
The impact of Wikis as a collaborative writing tool on EFL students' writing

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ABSTRACT

Keywords:

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This study investigated the impact of wiki-based collaborative writing on EFL students' business writing performance in a Business English Writing course at Universitas Pahlawan Tuanku Tambusai. The study employed a quasi-experimental one-group pretest–posttest design involving 100 university students. Students participated in four types of wiki-based collaborative writing activities during the treatment period. Writing performance was assessed using an analytical scoring rubric covering overall writing, content, organization, vocabulary, language use, and mechanics. The data were analyzed using descriptive statistics, ANOVA, and paired sample t-tests. The findings revealed that there were no statistically significant differences among the four wiki collaboration types, although Wiki Type 4 obtained the highest mean score. The results also showed a significant improvement in students' overall writing performance after the wiki-based collaborative treatment. However, no significant improvement was found in the individual writing components, including content, organization, vocabulary, language use, and mechanics. These findings suggest that wiki-based collaborative writing can support students' overall writing development and collaborative engagement, although its short-term impact on specific writing sub-skills remains limited. The study contributes to the growing body of research on digital collaborative learning in ESP and EFL writing contexts.

1. INTRODUCTION

English is becoming more essential for worldwide commerce and successful communication as globalization continues. As multinational enterprises progressively collaborate; to remain competitive, workers are expected to obtain a high level of English proficiency. Being able to communicate effectively in English is increasingly required for professional success (Tsao, 2021). With the continuing spread of globalization, English has become a more vital medium for global trade, and universities and colleges now offer programs to prepare students for professional communication in the English language. The English education system in several countries, especially Indonesia, has undergone modifications because of this new trend. One example of the shift is the establishment of English for Specific Purpose (ESP) courses in trade schools and technical institutions.

Beginning in the late 1960s, ESP developed as a practice of instruction in English as a foreign language (Richards, 2001). Meanwhile, Aldayel et al. (2026) noted that EFL students have a variety of challenges when it comes to acquiring specialized writing in their academic areas. Many

Taiwanese university graduates still struggle to write in English in various employment settings. Chu et al.(2017) argued that students have inadequate opportunities to practice English beyond the class and that their linguistic understanding is poor. In response to these challenges, technology has increasingly been integrated into language learning. A devoted ESP instructor must use modern educational techniques as a teaching aid to make courses more exciting and effective in improving students' language learning skills and motivation. However, although technology can support writing instruction, it should be utilized as an adjunct rather than a substitute for traditional writing pedagogy(Amani & Bisriyah, 2025).

Previous studies have also shown the positive impact of digital learning platforms on students' writing development. Ami (2022) found that students had positive perceptions and acceptance toward the use of Padlet in learning English writing, as it facilitated their writing process and supported their engagement in writing activities. Similarly, Pratiwi et al. (2023) reported that students perceived Instagram as a digital platform for creative writing which enhanced creativity, provided inspiration, and encouraged broader engagement with their writing products.

Furthermore, other collaborative online platforms, Wikis may also help improve students' writing fluency(Hosseini et al., 2020). Wikis as one of the Web-based technology solutions has captured the attention of many researchers and educators in the last era due to the wide variety of benefits as it provides teachers with a readily available form of media of computer-based instruction, helps encourage collaborative and active communication among students, provides plenty ways of communicating, and makes the process of writing more efficient (Kamel Boulos et al., 2006).

The benefits of using wikis in education have been mentioned in some research. Wikis do not need much knowledge or technical knowledge, and the method of developing and editing wikis is simple and obvious. In the process of accessing and modifying wikis, teachers and students only need to be connected to the internet. Students can easily submit their writing with their classmates and receive feedback in a collaborative environment using wikis. Wikis also enable users to connect to a timeline of all the changes and modifications made. In addition, it allows students and teachers to measure and evaluate their progress throughout the process of writing.

Some investigations in ESP courses using wiki have also been undertaken as part of research (Kuteeva, 2011). This shows that wikis are indeed being utilized in ESP instruction, and the advantages of using wikis extend from language acquisition to the formation of application efficiency. Alyousef and Picard (2011) developed a task which is comparable to students' field of knowledge. In a wiki-mediated context, the students are expected to respond to four specific questions about an investigated issue and a collection of documents.

