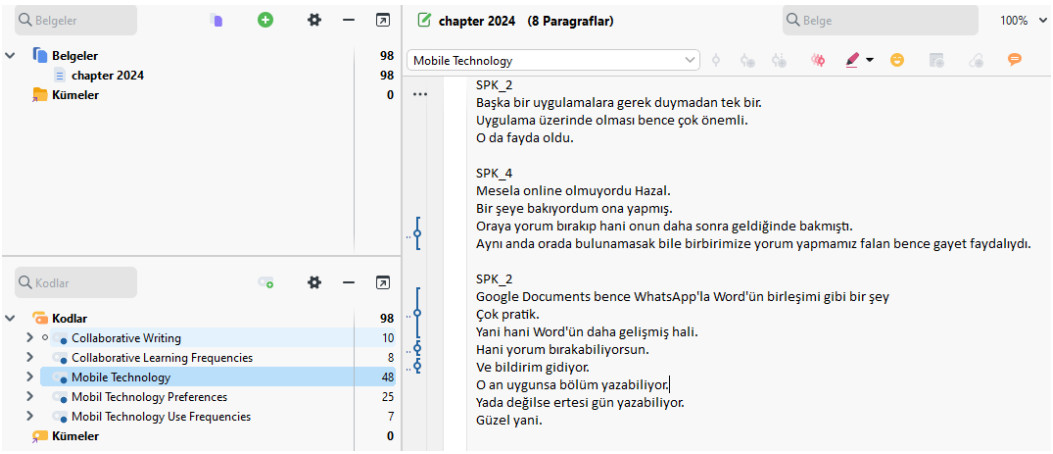

Figure 1. A screenshot of the MAXQDA analysis

Two steps were taken by the researchers to guarantee the theme analysis' dependability. First, two raters established themes based on the study questions and separately coded the data under these topics. Second, the two researchers examined and resolved any discrepancies in interpretation to complete their distinct code lists. Participants' responses were led to 98 codes grouped under two main themes (Table 3): collaborative writing and mobile technology. The interrater reliability level between the raters computed by MAXQDA was found .85 and indicated a high level of agreement and degree of reliability.

Table 3. Themes, sub-themes, and codes

Themes	Sub-themes	Codes
collaborative writing	strengths of collaborative writing	being effective for motivation being useful providing different perspectives
	weaknesses of collaborative writing	finding challenging not preferring group work unequal distribution of workload
mobile technology	WhatsApp	benefits of WhatsApp challenges of WhatsApp
	Google Docs	benefits of Google Docs challenges of Google Docs

On September 27, 2024, Süleyman Demirel University sent the Ethics Committee Approval numbered 152/18. The data collection tool used in this study that involved human subjects complied with the institutional research committee's ethical guidelines. Participants were informed about the purpose of the study, the procedures involved, the confidentiality and anonymity of their answers, and their rights, including the ability to refuse any questions, which were outlined in a permission form.

4. Key results related to mobile technology and collaborative writing

The findings of the present study were grouped under two main themes in line with the research questions. It was found that graduate students used mobile technologies frequently and remarked that they have more benefits than challenges. Further, the informants had limited and somewhat negative experiences of collaborative writing. However, the participants' ideas changed with the collaborative writing course, and they focused on both the strengths and weaknesses of collaborative writing practices.

4.1. Usage of mobile technology among postgraduate students

To begin with mobile technology use, graduate students' preferences and frequencies of mobile technology use were presented below. Then, participants' perceptions regarding the benefits and challenges of particular mobile technologies, *WhatsApp* and *Google Docs*, were discussed respectively.

4.1.1. Mobile technology preferences and frequencies of graduate students

The first research question addressed graduate students' mobile technology preferences in relation to the benefits and challenges of using mobile technologies, *WhatsApp* and *Google Docs*. Accordingly, graduate students' preferences for the use of mobile technologies were shown in Figure 2 below.

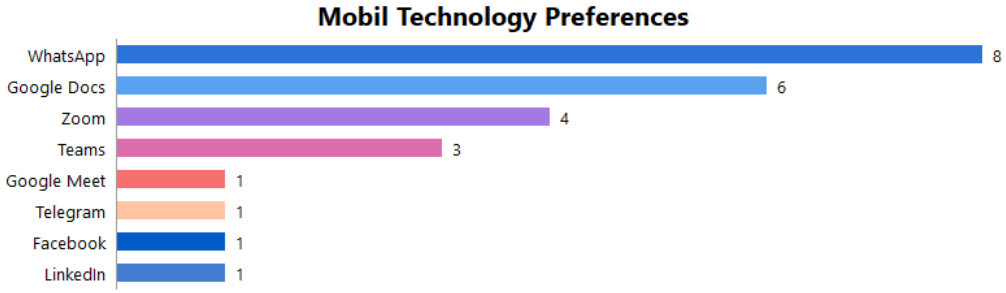

Figure 2. Mobile technology preferences of graduate students

As illustrated in the figure above, graduate students preferred to use *WhatsApp* (*f*=8) most frequently, followed by *Google Docs* (*f*=6), Zoom (*f*=4), and Teams (*f*=3). Besides, *Google Meet* (*f*=1), *Telegram* (*f*=1), *Facebook* (*f*=1), and *LinkedIn* (*f*=1) were the least preferred mobile technologies among the graduate students.

In addition, the findings revealed that most graduate students engaged in mobile technologies on a daily basis (*f*=5). At the same time, one of them used mobile technologies once a month and the other participant stated that they used mobile technologies once a week, as shown in Figure 3 below.

