A Study of EFL Learners' Argumentative Writing Skills through Online Collaborative Writing Activities

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Abstract

This study explored the impact of online collaborative writing on EFL learners' argumentative writing abilities and learners' attitudes toward using this method to enhance writing skills. The participants consisted of twenty undergraduate learners from a writing classroom, selected through purposive sampling. The twenty learners were categorized into three proficiency levels: advanced, intermediate, and novice learners. The selected participants were then divided into five heterogeneous groups to collaboratively compose argumentative paragraph writings. This study employs a quantitative technique. The instruments consisted of six lesson plans, *pre-test* and *post-test*, four argumentative writing assignments, and a questionnaire. The study evaluated an online collaborative writing activity to determine how proficiency levels affected both group and individual writing performance. The results of the learners' argumentative writing *post-test* were higher than *pre-test* scores across all proficiency levels. The highest scores in learners' argumentative writing were found in the group performance, followed by the individual *post-test* scores, respectively. This approach enhances learners' analysis, evaluation, and content-creation skills, leading to more effective group work. Additionally, online collaborative writing simplifies tasks like gathering information and using various functions, making the writing process more efficient.

Keywords: argumentative writing, online collaborative writing, writing activities

Introduction

Writing is an essential skill for communicating and expressing educational knowledge, and its importance is steadily growing in Thailand (Sararit et al., 2020). Writing is often considered

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the most critical of the four core English language skills, especially in academic settings like universities (Karaca & Inan, 2020). Writing is essential for college student's academic success, as many university courses require term papers as part of degree program requirements (Jelodar & Farvardin, 2019). However, it is the most challenging skill for L2 learners to master, as it demands extensive linguistic knowledge, including grammatical accuracy, and lexical and syntactic competence (Karaca & Inan, 2020; Kioumarsi et al., 2018). Within the context of Thailand, Thai university learners struggle with academic writing in English, considering it the most challenging language skill to master in college composition courses (Rattanadilok Na Phuket & Othman, 2015; Sermsook et al., 2017). In university settings, learners engage in various types of written discourse, with argumentative writing being the most important for academic and professional settings (Abbas & Herdi, 2018; Permata et al. 2019). However, researchers identify it as the most challenging type of writing due to its complexity (Ferris, 1994; McCann, 1989). Argumentative writing is a complex task where the writer takes a stance on a controversial issue and provides reasons and evidence to persuade the reader to accept their viewpoint (Anker, 2005; Intraprawat, 2002). Thus, the challenges Thai learners face suggest a need for targeted instruction to improve their argumentative writing skills. Language education employs various methodologies, with collaboration being a key approach. Collaborative writing, in particular, fosters interaction and teamwork by encouraging partners or groups to work together on creating written pieces (Zhang & Chen, 2022; Zhang & Plonsky, 2020). Collaborative writing is an instructional approach that enhances writing quality by promoting idea-sharing, peer feedback, and collective responsibility among students. It engages learners at every stage of the writing process and cultivates teamwork, critical thinking, and a comprehensive understanding of the writing process (Azodi & Lotfi, 2020; Such, 2019).

Technology is now essential in education, especially for teaching English writing to EFL learners. Digital platforms enable collaborative writing, helping educators overcome the time and space limits of traditional learning (Hafner & Ho, 2020; Hung et al., 2022; Lin et al., 2022; Loncar et al., 2021; Rahimi & Fathi, 2022; Yeh, 2021). Online collaborative writing instruction gives learners access to various resources and writing communities, empowering them to improve the writing skills and overcome writing challenges. Therefore, this research utilizes online collaborative writing activities to enhance the argumentative writing skills of EFL learners with the aim of investigating the effects of online collaborative writing on EFL learners' argumentative writing abilities and learners' attitudes toward using this method to enhance writing skills.

