

COLLABORATIVE WRITING TASKS IN EFL CLASSROOM:
COMPARING GROUP, PAIR, AND INDIVIDUAL WORK
IN ARGUMENTATIVE WRITING



A Dissertation Submitted to University of Phayao
in Partial Fulfillment of the Requirements
for the Doctor of Philosophy Degree in English
May 2022

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หลักสูตรปริญญาศิลปศาสตรดุษฎีบัณฑิต
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JITLADA MOONMA

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Dissertation

Title

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Doctor of Philosophy Degree in English
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Keywords: argumentative writing, collaborative writing, critical thinking, patterns of interaction

ABSTRACT

The aims of this research were to study the effects of the students' argumentative writing qualities by using collaborative writing activities, the students' self-assessments of the critical thinking skills practiced in writing activities, and the students' patterns of interaction during collaborative writing. The subjects of the study were thirty–two second–year English major students taking Writing II in the second semester of the academic year 2019 at a northern Thai university. The instruments consisted of individual and collaborative writing lesson plans that covered three weeks, with four hours in each class, and a writing model. Data was collected from the students' argumentative writing assignments, students' self–assessment of critical thinking practiced in writing activities through a questionnaire and a semi–structured interview, plus conversations observed and documented during collaborative writing activities. The data was analyzed by using descriptive statistics (mean and standard deviation), and data linguistics were analyzed by Revised Bloom's Taxonomy and Storch's model. The results of the students' argumentative writing revealed that group work led to the highest scores in all proficiency levels. In groups, the students' critical thinking improved regarding analyzing, evaluating, and creating information when they brainstormed, shared, and discussed all the information. The highest degree of critical thinking skills practiced was found in groups, followed by pairs, and individuals, respectively. Regarding patterns of interaction, the advanced and intermediate students engaged and interacted better than novice students. The roles of advanced and intermediate students were shown to be expert and collaborative, whereas the novice students were found to be passive.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my dissertation advisor. For her excellent, caring, patience, and providing me with many insightful discussions and suggestions, Assistant Professor Dr.Chittima Kaweera deserves our highest praise. I am also deeply grateful to Assistant Professor Dr.Khomkrit Tachom, Assistant Professor Dr.Sukanya Kaowiwattanakul, and Dr.Rattana Yawiloeng, who have been actively interested in my work and have always been available to advise me. They are all hard-working professors. This thesis would not have been completed without all the support.

I would like to express my sincere appreciation to the chairman of my dissertation examination, Assistant Professor Dr.Wannaprapha Suksawas, for her valuable suggestions and warm encouragement.

I also would like to express my deep thanks to the experts involved in the validation survey for this research project: Assistant Professor Dr.Sukanya Kaowiwattanakul, Dr.Rattana Yawiloeng, and Dr.Chuanpit Sriwichai. Without their passion, the validation survey could not have been successfully conducted.

I would like to thank you, my friends in a doctoral program, my colleagues in the English Department, the faculty of Humanities and Social Sciences at Lampang Rajabhat University, and Mr. Greg Sugden and Mrs. Merrie Hamilton, my foreign friends, for supporting me in my studies and always encouraging and sharing every moment throughout the period of my research.

I would like to thank my thirty-two second-year English major students in the English Department, the faculty of Humanities and Social Sciences at Lampang Rajabhat University, who were the participants in this study.

I would like to express my deep appreciation to the University of Phayao, Thailand, for providing financial support for this Doctoral Degree Dissertation.

Finally, I must express my very profound gratitude to my parents, my sister, and brother for their constant support, encouragement, and unconditional love throughout my life.

Jitlada Moonma

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CHAPTER I

INTRODUCTION

Background and Rationale of the Study

Spoken by 1.75 billion people—a quarter of the world’s population—English is emerging as the first global language. As a lingua franca of trade, technology, and culture, it has been entwined with increasing globalization throughout the last several decades (Tapio et al., 2019). Under David Graddol’s extensive survey for the British Council (2019), the number of non-native or second-language speakers of English now outnumbers those of primary or native speakers. Moreover, English has been recognized as a universal language and as a tool for communicating, exchanging, and transferring knowledge, information, and technology.