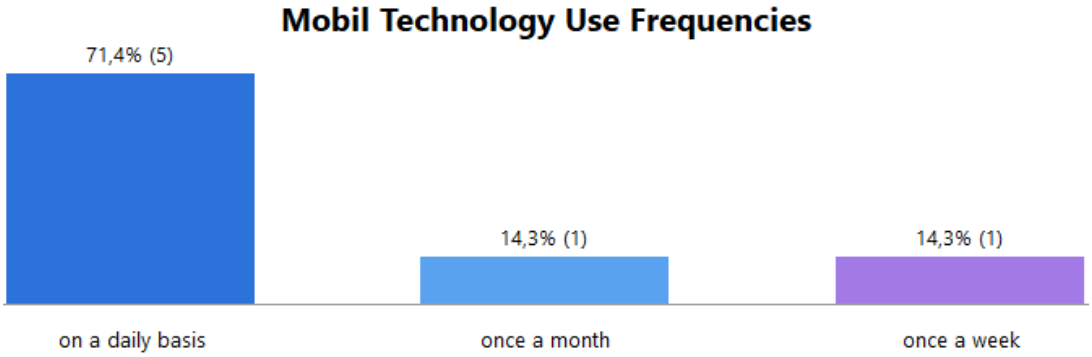

Figure 3. Mobile technology use frequencies of graduate students

4.1.2. Benefits and challenges of WhatsApp

The study revealed that *WhatsApp* was the most frequently used and preferred mobile technology tool among graduate students because of the conveniences it provides, as illustrated in Figure 4 below.

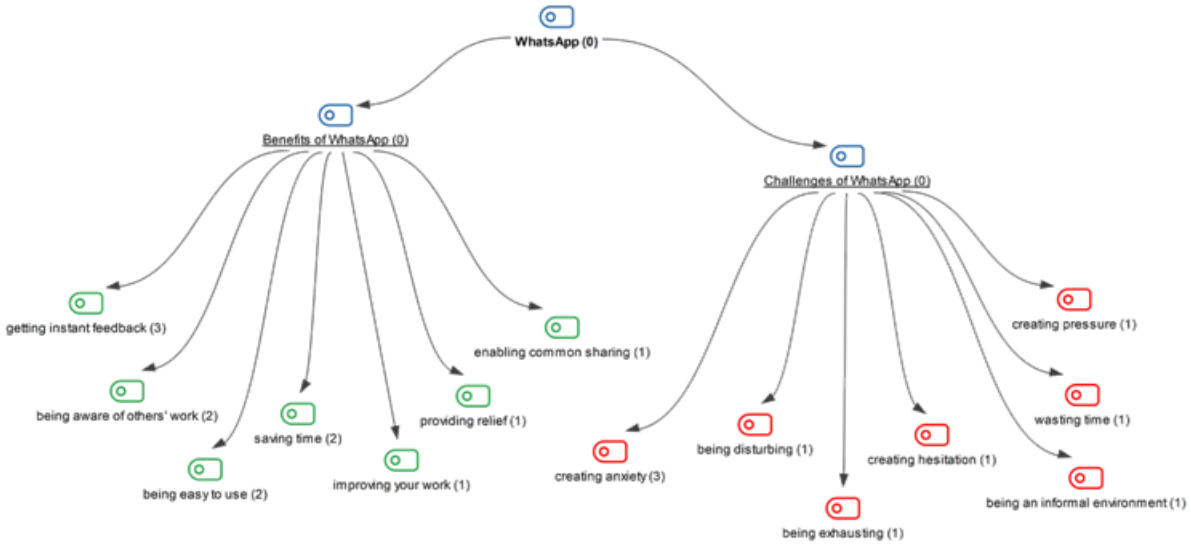

Figure 4. Benefits and challenges of WhatsApp

To illustrate, *WhatsApp* enabled participants to progress much faster and easier in their studies by providing instant feedback (*f*=*3*) as shown below.

> *"I would write on WhatsApp, for example, and I would get a reply, so the process was much easier for me."* (S2)

The participants also noted that *WhatsApp* was easy to use (*f*=2) and beneficial for saving time (*f*=2) and being aware of their peers' studies (*f*=2), as exemplified in the following excerpts.

> *"WhatsApp is easy to use because everyone already uses it."* (S2)

> *"The more we talk on WhatsApp, the more we are aware of what stage the others are at."* (S3)

> *"For example, I ask a question, but maybe others will ask the same question, so it saves time."* (S6)

As per the challenges of *WhatsApp*, it was found that it caused anxiety among some participants (*f=3*), as exemplified below.

> *"I wonder if I could have done it more effectively or if I could have done it more effectively, why my work has not progressed, or if I am behind, it is a bit bad."* (S1)

Additionally, other challenges of *WhatsApp* were that for some participants, it caused hesitation (*f=1*) or pressure (*f=1*), and for others, it was disturbing (*f=1*), exhausting (*f=1*), and informal (*f=1*).

> *"For example, in a group on WhatsApp, it's like an obligation to respond at that moment. You know, it makes me a little uncomfortable to be accessible at any moment."* (S3)

> *"For example, when we want to send something from the computer, we have to open WhatsApp web all the time and that process is a bit tiring."* (S2)

4.1.3. Benefits and challenges of Google Docs

Google Docs was the second most preferred mobile technology tool among the graduate students, and the participants noted that the benefits of Google Docs outweighed the challenges, as illustrated in Figure 5 below.