Literature Review
1. English Writing in Thai Contexts

Most Thai EFL learners start learning English in primary school, focusing on four skills. While English is not widely used socially, it is prevalent in academic contexts (Chuenchaichon, 2014). However, Pawapatcharaudom (2007) argued that most Thai university learners continue to face significant challenges with writing skills. They find writing the most challenging skill due to its complexity, involving content, context, process, register, rhetoric, and linguistic features. In

Thailand, teaching writing often relies on traditional methods, focusing on understanding language patterns and improving skills using instructor-provided texts (Chanaroke & Niemprapan, 2020; Nguyen, 2019c; Nguye & Suwannabubpha, 2021). Despite some improvement in English proficiency, their performance remains unsatisfactory, especially in academic settings.

2. The Process Approach to Teaching Writing

The process approach views writing as a dynamic activity where writers generate, revise, and refine ideas to communicate more effectively. The process approach to writing emphasizes skills like planning, drafting, and revising while placing less focus on linguistic knowledge such as grammar and sentence structure compared to the product approach (Badger & White, 2000). So, the process approach to writing motivates learners to improve their language skills and expand their linguistic knowledge by incorporating feedback from teachers and peers throughout the writing process

3. Argumentative Writing

Argumentative writing is a style aimed at persuading the reader of the validity of a statement by defending the author's perspective (Oktavia et al., 2014). It involves taking a stance on an issue, supporting it with reasons and evidence, and analyzing the topic to present a clear position. This approach focuses on the importance of using evidence to strengthen arguments and effectively persuade the reader (Layaalia, 2015; Rachmawati, 2016). Argumentative writing demands that the writer effectively convey an in-depth understanding and extensive knowledge of the topic. This makes it the most advanced level of writing, characterized by a clear purpose and well-defined boundaries.

4. Structure Elements of Argumentative Writing

According to Hatch (1992), the traditional structure of argumentative writing includes an introduction, case explanation, argument outline, proof, refutation, and conclusion. However, there are many other formats for constructing argumentative texts beyond the classical model. In this study, the researcher uses Reid's (1988) framework for structuring argumentative writing, which is valued for its organized and systematic approach to presenting arguments. It provides a clear sequence of components, beginning with an introduction that includes a thesis statement, followed by optional background information. The structure then progresses through three supporting arguments, addresses counterarguments and refutations, and may conclude with a proposed solution. This structured framework ensures a logical flow of arguments while offering flexibility by allowing sections to be omitted based on factors like assignment requirements, audience, and available material, providing a systematic yet adaptable approach to argumentative writing.

5. Collaborative Writing

Collaborative writing is rooted in the principles of collaborative learning, inspired by Vygotsky's theory that human development and learning take place within a social context. In

collaborative writing, learners work in groups to create a text together, fostering mutual learning among peers (Storch, 2005). Many instructors incorporate collaborative writing into their classes, guiding learners through brainstorming, drafting, and editing. Some instructors have groups discuss key points, assign individual sections for drafting, and later combine them into a unified essay (Kuiken & Vedder 2002a; Storch 2005). Others involve learners in presenting their essays to the class or engaging in peer review sessions after drafting (Fung, 2006). Collaborative writing can be a more effective learning method than traditional teacher-centered instruction, as it fosters a collaborative learning environment where multiple learners actively engage and work together. During collaborative assignments, students can learn from their classmates while working together. The difference between studying collaborative writing in L1 and L2 may relate to how it helps in language acquisition (Dobao 2012; McDonough, et al., 2018; Villarreal & Gil-Sarratea, 2019).

In summary, Collaborative writing helps learners develop new skills by exposing them to different roles and tasks. It encourages peer interaction, improves thinking processes, and prepares them for success in academics and real-life situations (Gutiérrez, 2008; Storch, 2013).