The use of wikis in ESP classrooms shows the many ways in which web-based technologies may alter a teaching-learning process. The use of wikis to enhance language skills has become the subject of numerous studies (Li & Zhu, 2013). The findings indicate that wikis can benefit pupils by boosting the process of writing. Other research has been conducted to encourage ESP students to use computer techniques to accomplish collaborative writing activities, whereas additional research is necessary to understand the advantages of wikis for ESP teaching. Therefore, by involving students in a wiki-based collaborative learning environment, this research aims to improve students' business writing skills and motivate them in learning English.

1.1. Review of Literature

1.1.1. Wikis as a Tool for Collaborative Writing

The basic functions of wikis offer students multiple opportunities to communicate, share information, present material, edit files, and collaborate on documents within a shared space (Kennedy & Miceli, 2013). In addition, wikis also have additional features that might help with collaboration. Wikis allow students to communicate with their equivalents, assume responsibility of their own study, and enhance their critical thinking skills. A study designed by (Yusoff et al., 2012) investigated students' viewpoints on wikis as a tool in collaborative writing. The findings show that the students have no major issues collaborating online. They said wikis are helpful for storing material and completing group work. They also reported that using wikis for collaborative projects increases group engagement.

Inside an online (Wiki) language international program (Chinese and English) in China and the UK, the impact of collaborative task on error checking for English as a Foreign Language acquisition was investigated by (Zou et al., 2016). The findings indicate that students like utilizing Wikis for collaborative learning to practice their language skills, especially when wikis are combined with specially created projects in their language classes. Wikis may be used as a language teaching aid to increase student participation in collaborative writing. Mohd Kasim et al. (2022) mentioned that this style of learning fosters online communities where students collaborate to achieve group goals connected to course tasks. Every group member has the capacity to improve in a way that benefits all. Kassem (2017) also found that wikis have a positive impact on the development of business writing skills and the reduction in writing anxiety among EFL students. It is suggested that instructors receive adequate training including how to incorporate wikis into business writing classes. There are also pedagogical implications as well as ideas for future research.

1.1.2. Integration of Wikis into EFL and ESP Courses

In foreign language classrooms, wiki-based collaboration is becoming more popular. Study conducted by Wang (2014) examined the use of wikis in an EFL writing classroom. The aim is to explore the extent to which wikis can facilitate collaboration and promote foreign language acquisition through a social constructivist perspective. According to the findings, wikis raise students' willingness to study English, improve their writing confidence, and support their social constructivist learning initiatives. Wikis also can benefit teachers and students by improving their writing skills in terms of accuracy and quality in a collaborative environment (Alshumaimeri, 2011). The study conducted by Kwan and Yunus (2015) explore the use of wikis in ESL collaborative writing among gifted students, particularly group participation and interaction. They found that wikis prove to be an interesting alternative for ESL collaborative writing that is capable of motivating and fostering collaborative language learning efforts among gifted students. Overall, these studies suggest that the integration of wikis into EFL and ESP classrooms can promote collaborative learning, increase students' motivation and confidence, and improve the quality of students' writing through interactive learning environments.

1.1.3. Wikis Used to Teach Business English Writing

As a type of ESP, business English is an important aspect of learning a second language. Meanwhile, the conventional focus of writing instruction has been on linguistic structures and practices (Sengupta & Falvey, 1998). In addition, while students learn the phases of the writing process step by step, they are not all provided with the chance to practice these skills in class. A

new approach to teaching business writing has therefore been introduced in foreign language training and corporate communication. Writers focus on the most efficient means of communicating their messages while avoiding misconceptions. The application of wiki technology has made work in a group easier, preparing students to deal with the intricacies of today's commercial environment.

The investigation looks at the following ten criteria for the post-test or for non-wikis, including format/layout, audience and purpose, organization, content and style, grammar and structure, language, reference, technical issues, vocabulary, and mechanics. In addition, (Kuteeva, 2011) looked into the use of wikis in a class of Effective English Communication. According to the findings, students who use wikis for writing exercises produce better viewer and audience-oriented texts. (Aydin & Yildiz, 2014) focused on the use of wikis for collaborative written assignments in foreign language classrooms. Regardless of the assignment category, the results of this analysis imply that students attach greater importance to meaning than to form. Finally, students admit having a favorable experience with wikis for foreign language writing and believing that their writing skills have therefore improved. Conventional workplace teaching in writing primarily emphasizes the procedure that focuses on students' cognitive and syntactic abilities. Further research regarding the effect of wikis on EFL students' business writing skills is hence required.