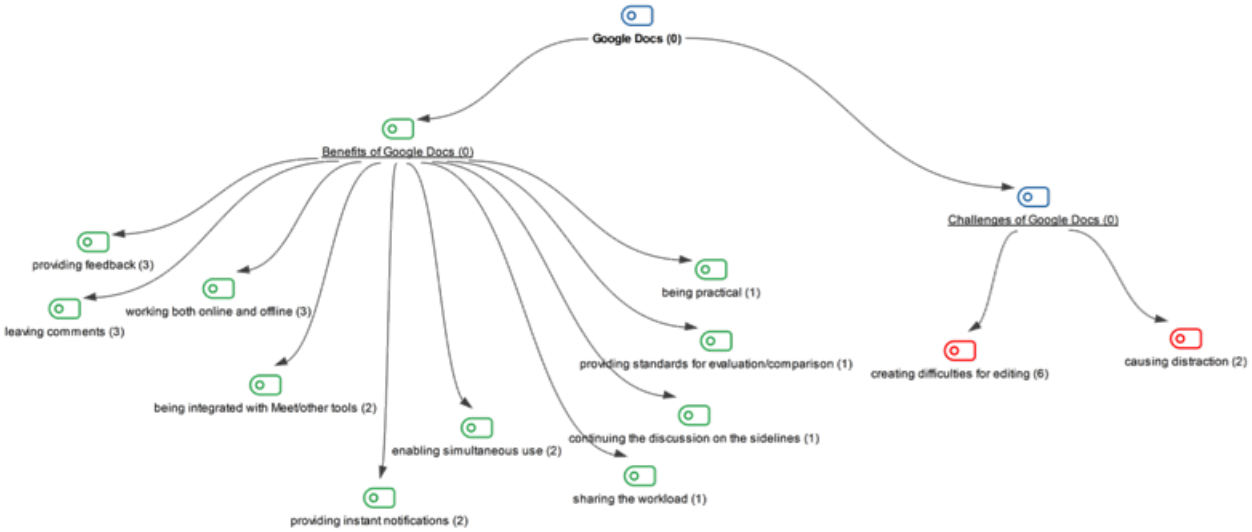

Figure 5. Benefits and challenges of Google Docs

To begin with the benefits of Google Docs, it was found that graduate students preferred this tool since it provided feedback (*f=3*), enabled the students to leave comments in the margins (*f=3*) and to work both online and offline (*f=3*). In this regard, the participants stated that they

used this tool since Google Docs contributed to their professional and academic development, as exemplified below:

> *"Feedback is definitely quite helpful, I really like this aspect of Google Docs, and I was able to improve myself."* (S6)

> *"I left a comment there, and she looked at it when she came back later. Even if we couldn't be there at the same time, I think it was very useful for us to comment to each other."* (S1)

Additionally, it was helpful for graduate students in terms of enabling simultaneous use (*f=2*), providing instant notifications (*f=2*), and being integrated with other tools such as Google Meet (*f=2*), as shown in the following excerpts.

> *"I would get an instant notification, and that was very important."* (S4)

> *"I think the biggest difference is that everyone can work at the same time."* (S3)

Challenges were also expressed about the use of Google Docs by the graduate students. In this sense, the most recurrent code was that Google Docs made it challenging to edit the document (*f=6*). Therefore, graduate students stated that editing their documents in Google Docs was difficult for them, as seen in the excerpt below.

> **"***I guess the only disadvantage of Google Docs is that we can't really edit them."* (S2)

Further, some participants pointed out that they did not feel comfortable when their friends or instructors were online in their documents and that they could get distracted and quit studying, as exemplified below.

> *"I want to talk about one of its disadvantages. For example, in the Google doc, I am fully focused; while I am editing my document, someone goes online in my document, and my whole focus is immersed. I instantly leave the document; I wonder what they are looking at, what they are thinking. Or are they reading what I am writing right now? What do they feel? Or they are reading it, I wonder if they think it's too ridiculous, and I leave."* (S1)

4.2. Collaborative writing experiences of graduate students

In addition, participants noted that they did not have much collaborative learning experiences before this academic writing course as presented in Figure 6 below.

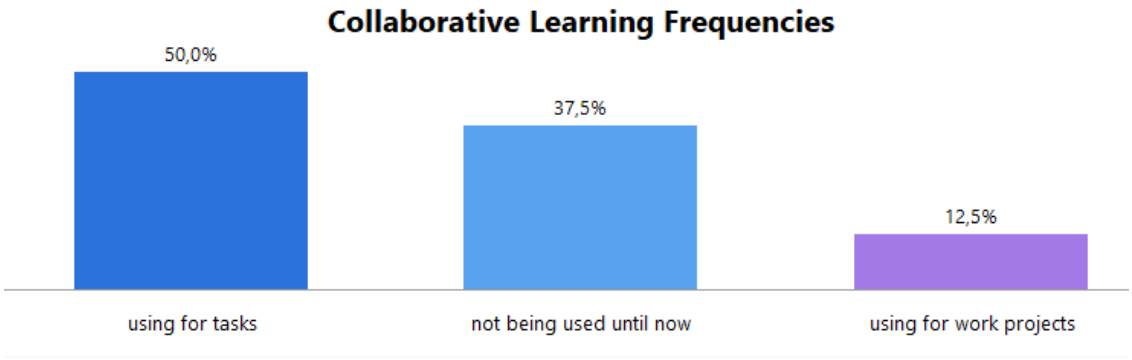

Figure 6. Collaborative writing experiences of graduate students

The graduate students' collaborative writing experiences were mostly based on their undergraduate years and they engaged in collaborative tasks during this period. Additionally, one of the participants stated that she engaged in collaborative writing as a part of their school-related e-twinning project as exemplified in the following excerpt.

> *"I remember we worked together when there was an e-twinning project at the school where I worked as a teacher."* (S3)

4.2.1. Strengths and weaknesses of collaborative writing

Graduate students only had little collaborative writing experiences; the course on collaborative writing was a new experience for most of them. The participants gained positive experiences in collaborative writing processes with the help of a collaborative writing course. Therefore, the informants mainly mentioned the benefits and strengths of collaborative writing as well as a few challenges, as inferred from Figure 7 below.