6. Online Collaborative Writing

In recent years, technology has significantly reshaped education, especially in English language teaching, making its integration into writing instruction essential for EFL teaching (Barrot, 2021; Cancino & Panes, 2021). Research has shown that interaction patterns in web-based collaborative writing have a positive impact on the quality of the written texts (Elola & Oskoz, 2010). This proficiency enables educators to create various opportunities for language learners to actively engage in and enhance their L2 writing skills (Zheng & Warschauer, 2017). It is suggested that L2 writing instructors adopt a multimodal approach, incorporating various modes and digital technologies to improve writing quality. In recent years, teaching writing through online collaborative instruction has gained popularity (Weisberger et al., 2021; Yeh, 2021). Online collaborative writing instruction offers several advantages over traditional face-to-face methods. It allows learners to communicate and collaborate in real-time, regardless of location, and provides the opportunity to receive feedback from a wider audience, enhancing the writing experience (Hsu, 2020). Online collaborative writing instruction gives learners access to a variety of online writing resources (Abrams, 2019). Learners have access to resources like online dictionaries, grammar checkers, and writing communities, which support their writing development and help them overcome common writing challenges (Hafner & Ho, 2020; Reinhardt, 2019).

Research Objectives

1. To investigate the effects of online collaborative writing on EFL learners' argumentative writing ability.

2. To explore EFL learners' attitudes toward the use of online collaborative writing in enhancing an argumentative writing ability.

Methodology

1. Research Design

This study used a single-group *pre-test* and *post-test* design to collect quantitative data. The research followed a two-phase strategy. In the first phase, the focus was on reviewing relevant theories and research on the collaborative writing approach. This phase also involved creating online collaborative argumentative writing activities and designing the research instruments for the study. In the second phase of the study, *pre-test* and *post-test* experimental design was used to implement online collaborative argumentative writing. Microsoft Teams was the platform for conducting and assessing the activities. The participants for this phase were undergraduate learners. The learners were assigned four argumentative paragraph writing tasks, based on Reid's (1988) structure. The assessment criteria used for scoring were adapted from the TOEFL Writing Scoring Guide (2014) (Educational Testing Service, 2014)

The study explores two key aspects: it evaluates third-year learners' writing proficiency by analyzing the *pre-test* and *post-test* results and focusing on four argumentative paragraph writing guided by online collaborative writing activities. Secondly, the study also examined EFL learners' attitudes toward online collaborative writing using a questionnaire for detailed analysis.

2. Population and Samples

The study participants included a single group of 20 undergraduates enrolled in the Academic Writing course during the 2024 academic year. A purposive sampling method was employed to ensure diversity, with participants divided into three proficiency groups: advanced, intermediate, and novice learners. Learners will be categorized based on learners' grade averages from English writing courses, including English Sentences and Paragraph Writing, during the 2022-2023 academic year.

The 20 learners were divided into five groups to collaboratively compose an argumentative paragraph for each assignment. The teacher organized the groups based on learners' grade averages from the previous English writing course, categorizing them as advanced, intermediate, and novice learners. Learners were then allowed to choose their groups, with the condition that each group must include members from all proficiency levels.

3. Research Instruments
3.3 Lesson Plans

The lesson plan was carefully developed, focusing on the principles of an online collaborative writing activity based on Moonma's model (2021). It included eight steps: overview, study, pre-writing, drafting, revising, rewriting, proofreading, and publishing, all aimed at improving learners' argumentative writing ability and argumentative paragraph writing. The lesson plan consisted of six lessons, each designed to enhance learners' writing skills through online collaborative writing activities. Each lesson lasted four hours per week, totaling 240 minutes. Three experts in English language education validated the lesson plans to assess the appropriateness and completeness using a satisfaction survey. The satisfaction survey showed

a mean of 4.91 and a standard deviation of 0.15, indicating strong expert agreement on the lesson plan's relevance and appropriateness.

3.2 Pre-test & Post-test

The test was designed to assess learners' proficiency in writing argumentative paragraphs during the initial session and after completing the online collaborative writing tasks. It had a duration of one hour, during which learners were required to compose an English argumentative paragraph of at least 200 words.

The *pre-test* and *post-test* writing assessments, based on IELTS prompts, feature distinct but equally challenging topics. The *pre-test* writing prompt is "Some people believe that the internet has facilitated greater social interaction, while others believe that it has resulted in increased isolation among people and communities. Is the Internet increasing isolation or bridging gaps?". The *post-test* writing prompt is "While some people believe that obtaining a degree from a university is the most effective method of securing a good job, others believe that it would be more advantageous to immediately enter the workforce and acquire experience. Is a university degree essential for a successful career, or is obtaining work experience more valuable?".