Although numerous studies have reported the positive effects of wikis on collaborative writing and language learning, several important gaps remain unresolved. First, most previous studies have focused on general EFL writing contexts, while limited research has specifically examined the use of wiki-based collaborative learning in Business English Writing courses within ESP settings. Second, previous studies tend to emphasize students' perceptions, motivation, and general writing improvement without investigating whether different types of wiki collaboration produce significantly different learning outcomes. Third, inconsistent findings have been reported regarding the improvement of specific writing components such as organization, vocabulary, grammar, and mechanics. While some studies reported significant improvement in writing quality, others found that collaborative wiki activities mainly enhanced participation and engagement rather than linguistic accuracy. Therefore, further investigation is needed to examine how wiki-based collaborative writing affects students' overall writing performance and individual writing components in ESP contexts.

1.2. Research Question

The study investigated the effect of wikis on the English writing skills of the students of Universitas Pahlawan Tuanku Tambusai. This study addressed the following research questions:

- 1.2.1. Is there a significant difference in students' writing performance among the four types of wiki-based collaborative activities?
- 1.2.2. Does wiki-based collaborative writing significantly improve students' overall writing performance and individual writing components?

2. METHOD

2.1. Research Design

This study employed a quasi-experimental one-group pretest–posttest design to examine the impact of wiki-based collaborative writing on students' business writing performance. The study did not involve a separate control group because the primary objective was to investigate changes in students' writing performance before and after participating in wiki-based collaborative

learning activities. In addition, the study compared four types of wiki collaborative activities to identify possible differences in writing performance across wiki treatments.

2.2. Participants and Context

The participants were selected using convenience sampling because all students enrolled in the Business English Writing course during the first semester of the 2021 academic year were involved in the study. The 100 students were divided equally into four collaborative wiki groups consisting of 25 students in each group. Each group participated in a different type of wiki-based collaborative writing activity throughout the treatment sessions. Its purpose is to strengthen students' capacity to deal with knowledge related to particular fields of business while supplying them with the language skills they need for academic studies and professional development.

The four wiki collaboration types differed in the structure of collaborative interaction and editing activities. Wiki Type 1 focused on individual drafting followed by peer correction. Wiki Type 2 emphasized group editing and content revision. Wiki Type 3 integrated collaborative organization and restructuring activities, while Wiki Type 4 combined collaborative drafting, editing, feedback exchange, and revision processes simultaneously. These different collaborative structures were designed to explore whether varying levels of interaction and collaboration influenced students' writing performance differently.

2.3. Instruments

The primary instrument used in this study was a writing test administered as both a pre-test and post-test. Students were required to compose a business letter within 60 minutes for each test. The writing tests were validated by two experts to ensure content validity. Students' writing performance was evaluated using an analytical scoring rubric covering six components: overall writing, content, organization, vocabulary, language use, and mechanics. The writing tests were assessed using inter-rater scoring by the course instructor and the researcher to ensure scoring consistency and reliability.

2.4. Research Analysis

The main data analysis used in this research was the difference or comparison test, both on the average and in the ranking. The type of analysis used was the Multiple Independent T Test. A descriptive analysis in the form of Crosstab was also carried out in this study to examine the values in different wikis. Descriptive statistics was performed to calculate the mean and standard deviation of the variables defined in the wiki treatment.

3. RESULTS AND DISCUSSION

3.1. Results

The descriptive statistics was used to calculate the mean and standard deviation of the variables. The results are presented in the following table.

Table 1. Descriptive Statistics of the Variables

Variable	Mean	SD
Overall	20.42	2.66
Content	2.96	1.04
Organization	2.84	0.97
Vocabulary	2.91	1.00
Language Use	2.97	0.86
Mechanics	2.95	0.95

There were six variables in the writing skill category, including Overall, Content, Organization, Vocabulary, Language Use, and Mechanics. The Language Use variable had the highest average value (2.97) with a standard deviation of 0.86. Meanwhile, the Organization variable had the lowest mean with 2.84 and a standard deviation of 0.97.

Table 2. Variable Distribution

Item	Add	Delete	Move	Wording	Link	Format	Lingual	Grammar
Terms edited at least once (%)	42	50	53	47	48	53	46	47
Average number of actions/terms	2.74	2.85	3.07	2.96	3.04	3.10	2.98	2.96
Standard deviation	0.93	0.98	0.98	0.97	1.02	1.01	0.94	0.97
Median	2.55	2.8	3.1	2.9	2.9	3.1	2.9	2.9

Table 2 presents the distribution of collaborative editing activities across different wiki interaction categories. The highest average number of actions was identified in the Format (M = 3.10) and Move (M = 3.07) categories, indicating that students were actively engaged in revising and restructuring collaborative writing content. Meanwhile, the Add category showed the lowest average score (M = 2.74). Overall, the findings suggest that students participated actively in various collaborative editing processes during wiki-based writing activities.