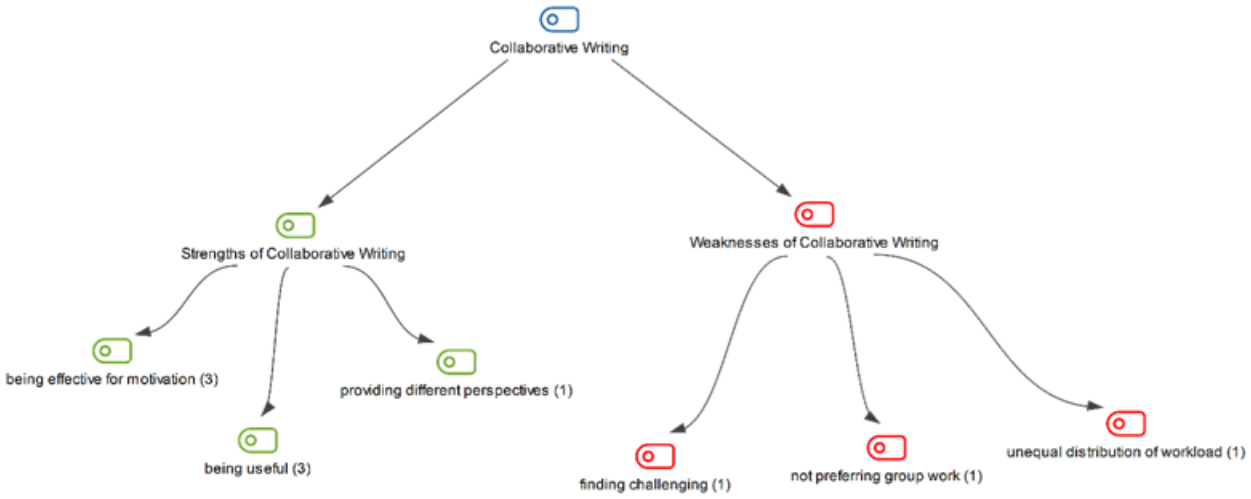

Figure 7. Strengths and weaknesses of collaborative writing

To exemplify, the participants regarded collaborative writing as a practical activity for motivation (*f*=3), helpful for their learning (*f*=3), and gaining different perspectives (*f*=1). Thus, the following excerpts pointed out the strengths of collaborative writing practices.

> *"Working collaboratively on Google Documents was really effective. Both in terms of motivation and seeing your feedback. I think I learned something from my friends." (S4)*

> *"It was very beneficial for everyone to get help from each other, to get help instead of coming up with something in common."* (S6)

> *"So it helped me to see those different perspectives."* (S2)

When asked about the weaknesses of collaborative writing, the informants reported that collaborative tasks could be challenging (*f=1*) since they did not prefer group work (*f=1*), or the workload would not be equal in group tasks (*f=1*). In this regard, the following excerpts could shed light on the interviewees' perceptions regarding the negative aspects of collaborative writing.

> *"So I think group work is challenging in general. For example, I frankly don't like group work very much because you deliver something in common, and when you deliver something in common, some of the things the other side does may not feel comfortable with."* (S4)

"Honestly, I did not didn't see any benefit of group work until my master's degree. Since I didn't feel comfortable with group work, I was organizing that part of it, so there is definitely an inequality of burden." (S6)

In summary, these results suggest that graduate students made use of mobile technologies during the collaborative writing processes. They benefited from especially *WhatsApp* and *Google Docs* for collaborative writing practices. Graduate students also indicated that mobile technologies contributed a lot to their writing process, although they have some difficulties. Further, the participants expressed that they enhanced their collaborative writing skills with the help of the writing course and that collaborative writing has more strengths than weaknesses.

5. Discussion

The present study explored collaborative writing in an academic context and the role of mobile technologies during this process. The results indicated both the benefits and challenges of using as WhatsApp and Google Docs for collaborative academic paper writing.

In terms of benefits, these mobile technologies have been found to enhance communication and collaboration among students in parallel with the findings of Andujar (2016). Specifically, participants favored WhatsApp due to its ease of communication by providing immediate feedback and increasing a sense of belonging among peers and lecturers. This finding aligns with Mazer and Ledbetter (2012), who argue that social media tools can bridge communication gaps, leading to stronger student engagement and motivation. Likewise, Google Docs was considered an effective tool due to its shared learning space, which enables simultaneous contributions on a web-based platform (Zorko, 2009). In addition, participants were satisfied with obtaining peer feedback and teacher feedback during the collaborative writing. As Storch (2013) emphasized, collaborative writing improves linguistic accuracy, negotiation of meaning and engagement in higher-order thinking. The ability to consider multiple viewpoints and reflect critically on their academic writing is one of the valuable contributions of these collaborative learning environments (Li & Zhu, 2017).

However, participants have also noted some challenges with collaborative writing tasks. One of the commonly addressed challenges is the unequal distribution of workload, in which learners become often frustrated with their group members' unbalanced contribution. This is similar to Barkley et al.'s (2014) identification of "free-rider" issues in group work, where some students tend to contribute less, creating a sense of inequality. That is, unbalanced contribution and irresponsibility are seen as significant drawbacks of collaborative learning (e.g., Slavin,

1995). Moreover, some participants stated how uncomfortable they felt by being monitored by others in collaborative tools like Google Docs. This finding aligns with Swain and Lapkin's (2002) findings that real-time peer observation might lead to anxiety among participants. On the other hand, Oshima and Oshima (2001) found technology associated with collaborative learning lessened anxiety to some extent in contrast to our study who are not used to immediate peer and lecturer feedback.