The *pre-test* and *post-test* were validated for content validity before implementation. Three English language instruction experts assessed the tests' suitability and relevance using the *Item-Objective Congruency Index* (IOC), achieving a perfect IOC score of 1.00 for each assessment. This validation confirmed alignment with educational objectives and academic standards.

3.3 Argumentative Writing Tasks

Learners were allowed to write argumentative paragraphs on four different topics to assess the argumentative writing. The topics, derived from IELTS exam prompts, covered education, family, social issues, and media. The scoring criteria were adapted from the Test of Written English (TWE), which employs a holistic scoring approach. This method evaluates writing on a single scale, emphasizing overall performance rather than analyzing individual components or counting errors. (Saito, 2010). This approach emphasizes the strengths of the writing, focusing on what is most relevant in the given context and effectively highlighting key information about these elements. This study adopts a holistic assessment approach, emphasizing the simultaneous development of all aspects of writing proficiency. It evaluates writing with a single grade that represents an overall impression of the work. The argumentative writing assessments, featuring distinct subjects, were validated for content accuracy by three experts in English language instruction using the *Item-Objective Congruency Index* (IOC). The evaluated items achieved an IOC score of 1.00, exceeding the commonly accepted threshold of 0.5, demonstrating strong alignment with the research objectives. This thorough validation underscores the writing assessment's reliability as a key study instrument.

3.4 Questionnaire

The questionnaire, adapted from Wichanpricha (2021), was developed to explore learners' attitudes toward online collaborative writing activity. The questionnaire consisted of 5 Likert

scale items, with responses ranging from "Strongly Agree" to "Strongly Disagree". The *Index of Item-Objective Congruence* (IOC) was used to validate the questionnaire, with three experts in English language instruction ensuring its relevance and alignment with the study's aims. An IOC score of at least 0.5 was required for an item to be deemed acceptable. After expert evaluations, the questionnaire achieved an outstanding IOC value of 1.00, demonstrating its strong alignment with the study's objectives. Its reliability was further confirmed through a pilot test with a non-sample population, yielding a Cronbach's Alpha of .90, indicating high reliability.

4. Data Collection

This study took place over six weeks during the 2024 academic year in the Academic Writing course. The course was selected for its focus on enhancing learners' argumentative writing skills. A key objective of the study was to explore how learners' writing abilities improved through online collaborative argumentative writing activities. It was important to incorporate activities in the writing class that would support learners' learning while avoiding any negative effects.

5. Data Analysis

This study's data analysis examined the impact of an online collaborative writing activity on EFL learners' argumentative writing skills and the learner's attitudes toward the activity.

The learners' *pre-test*, *post-test*, and writing assignment scores were assessed by two experts using the Test of Written English (TWE) Scoring Guide. The average scores from both raters were analyzed using a paired-sample *t*-test in the computer program to evaluate the impact of the argumentative writing tasks on learners' performance. To assess the quality of argumentative writing, two raters will evaluate the learners' work. Rater 1 will be a Thai English language instructor from the English Department, and Rater 2 will be a native English speaker with experience teaching Thai EFL students. The scores from both raters will be analyzed to ensure they are consistent and reliable.

The analysis of the Likert-scale (Wichanpricha, 2021) questionnaire assessed learners' attitudes toward online collaborative writing, showing that this method is effective. Descriptive statistics, including mean scores for each statement and standard deviations, were calculated to evaluate the responses. This analysis provided insights into the level of consensus among learners regarding the effectiveness of the teaching method.

Results

This section analyzes data from 20 undergraduate learners enrolled in an Academic Writing course. The study aims to achieve two key objectives: first, to investigate the effects of online collaborative writing on EFL learners' argumentative writing abilities, and second, to collect learners' attitudes toward using online collaborative writing as a tool to enhance argumentative writing skills.