Table 3. ANOVA of the Writing Scores

Wiki Type	N	M/SD	95% CI		F	p	Significant paired test
			LL	UL			
P1	25	31.86/4.18	-2.381	3.037	0.993	0.400	P1<P4 (0.07)
P2	25	32.18/2.92	-3.037	2.381			
P3	25	32.14/3.69	-2.997	2.421			
P4	25	33.45/3.31	-4.301	1.117			

Based on the results of the ANOVA test, of the four types of wikis, W4 had the highest mean writing score with 33.45 while the standard deviation was 3.31. The difference in the writing scores for each type of wikis had a minimum lower limit of -4.301 with a maximum upper limit of 3.037. Then, the F value obtained was 0.993 with a P (Sig) value of 0.400, indicating that the overall writing scores among W1, W2, W3, and W4 have no significant differences. Furthermore, when compared among the wiki types, the mean of W4 was significantly different from or higher than that of W1 (Sig: 0.07). Meanwhile, W2 and W3 were insignificantly different.

Table 4. Mean and SD of the Overall Variable

	Pre-Test		Post-Test		T	p	95%CI		Effect Size
	M	SD	M	SD			LL	UL	
Overall	18.33	1.66	22.52	1.59	-12.88	0.00	-4.84	-3.54	0.33

The difference in the mean of the Overall variable between the pre-test and post-test reached 4.19 points. With 4.84 lower limit and 3.54 upper limit, the t value obtained was 12.88 (P = 0.00). Since the P value was less than 0.05, the difference in the pre-test and post-test treatment affected the difference in the mean of the Overall variable.

Table 5. Mean and SD of the Content Variable

	Pre-Test		Post-Test		T	p	95%CI		Effect Size
	M	SD	M	SD			LL	UL	
Content	3.10	1.04	2.81	1.03	1.44	0.15	-0.11	0.71	0.21

The difference in the mean of the Content variable between the pre-test and post-test was 0.30. With a lower limit of 0.11 and upper limit of 0.71, the t value was 1.44 ($P = 0.15$). Because the P value was more than 0.05, the difference in the pre-test and post-test treatment did not affect the difference in the mean of the Content variable.

Table 6. Mean and SD of the Organization Variable

	Pre-Test		Post-Test		T	P	95%CI		Effect Size
	M	SD	M	SD			LL	UL	
Organization	2.96	0.99	2.73	0.96	1.17	0.24	-0.16	0.61	0.19

The difference in the mean of the Organization variable of the pre-test and post-test was 0.23 with a lower limit of 0.16, an upper limit of 0.61, and a t value of 1.17 ($P = 0.24$). Because the P value was higher than 0.05, the difference in the pre-test and post-test treatment did not influence the difference in the mean of the Organization variable.

Table 7. Mean and SD of the Vocabulary Variable

	Pre-Test		Post-Test		T	p	95%CI		Effect Size
	M	SD	M	SD			LL	UL	
Vocabulary	3.06	1.05	2.75	0.93	1.56	0.12	-0.08	0.70	0.20

The difference in the mean of the Vocabulary variable between the pre-test and post-test reached 0.31. With 0.08 lower limit and 0.70 upper limit, the t value was 1.56 ($P = 0.12$). Since the P value was more than 0.05, the difference in the pre-test and post-test treatment did not influence the difference in the mean of the Vocabulary variable.

Table 8. Mean and SD of the Language Use Variable

	Pre-Test		Post-Test		T	P	95%CI		Effect Size
	M	SD	M	SD			LL	UL	
Language Use	2.90	0.85	3.04	0.86	-0.82	0.42	-0.48	0.20	0.17

The difference in the mean of the Language Use variable between the pre-test and post-test was 0.14. The lower limit was 0.48, the upper limit was 0.20, and the t value was 1.82 ($P = 0.42$). A P higher than 0.05 indicated that the pre-test and post-test difference did not influence the mean difference of the Language Use variable.

Table 9. Mean and SD of the Mechanics Variable

	Pre-Test		Post-Test		T	p	95%CI		Effect Size
	M	SD	M	SD			LL	UL	
Mechanics	2.98	0.99	2.92	0.92	0.30	0.76	-0.32	0.44	0.19

The mean difference of the Mechanics variable between the pre-test and post-test was 0.06 with 0.32 lower limit, 0.44 upper limit, and 0.30 t value ($P = 0.76$). A P more than 0.05 showed that the pre-test and post-test difference did not affect the mean difference of the Mechanics variable.