Despite these challenges, the current study suggested an overall positive perception of collaborative writing over time. For example, while some participants initially stated their discomfort, their engagement with collaborative writing and mobile technologies led to a more positive outlook by the end of the study. This shift in perception aligns with Ting-Toomey and Oetzel's (2001) observation that prolonged engagement in collaborative tasks can lead to a greater appreciation for the learning process, especially when supported by structured guidance and peer interaction. These findings also parallel Fernández Dobao (2012), whose study suggested that clear goals and tools leading to even cooperation help learners enhance their writing skills and perceptions as well. In fact, encouraging learners to reflect on their own writing and that of their peers leads to both cognitive development, as indicative of Swain's (2000) output hypothesis and process writing with ultimately improved writing skills. Thus, this study suggests that collaborative writing can lead to improvement as long as sufficient support and scaffolding are available.

The findings further suggest that mobile technologies play a crucial role in mediating these collaborative writing processes. According to Stockwell and Hubbard (2013), mobile devices make learning adaptable and time-efficient. These tools support real-time communication and collaboration by increasing engagement and learning outcomes though they also include unequal participation, distraction and anxiety among learners.

6. Conclusion

This study confirms the potential benefit of mobile technologies, specifically WhatsApp and Google Docs, to enhance collaborative writing processes at a graduate level. The findings indicate that these technologies introduce several benefits, including supporting a cooperative learning environment and communication among peers. The integration of these tools into academic writing also indicates learners' enhanced writing skills, thereby gaining multiple perspectives and being more deeply engaged with weekly feedback, supporting the conclusions of earlier research by Andujar (2016) and Zorko (2009). However, the study also suggests that

challenges were faced due to the pressure of unequal workload distribution and real-time feedback by peers and lecturers. Therefore, mobile technologies should be thoughtfully designed to avoid learners with constant availability and real-time monitoring no matter how they lead to collaboration and engagement among learners. Future research could further explore how different mobile technologies beyond WhatsApp and Google Docs can contribute to collaborative writing in higher education. In addition, longitudinal studies could investigate how sustained use of these mobile technologies' impacts students' writing development and group dynamics over time.

REFERENCES

Abrams, Z. (2016). Exploring collaboratively written L2 texts among first-year learners of German in Google Docs. *Computer Assisted Language Learning*, *29*(8), 1259-1270. https://doi.org/10.1080/09588221.2016.1270968

Akman Yeşilel, D. B. (2022). Utilizing mobile technology to improve writing skill. In G. Yangın Ekşi, S. Akayoğlu, & L. Anyango (Eds.), *New Directions in Technology for Writing Instruction* (pp. 147-167). Springer.

Albogami, A., & Algethami, G. (2022). Exploring the use of WhatsApp for teaching speaking to English language learners: A case study. *Arab World English Journal*, (2), 183-201. https://doi.org/10.24093/awej/covid2.12

Aldawi, F., & Maher, A. (2023). The role of Google Docs in enhancing collaborative writing in higher education institutions. *2023 IEEE 3rd International Maghreb Meeting of the Conference on Sciences and Techniques of Automatic Control and Computer Engineering (MI-STA)*. https://doi.org/10.1109/mi-sta57575.2023.10169399

Alharbi, M. A. (2020). Exploring the potential of Google Doc in facilitating innovative teaching and learning practices in an EFL writing course. *Innovation in Language Learning and Teaching*, *14*(3), 227-242. https://doi.org/10.1080/17501229.2019.1572157

Alonzo, D., & Oo, C. Z. (2023). The use of Messenger for research collaboration: An auto-ethnographic study. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.1076340

Alsahil, A. (2024). Exploring students' perceptions and affordances of Google docs-supported collaborative writing. *Innovation in Language Learning and Teaching*, 1-19. https://doi.org/10.1080/17501229.2024.2326030

Alwahoub, H. M., Azmi, M. N., & Halabieh, M. (2020). Computer-assisted collaborative writing and students' perceptions of Google Docs and wikis: A review paper. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, *4*(1), 15-27. https://doi.org/10.30743/ll.v4i1.2499

Andujar, A. (2016). Benefits of mobile instant messaging to develop ESL writing. *System*, *62*, 63-76. https://doi.org/10.1016/j.system.2016.07.004

Andújar-Vaca, A., & Cruz-Martínez, M. (2017). Mobile instant messaging: WhatsApp and its potential to develop oral skills. *Comunicar*, *25*(50), 43-52. https://doi.org/10.3916/c50-2017-04

Barkley, E. F., Cross, K. P., & Major, C. H. (2014). *Collaborative learning techniques: A handbook for college faculty*. John Wiley & Sons.

Berndt, A. E. (2011). Developing collaborative research agreements. *Journal of Emergency Nursing*, *37*(5), 497-498. https://doi.org/10.1016/j.jen.2011.04.010

Bikowski, D., & Vithanage, R. (2016). Effects of web-based collaborative writing on individual L2 writing development. *Language Learning & Technology*, *20*(1), 79-99. https://www.lltjournal.org/

Burston, J. (2014). MALL: The pedagogical challenges. *Computer Assisted Language Learning*, *27*(4), 344-357. https://doi.org/10.1080/09588221.2014.914539

Çakmak, F. (2019). Mobile learning and mobile assisted language learning in focus. *Language and Technolog*, *1*(1), 30-48. https://dergipark.org.tr/tr/download/article-file/665969

Canham, N. (2018). Comparing Web 2.0 applications for peer feedback in language teaching. *Writing and Pedagogy*, *9*(3), 429-456. https://doi.org/10.1558/wap.32352

Castelló, M., Kruse, O., Rapp, C., & Sharples, M. (2023). Synchronous and Asynchronous Collaborative Writing. In O. Kruse, C. Rapp, C. M. Anson, K. Benetos, E. Cotos, A. Devitt, & A. Shibani (Eds.), *Digital Writing Technologies in Higher Education* (pp. 121-139). Springer Link.