1. The Effect of Online Collaborative Writing Activities on Learners' Argumentative Writing Ability

To obtain the results of EFL learners' argumentative writing ability before and after implementing the writing instruction in the online collaborative writing activities, the participants were assigned to do a *pre-test* and *post-test* with each scored out of thirty. In this part, the findings were presented in the mean score, standard deviation, and paired samples *t*-test. Table 1 presents the results of the analysis.

Table 1

Paired Samples Test: The Overall Learners' Argumentative Writing Mean Scores (Pre-Test vs. Post-Test)

Test	*n*	*M*	*SD.*	Mean Difference	*t-test*	*df*	*Sig*	Lower	Upper
Pre-test	20	4.85	0.812	4.8500	26.688	19	0.000*	4.4696	5.2304
Post-test	20	7.40	1.046	7.4000	31.629	19	0.000*	6.9103	7.8897

*P<.05

Table 1 presented the Paired Samples Test results for 20 Thai undergraduate learners, revealing significant improvements in argumentative writing after online collaborative activities. *Pre-test* scores averaged 4.85, increasing to 7.40 in the *post-test*, with p-values of 0.000* confirming the significance. The confidence intervals for both *pre*-and *post-test* scores supported the reliability of these findings, indicating that online collaborative writing activities effectively enhanced the learners' argumentative writing skills.

To evaluate EFL learners' argumentative writing proficiency during online collaborative writing activities, participants worked in groups to complete four argumentative writing assignments. The findings were presented in terms of the mean score, standard deviation, and paired samples *t-test*. The results of this analysis were shown in Table 2.

Table 2

Paired Samples Test: The Learners' Argumentative Writing of all proficiency levels Mean Scores (Pre-Test vs. Post-Test)

Students' Level of English Proficiency	Pre-test				Post-test			
	M	*SD.*	*t-test*	*Sig*	*M*	*SD.*	*t-Test*	*Sig*
Advanced (*n* =5)	20.00	0.125	36.470	0.000*	26.80	1.643	63.687	0.000*
Intermediate (*n* =6)	16.00	0.632	25.298	0.000*	23.66	1.173	20.163	0.000*
Novice (*n* =9)	15.00	1.500	30.00	0.000*	21.33	1.000	64.00	0.000*

*P<.05

Table 2 compares pre-test and post-test scores for argumentative writing proficiency across advanced, intermediate, and novice learners. All groups improved after online collaborative

writing activities, with the advanced group showing the highest scores (26.80), followed by the intermediate group (23.66), and the novice group (21.33).

The standard deviations reveal performance variability among groups. The advanced group showed consistent performance initially, with slight variability increases post-test (20.00 to 26.80). The intermediate group maintained moderate variability, with a small post-test increase (16.00 to 23.66). The novice group, initially the most variable, showed improved consistency after the intervention (15.00 to 21.33).

In conclusion, all proficiency levels showed significant improvement in argumentative writing after online collaborative writing activities, with advanced learners achieving the highest scores and intermediate and novice groups making notable relative gains. This underscores the efficacy of online collaborative writing in enhancing writing abilities at all levels of proficiency.

Table 3

The Improvement in Four Argumentative Writing Assignment Scores Focused on Group Work during Online Collaborative Writing Activities

Group	n	M	SD.	Mean Difference	t-test	df	Sig	Lower	Upper
Group 1	4	23.75	1.750	23.750	13.571	3	0.001*	18.1807	29.3193
Group 2	4	24.50	1.658	24.500	14.774	3	0.001*	19.2225	29.7775
Group 3	4	25.00	1.732	25.000	14.434	3	0.001*	19.4878	30.5122
Group 4	4	25.50	1.658	25.500	15.377	3	0.001*	20.2225	30.7775
Group 5	4	26.25	1.750	20.680	15.00	3	0.001*	20.6807	31.8193

*$P<.05$

Table 3 analyzed the four writing assignments completed by EFL learners, focusing on group performance and progression. A steady improvement was observed across groups, with scores rising from 23.75 in Group 1 to 26.25 in Group 5. The standard deviations remained consistent, ranging from 1.658 to 1.750, indicating stable performance with minimal variation. All groups showed statistically significant results ($p = 0.001$), confirming that the observed performance differences were meaningful and not random.