The findings revealed a statistically significant improvement in students' overall writing performance after participating in wiki-based collaborative learning activities. The overall mean score increased from 18.33 in the pre-test to 22.52 in the post-test ($p < 0.05$). This result indicates that collaborative wiki activities positively contributed to students' general writing performance.

However, no statistically significant improvements were identified in the individual writing components, including content, organization, vocabulary, language use, and mechanics. Although slight mean differences were observed between the pre-test and post-test scores, the p-values for all individual components were higher than 0.05. These findings suggest that wiki-based collaborative writing may support students' overall engagement and writing fluency more effectively than specific linguistic sub-skills.

3.2. Discussion

The findings showed that there were no statistically significant differences among the four wiki collaboration types, although Wiki Type 4 obtained the highest mean score. This finding suggests that the effectiveness of wiki-based collaborative writing may not primarily depend on the specific type of wiki activity used, but rather on the collaborative learning process itself. All wiki types encouraged interaction, peer feedback, collaborative editing, and active participation, which are considered essential elements of social constructivist learning. Therefore, despite differences in collaborative structures, students appeared to benefit similarly from the collaborative writing experience.

The study also revealed that students' overall writing performance improved significantly after participating in wiki-based collaborative learning activities. However, no statistically significant improvement was identified in the individual writing components, including content, organization, vocabulary, language use, and mechanics. One possible explanation is that wiki collaboration primarily supports students' engagement, confidence, and writing fluency rather than immediate mastery of specific linguistic sub-skills. In collaborative environments, students tend to focus more on meaning negotiation, idea sharing, and task completion than on grammatical accuracy or mechanical correctness. Furthermore, the relatively short duration of the treatment may not have provided sufficient time for substantial improvement in specific writing components.

These findings support the principles of social constructivism, which emphasize that knowledge is developed through interaction, collaboration, and shared learning experiences. Through wiki-based activities, students actively constructed meaning together, exchanged feedback, and revised their writing collaboratively. This collaborative process may explain the improvement in overall writing performance, as students became more engaged and confident during the writing process. Nevertheless, collaborative interaction alone may not be sufficient to significantly improve technical aspects of writing without longer and more focused linguistic instruction.

The findings of this study are consistent with previous studies on collaborative and wiki-based writing. (Wang, 2015) reported that collaborative writing through wikis improved students' business writing skills and increased engagement in language learning activities. Similarly, recent studies have shown that collaborative digital writing environments can enhance students' writing confidence, interaction, and participation in EFL classrooms (Kitjaroonchai & Suppasetseree, 2021; Saksopin et al., 2024). Furthermore, (Wiboolyasarin et al., 2024) found that collaborative writing supported by digital feedback significantly improved L2 writing proficiency and collaborative learning engagement.

The present findings also align with (Gündüz, 2023), who reported that wiki-based collaborative writing tasks promoted active learning and writing development in higher education EFL contexts. In addition, (Aydin & Yildiz, 2014) emphasized that students using collaborative wiki environments tend to focus more on meaning construction than linguistic form, which may explain why significant improvement was found in overall writing performance but not in specific writing components in the present study. Therefore, the current findings reinforce previous evidence that wiki-based collaborative learning is effective in promoting collaborative engagement and general writing development in EFL and ESP contexts.

Pedagogically, the findings imply that wiki-based collaborative learning can be integrated into Business English Writing courses to promote active participation, collaborative interaction, and writing engagement. However, instructors may need to combine collaborative wiki activities with explicit language instruction and corrective feedback to improve students' linguistic accuracy and technical writing skills more effectively.

4. CONCLUSION

This study concludes that wiki-based collaborative writing positively contributes to students' overall business writing performance in an EFL context. Although no statistically significant differences were found among the four wiki collaboration types, the findings indicate that collaborative wiki activities generally support students' engagement and writing development. The study also found significant improvement in students' overall writing scores after the treatment. However, no significant improvement was identified in specific writing components such as content, organization, vocabulary, language use, and mechanics. These findings imply that wiki-based collaborative learning is effective in promoting collaborative engagement and overall writing development, but additional instructional support and longer treatment duration may be necessary to improve specific linguistic sub-skills. The study contributes to the implementation of digital collaborative learning in ESP and Business English writing instruction.

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