Chen, W. (2019). An exploratory study on the role of L2 collaborative writing on learners' subsequent individually composed texts. *The Asia-Pacific Education Researcher*, *28*(6), 563-573. https://doi.org/10.1007/s40299-019-00455-3

Chen, W., & Yu, S. (2019). Implementing collaborative writing in teacher-centered classroom contexts: Student beliefs and perceptions. *Language Awareness*, *28*(4), 247-267. https://doi.org/10.1080/09658416.2019.1675680

Chen, W., & Zhang, M. (2023). Understanding an assessment approach in computer-mediated collaborative writing: Learner perceptions and interactions. *Language Awareness*, *33*(1), 135-162. https://doi.org/10.1080/09658416.2023.2180513

Chen, W., Liu, D., & Lin, C. (2023). Collaborative peer feedback in L2 writing: Affective, behavioral, cognitive, and social engagement. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1078141

Colen, K., & Petelin, R. (2004). Challenges in collaborative writing in the contemporary Corporation. *Corporate Communications: An International Journal*, *9*(2), 136-145. https://doi.org/10.1108/13563280410534339

Creswell, J. W. (2016). *30 Essential skills for the qualitative researcher.* Sage Publications.

Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33–56). Ablex Publishing.

Du, Z., Sun, Y., Zhao, G., & Zweig, D. (2021). Do overseas returnees Excel in the Chinese labour market? *The China Quarterly*, *247*, 875-897. https://doi.org/10.1017/s0305741021000023

Duman, G., Orhon, G., & Gedik, N. (2014). Research trends in mobile assisted language learning from 2000 to 2012. *ReCALL*, *27*(2), 197-216. https://doi.org/10.1017/s0958344014000287

Ebadijalal, M., & Moradkhani, S. (2023). Impacts of computer-assisted collaborative writing, collaborative prewriting, and individual writing on EFL learners' performance and motivation. *Computer Assisted Language Learning*, 1-25. https://doi.org/10.1080/09588221.2023.2178463

Ede, L. S., & Lunsford, A. A. (1990). *Singular texts/plural authors: Perspectives on collaborative writing*. Southern Illinois University Press.

Elabdali, R. (2021). Are two heads really better than one? A meta-analysis of the L2 learning benefits of collaborative writing. *Journal of Second Language Writing*, *52*, 100788. https://doi.org/10.1016/j.jslw.2020.100788

Elola, I., & Oskoz, A. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning & Technology*, *14*(3), 51–71.

Fauzi, I., & Angkasawati, P. (2019). The use of listening logs through WhatsApp in improving listening comprehension of efl students. *JOALL (Journal of Applied Linguistics & Literature)*, *4*(1), 13-26. https://doi.org/10.33369/joall.v4i1.6773

Fernández Dobao, A. (2012). Collaborative writing tasks in the L2 classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing*, *21*(1), 40-58. https://doi.org/10.1016/j.jslw.2011.12.002

Galegher, J., & Kraut, R. E. (1994). Computer-mediated communication for intellectual teamwork: An experiment in group writing. *Information Systems Research* 5(2):110-138. http://dx.doi.org/10.1287/isre.5.2.110

Gimenez, J., & Thondhlana, J. (2012). Collaborative writing in engineering: Perspectives from research and implications for undergraduate education. *European Journal of Engineering Education*, *37*(5), 471-487. https://doi.org/10.1080/03043797.2012.714356

Haythornthwaite, C. (2005). Introduction: Computer-mediated collaborative practices. *Journal of Computer-Mediated Communication*, *10*(4), 00-00. https://doi.org/10.1111/j.1083-6101.2005.tb00274.x

Jiang, W., & Eslami, Z. R. (2021). Effects of computer-mediated collaborative writing on individual EFL writing performance. *Computer Assisted Language Learning*, *35*(9), 2701-2730. https://doi.org/10.1080/09588221.2021.1893753

Jiang, W., & Eslami, Z. R. (2022). Effects of computer-mediated collaborative writing on individual EFL writing performance. *Computer Assisted Language Learning*, *35*(9), 2701-2730. https://doi.org/10.1080/09588221.2021.1893753

Kartal, G. (2019). What's up with WhatsApp? A critical analysis of mobile instant messaging research in language learning. *International Journal of Contemporary Educational Research*, *6*(2), 352-365. https://doi.org/10.33200/ijcer.599138

Kırmızı, Ö. (2024). The applicability of collaborative writing in the post-graduate context: Introducing flexible collaborative writing. In G. Zeybek (Ed.), *Policy development, curriculum design, and administration of language education* (pp. 53-79). IGI Global.

Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *Bmj*, *311*(7000), 299-302.

Krueger, R. A. (2014). *Focus groups: A practical guide for applied research.* Sage publications.

Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, *49*(2), 207-218. https://doi.org/10.1111/bjet.12580

LeFevre, K. B. (1987). *Invention as a social act*. Southern Illinois University Press.

Li, M. (2018). Computer-mediated collaborative writing in L2 contexts: An analysis of empirical research. *Computer Assisted Language Learning*, *31*(8), 882-904. https://doi.org/10.1080/09588221.2018.1465981

Li, M., & Zhu, W. (2017). Explaining dynamic interactions in wiki-based collaborative writing. *Language Learning & Technology*, *21*(2), 96–120.

Lowry, P. B., Curtis, A., & Lowry, M. R. (2004). Building a taxonomy and nomenclature of collaborative writing to improve interdisciplinary research and practice. *The Journal of Business Communication (1973)*, *41*(1), 66-99.