2. Learners' Attitudes toward Using Online Collaborative Writing as a Tool to Enhance Argumentative Writing Ability.

This study investigates learners' attitudes toward the effectiveness of online collaborative writing activities in enhancing argumentative writing skills, offering a deeper understanding of the topic. To gather insights, the researcher adapted a 10-item Likert scale questionnaire from Wichanpricha (2021) to assess learners' attitudes toward using Microsoft Teams for collaborative writing. Learners were asked to evaluate the items and select the option that best represented their views. The goal of this questionnaire is to provide a comprehensive understanding of undergraduate learners' perceptions of online collaborative writing.

Table 4

Learners' Attitudes toward the Effectiveness of Online Collaborative Writing Activities in MS Teams Enhancing Argumentative Writing Ability: Questionnaire Results

No.	Statement	M	SD.	Interpretation
1.	I improve my writing skills when learning Academic Writing through MS Teams.	4.70	0.47	Strongly Agree
2.	I believe that learning Academic Writing through MS Teams is as effective as learning in the regular classroom.	4.65	0.48	Strongly Agree
3.	I like learning Academic Writing through MS Teams more than the traditional method.	4.85	0.36	Strongly Agree
4.	I enjoy doing online collaborative writing activities through MS Teams.	4.65	0.58	Strongly Agree
5.	I grow more confident in argumentative writing as I learn Academic Writing through MS Teams.	4.80	0.41	Strongly Agree
6.	I can actively participate in online collaborative writing activities through MS Teams when working in a group.	4.85	0.36	Strongly Agree
7.	I can express more opinions in online collaborative writing activities through MS Teams.	4.75	0.44	Strongly Agree
8.	I have the opportunity to practice argumentative writing in online collaborative writing activities and presentation with friends through this platform.	4.8	0.41	Strongly Agree
9.	I can interact with teachers and friends while learning Academic Writing lessons through MS Teams.	4.7	0.47	Strongly Agree
10.	I am proud of myself for contributing to the success of the online collaborative writing activities through MS Teams.	4.85	0.36	Strongly Agree
	The learners' overall attitude level	4.76	0.06	Strongly Agree

Table 4 analysis of learners' attitudes toward online collaborative writing activities reveals strong positive perceptions. The data, collected through a 10-item Likert scale questionnaire, shows consistently high mean scores across all statements, indicating that learners strongly agree with the effectiveness and enjoyment of learning academic writing. The learners' overall attitude toward online collaborative writing is highly positive, with a mean score of 4.76 and low variation (standard deviation of 0.06). They feel that MS Teams effectively improves their writing skills (4.70), and they find the platform as effective, if not more so, than traditional classroom learning (4.65). A strong preference for MS Teams over traditional methods is reflected in the mean score of 4.85.

Learners report high enjoyment (4.65) and increased confidence in argumentative writing (4.80) through MS Teams. They value the opportunity for active participation (4.85) and peer collaboration in argumentative writing activities (4.80). The ability to engage with both teachers and peers (4.70) enhances their learning experience, and they take pride in their contributions to the success of collaborative writing activities (4.85). Overall, MS Teams is seen as an effective, engaging tool for improving academic writing.

Discussion

The purpose of this study was to investigate the effects of online collaborative writing on EFL learners' argumentative writing ability and learners' attitudes toward this approach. The results demonstrated significant improvements in learners' writing skills, which are consistent with the findings of Dobao (2012), McDonough et al. (2018), and Villarreal & Gil-Sarratea (2019), who emphasized that collaborative writing fosters an effective learning environment by encouraging active engagement and teamwork among learners. Similarly, Storch (2019) supported that collaborative writing enables writers to contribute to the text's content and engage in reviewing and discussing each other's suggestions. This process encourages learners to analyze and discuss linguistic choices and idea organization, facilitating learning through critique, questioning, and discussion. Such peer interaction helps learners expand their linguistic resources and gain a deeper understanding of writing. Moreover, incorporating online collaborative writing enhances learners' development and leads to higher writing scores.

Additionally, learners expressed their attitudes toward the use of online collaborative writing in enhancing their argumentative writing abilities through a questionnaire. The learners' overall attitude toward online collaborative writing activities is strongly positive. The results show a clear consensus that learners find online collaborative writing activities effective, enjoyable, and conducive to improving academic writing skills. These findings support Elola & Oskoz (2010), this approach positively impacts the quality of written texts. It allows learners to collaborate in real-time, regardless of location, and receive feedback from a broader audience, improving learners' writing experience (Hsu, 2020). Moreover, it helps learners overcome challenges and supports the development of writing ability. (Hafner & Ho, 2020; Reinhardt, 2019).

1. The Effects of Online Collaborative Writing Activity on EFL Learners' Argumentative Writing Ability

The *pre-test* and *post-test* results revealed significant improvements in learners' argumentative writing skills after participating in online collaborative activities. *Post-test* scores showed statistically significant increases, with confidence intervals confirming the reliability of these findings. Advanced, intermediate, and novice learners all demonstrated notable progress, with advanced learners achieving the highest scores and intermediate and novice groups showing substantial relative gains. Standard deviations indicated consistent performance among advanced learners, moderate variability in the intermediate group, and improved consistency in the novice group. Furthermore, the analysis of four argumentative writing assignments during online collaborative activities revealed steady group performance improvements, with

statistically significant results underscoring the meaningfulness of these gains. These findings collectively demonstrate the effectiveness of online collaborative writing in improving both individual skills and group performance in argumentative writing across all proficiency levels.

2. The Learners' Attitude toward Online Collaborative Writing Activity on EFL Learners' Argumentative Writing Ability

The result of learners' attitudes toward online collaborative writing activities reveals strong positive perceptions. Based on a 10-item Likert scale questionnaire, learners consistently reported high mean scores, demonstrating strong agreement with the effectiveness and enjoyment of learning academic writing through these activities. MS Teams was particularly praised, with learners recognizing it as an effective tool for improving writing skills and often preferring it over traditional classroom methods. Learners emphasized increased enjoyment and confidence in argumentative writing, valuing the platform's opportunities for active participation and peer collaboration. The ability to engage with both teachers and peers was seen as enhancing the overall learning experience. Learners expressed pride in their contributions to collaborative writing tasks, reinforcing the view of MS Teams as an engaging and effective tool for academic writing improvement.

Conclusion

This research, conducted within the context of an Academic Writing course, aimed to explore the effects of online collaborative writing on EFL learners' argumentative writing skills. The analysis of *pre-test*, *post-test*, and argumentative writing assignments results revealed significant improvements in learners' argumentative writing abilities after engaging in online collaborative writing activities. These findings highlight the effectiveness of this instructional method in fostering notable progress in learners' writing skills. Additionally, learners expressed a strongly positive attitude toward online collaborative writing, with consensus indicating that they found the activities both effective and enjoyable, contributing positively to the enhancement of their academic writing skills. These findings emphasize the importance of incorporating contextual relevance in English language learning, serving as a guiding principle for enhancing the effectiveness of instructional methods.

Recommendations
Implications and Further Studies

Examining learners' engagement across different sections of the online collaborative writing process is crucial to understanding the diverse dynamics of collaboration. To address this, a method was developed to identify online collaboration patterns that capture the fluid and evolving nature of interactions in collaborative writing. The study concludes with several recommendations for future research. First, the findings could be applied to various contexts across different regions of Thailand and with learners at different educational levels, providing insights into the effectiveness of online collaborative writing in diverse settings. Second, the study explores both the benefits and limitations of online collaborative writing, offering valuable insights into how technology tools can support the development of argumentative

writing skills, particularly for EFL learners in Thailand. Third, the approach suggests focusing on patterns of interaction in specific aspects of the task, such as content, organization, and language use, rather than conducting a broad, holistic examination. Finally, investigating the relationship between learners' attitudes and a qualitative assessment of their collaboratively written work could offer a deeper understanding of how important a learner's mindset is in achieving the potential benefits of online collaborative writing, as attitude and motivation are often studied together.

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