Mazer, J. P., & Ledbetter, A. M. (2012). Online communication attitudes as predictors of problematic internet use and well-being outcomes. *Southern Communication Journal*, *77*(5), 403-419. https://doi.org/10.1080/1041794x.2012.686558

Merriam, S. B. & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation (4th ed.)*. John Wiley & Sons

Naghdipour, B., & Manca, S. (2022). Teaching presence in students' WhatsApp groups: Affordances for language learning. *E-Learning and Digital Media*, *20*(3), 282-299. https://doi.org/10.1177/20427530221107968

Naveed, Q. N., Choudhary, H., Ahmaad, N., Alqahtani, J., & Qahmash, A. I. (2023). Mobile learning in higher education: A systematic literature review. *Sustainable*, *15*(18). https://doi.org/10.3390/su151813566

Nergiz Kartepe, B., & Atmaca, Ç. (2024). The effects of using Google Docs on writing skills of Turkish EFL learners. *Dil Eğitimi ve Araştırmaları Dergisi*, *10*(1), 147 - 165. https://doi.org/10.31464/jlere.1393853

Oshima, J., & Oshima, R. (2001). Next step in design experiments with networked Collaborative learning environments: Instructional interventions in the curriculum. In P. Dillenbourg, A. Eurelings, & K. Hakkarainen (Eds.), European perspectives on computer-supported collaborative learning (pp. 217-225). Routledge. https://doi.org/10.4324/9781410601544-8

Rhodes, C. M., and X. Lin. 2019. Collaborative academic writing: Reflections from an early career academic. *The Journal of Faculty Development 33*(3): 71–76.

Rice, R. P., & Huguley, J. T. (1994). Describing collaborative forms: A profile of the team-writing process. *IEEE transactions on professional communication*, *37*(3), 163-170.

Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice*. Allyn & Bacon.

Stockwell, G., & Hubbard, P. (2013). *Some emerging principles for mobile-assisted language learning*. Monterey, CA: The International Research Foundation for English Language Education. Retrieved from http://www.tirfonline.org/english-in-the-workforce/mobile-assisted-language-learning

Storch, N. (2011). Collaborative writing in L2 contexts: Processes, outcomes, and future directions. *Annual Review of Applied Linguistics*, *31*, 275-288. https://doi.org/10.1017/s0267190511000079

Storch, N. (2013). *Collaborative writing in L2 classrooms*. Multilingual Matters.

Strobl, C. (2014). Affordances of Web 2.0 technologies for collaborative advanced writing in a foreign language. *CALICO Journal*, *31*(1), 1-18. https://doi.org/10.11139/cj.31.1.1-18

Sung, Y., Chang, K., & Liu, T. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, *94*, 252-275. https://doi.org/10.1016/j.compedu.2015.11.008

Suwantarathip, O., & Wichadee, S. (2014). The effects of collaborative writing activity using Google docs on students' writing abilities. *Turkish Online Journal of Educational Technology*, *13*(2), 148-156.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97–114). Oxford University Press.

Swain, M., & Lapkin, S. (2005). The Evolving Sociopolitical Context of Immersion Education in Canada: Some Implications for Program Development. *International Journal of Applied Linguistics*, *15*, 169-186. https://doi.org/10.1111/j.1473-4192.2005.00086.x

Tay, L., & Cheung, Y. L. (2019). Second and foreign language writing and computer-mediated communication: A qualitative meta-synthesis of recent research. *Issues in Language Studies*, *8*(2). https://doi.org/10.33736/ils.1477.2019

Thomas, M., Reinders, H., & Warschauer, M. (2012). *Contemporary computer-assisted language learning*. Bloomsbury Publishing.

Trimbur, J. (1985). Collaborative learning and teaching writing. In B. W. McClelland & T. R. Donoyan (Eds.), *Perspectives on research and scholarship in composition* (pp. 87-109). Modern Language Association.

Tümen Akyıldız, S., & Çelik, V. (2022). Using WhatsApp to support EFL reading comprehension skills with Turkish early secondary learners. *The Language Learning Journal*, *50*(5), 650-666. https://doi.org/10.1080/09571736.2020.1865433

Vaughn, S. (2004). *Research-based methods of reading instruction: Grades K-3.* Association for Supervision and Curriculum Development.

Viberg, O., & Grönlund, Å. (2013). Systematising the field of mobile assisted language learning. *International Journal of Mobile and Blended Learning*, *5*(4), 72-90. https://doi.org/10.4018/ijmbl.2013100105

Vygotsky, L. S. (1987). Thinking and speech. In R. W. Rieber & A. S. Carton (Eds.), *The collected works of L. S. Vygotsky, Volume 1: Problems of general psychology* (pp. 39–285). Plenum Press. (Original work published in 1934)

Vygotsky, L. S. (1978). *Mind in society: Development of higher psychological processes*. Harvard University Press

Wang, F., Ai, B., & Kostogriz, A. (2024). "Writing by oneself is too lonely": Understanding Chinese returnee scholars' English collaborative writing experiences in academic publishing. *Journal of English for Academic Purposes*, *68*, 101363. https://doi.org/10.1016/j.jeap.2024.101363

Wigglesworth, G., & Storch, N. (2009). Pair versus individual writing: Effects on fluency, complexity and accuracy. *Language Testing*, *26*(3), 445-466. https://doi.org/10.1177/0265532209104670

Yang, Y. (2017). New language knowledge construction through indirect feedback in web-based collaborative writing. *Computer Assisted Language Learning*, *31*(4), 459-480. https://doi.org/10.1080/09588221.2017.1414852

Yanguas, I. (2020). L1 vs L2 synchronous text-based interaction in computer-mediated L2 writing. *System*, *88*, 102169. https://doi.org/10.1016/j.system.2019.102169

Yim, S., Warschauer, M., & Zheng, B. (2016). Google Docs in the classroom: A district-wide case study. *Teachers College Record: The Voice of Scholarship in Education*, *118*(9), 1-32. https://doi.org/10.1177/016146811611800903

Zeybek, G., Erdemir, N., & Sayın, I. (2023). The effect of an online writing community on ELT students' academic writing motivation. In G. Yangın-Ekşi, S. Akayoğlu, & L.

Anyango (Eds.), *New directions in technology for writing instruction* (pp. 367-389). Springer.

Zorko, V. (2009). Factors affecting the way students collaborate in a Wiki for English language learning. *Australasian Journal of Educational Technology*, *25*(5). https://doi.org/10.14742/ajet.1113

APPENDICES

Appendix A. Focus-group interview questions in English

Descriptive Information

Age:

Years of experience in English language teaching:

The questions consist of two parts. First, it will focus only on mobile technology, and then, it will focus on mobile technology in collaborative learning.

Mobile Technology

1. To what extent are you interested in mobile technology? What are your preferences? Prompt: WhatsApp, Telegram, Google Docs, Zoom, Meet, Moodle, Google Classroom, Facebook Group, etc.
2. How often do you use mobile technology for educational purposes?
3. Have you ever used WhatsApp and Google Docs for educational purposes? If yes, how often do you use WhatsApp and Google Docs for educational purposes?
4. What are the benefits and challenges of using WhatsApp for educational purposes?
5. What are the benefits and challenges of using Google Docs for educational purposes?

Mobile Technology in Collaborative Learning

1. To what extent are you interested in collaborative learning?
   Prompt: Group work, Project work, Group Discussion, Roleplay, etc.
2. How often do you use collaborative learning for educational purposes?
3. Have you ever been involved in collaborative learning? If yes, how often do you use collaborative learning?
4. What are the benefits and challenges of using WhatsApp Research Group for collaborative learning?
5. What are the benefits and challenges of using Google Docs Research Group for collaborative learning?

Appendix B. Focus-group interview questions in Turkish

Açıklayıcı Bilgiler

Yaş:

İngilizce öğretiminde yılların deneyimi:

Sorular iki kısımdan oluşmaktadır. Önce sadece mobil teknolojiye odaklanılacaktır, daha sonra ise iş birliğine dayalı öğrenmede mobil teknolojiye odaklanılacaktır.

Mobil Teknoloji

1. Mobil teknoloji ile ne ölçüde ilgileniyorsunuz? Tercihleriniz nelerdir?

   İpucu: WhatsApp, Telegram, Google Docs, Zoom, Meet, Moodle, Google Classroom, Facebook Group, vb.

2. Mobil teknolojiyi eğitim amaçlı olarak ne sıklıkla kullanıyorsunuz?
3. WhatsApp ve Google Docs'u hiç eğitim amaçlı kullandınız mı? Cevabınız evet ise, WhatsApp ve Google Docs'u eğitim amaçlı olarak ne sıklıkla kullanıyorsunuz?
4. WhatsApp'ı eğitim amaçlı kullanmanın faydaları ve zorlukları nelerdir?
5. Google Docs'u eğitim amaçlı kullanmanın faydaları ve zorlukları nelerdir?

İşbirliğine Dayalı Öğrenmede Mobil Teknoloji

1. İşbirliğine dayalı öğrenmeye ne ölçüde ilgi duyuyorsunuz?

   İpucu: Grup çalışması, Proje çalışması, Grup Tartışması, Rol Oynama, vb.

2. İşbirliğine dayalı öğrenmeyi eğitim amaçlı olarak ne sıklıkla kullanıyorsunuz?
3. Hiç işbirliğine dayalı öğrenmeye dahil oldunuz mu? Cevabınız evet ise, işbiriliğine dayalı öğrenmeyi ne sıklıkla kullanıyorsunuz?
4. İşbirliğine dayalı öğrenme için WhatsApp Araştırma Grubu kullanmanın faydaları ve zorlukları nelerdir?
5. İşbirliğine dayalı öğrenme için Google Docs Araştırma Grubunu kullanmanın faydaları ve zorlukları nelerdir?

ABOUT THE AUTHORS

Dr. Nihan ERDEMİR

ORCID: 0000-0002-8610-3590

nihanerdemir@gmail.com

Suleyman Demirel University, Faculty of Education, Department of English Language Teaching

Nihan Erdemir is an English Language Teaching Assistant Professor at Süleyman Demirel University, Turkey. She holds a Ph.D. from Gazi University, Turkey, and an M.A. from the University of Vienna, Austria. She taught English and Turkish in Austria and Turkey for over seven years. Her research interests are academic writing, language teacher education, and classroom research.

Dr. Derya COŞKUN

ORCID**:** 0000-0001-6044-6109

deryacoskun@sdu.edu.tr

Suleyman Demirel University, Faculty of Education, Department of English Language Teaching

Derya COŞKUN graduated from Foreign Language Education Department at METU in 2015 and completed her master degree at Süleyman Demirel University, Institute of Educational Sciences, at English Language Teaching Department. She received her PhD degree and is working as a research assistant. Her main research interests include teacher education, intercultural communication, critical reading, and pedagogy practices.

Res. Asst. İdil SAYIN

ORCID: 0000-0001-5546-2673

idilsayin@sdu.edu.tr

Suleyman Demirel University, Faculty of Education, Department of English Language Teaching

İdil SAYIN is currently pursuing her PhD in English Language Teaching (ELT) at Hacettepe University and is working as a research assistant at Süleyman Demirel University's ELT Department. She obtained her BA in ELT from Süleyman Demirel University in 2018 and completed her MA in ELT at the same institution in 2020. Additionally, she earned an MS in Measurement and Evaluation in Education from Hacettepe University in 2023. Her research interests include measurement and evaluation in ELT, technology in language education, and language assessment.

Cite this Chapter

Erdemir, N., Coşkun, D. & Sayın, İ. (2024). Enhancing collaborative writing of graduate students through Whatsapp and Google docs: An academic writıng course. In K. Büyükkarcı & A. Önal (Eds.), *The future of foreign language education: Innovations in different modes of teaching*, (pp. 178-210). ISRES Publishing.