In Thailand, English has also been recognized as an important component of the educational system. At all levels, a lot of educators have worked to establish and improve English teaching practices (from primary to university). This is because it has been recognized that English is a crucial tool for gaining additional knowledge, communicating with others, and serving as a primary educational tool. Furthermore, it is a necessary component for performing a variety of high-paying jobs (Chanaroke & Niemprapan, 2020)

However, it cannot be denied that Thai students spend twelve years studying English in primary and secondary schools, but the results are somewhat unsatisfactory. In addition, it is obvious that Thai students’ English proficiency and learners’ performance are relatively low (Khamkhien, 2010). From those results, in recent times, there has been an increasing emphasis on English taught in schools to enhance learners’ English language competency (Chanaroke and Niemprapan, 2020).

Taladngoen (2019) claims that the reform of a new English learning and teaching policy in the basic education system in 2017 transformed the grammar–translation method to CLT, starting from listening, speaking, reading, and writing, respectively. For language pedagogical context, learner–centered methods such as practical experience, independent work, autonomous learning, and self–access should be more encouraged than the traditional teacher–centered ones and Communicative Language Teaching (CLT) should be applied in the classrooms. Traditionally, Thai EFL teachers employ grammar–translation and audiolingual

methods in the English classroom. This leads to the use of unnatural language and creates a failure of interaction in the language classroom. Moreover, writing skill is one of the most important skills for educational success, but also one of the most complex skills to be mastered.

According to Sri Durga and Rao (2018), writing is an extremely complex cognitive activity in which the writer is required to demonstrate control of variables simultaneously. Strong writing skills may enhance students' chances for success. Writing is an essential factor of language. Good writing skills are needed for all the students to accomplish their educational and employment requirements. Process Approach stresses writing activities that move learners from the generation of ideas and the collection of data through to the publication of a finished text. The process approach is learner-centered in which learners' needs, expectations, goals, learning styles, skills, and knowledge are taken into consideration.

Although writing is essential for their current and future life the students are still struggling with it (Sari & Kaba, 2019); (Permata, Riyen and Hamzah, 2019, p. 892) state that students need to integrate all language elements to produce a good writing skills. Writing is a productive skill that delivers some ideas from an author's mind based on their feelings and experiences incorporated into good and proper sentences, paragraphs, and texts.

Nevertheless, the role of writing in English is limited in schools. Students are generally asked to write guided and/or controlled paragraphs and/or short essays occasionally. Students need more opportunities to practice another genre of writing and use it more communicatively inside and outside the language classroom. Thus, creating an environment, such as collaboration and another complex kind of writing seems to be a challenging issue for a writing English teacher.

Regarding the learner problems in English writing, students have some problems: incorrect grammar, lexicon knowledge limitation, and inappropriate word choices. They usually write grammatically incorrect sentences and are unable to use appropriate words; moreover, they do not know how to support their ideas by using evidence, facts, information, or statistics to argue some issues in their paragraphs. So, all problems affected the result of their writing quality. In addition, as students are assigned to write basic genres of writing (essay writing,

paragraph writing, problem-solving writing, and expository writing), these types of writing have been considered to not promote students' critical thinking skills (Hyland, 2013).

Thus, most Thai students at a university level are incapable of writing good argumentative paragraphs because of their lack of knowledge of English argumentative writing and inadequate practice writing during their past classroom instruction (Ka-kan-dee and Kaur, 2015).

According to Sari and Kaba (2019), one genre of writing that students need to master is argumentative writing. Furthermore, Sari and Kaba (2019) claimed that writing an argumentative essay is different from other essays because it has a different generic structure and language feature. When the topic arises from an issue, and then the writer should write different points of view toward the topic. In other words, the writer has to state the supportive ideas to persuade the reader to believe the topic. Therefore, an argumentative essay is complete as it involves all aspects of the writer, such as scientific ideas, and rhetorical features, and adds "sense" for readers to accept it.

Therefore, writing an argumentative essay is essential for university students (Sari and Kaba (2019)). However, for students who come into university, writing argumentation is one of the challenges English learners are likely to face (Hirvela, 2013). This is because of the nature of the demands posed by argumentative writing. It is a scientific paper that contains arguments, explanations, proof, or reasons then the writer argues for a certain idea and tries to persuade readers to adopt the writer's point of view (Abbas, 2018; Permata, 2019). Hence, when students are expected to produce arguments, they do not always meet this expectation (Hirvela, 2013).

For those challenging reasons, writing at a university level and a specific genre of writing, researchers and educators have developed a new English writing teaching methodology, which enhances the ability of learners to work in a group. It is called collaborative learning (CL). It is believed that every learner has individual differences. When learners interact, collaborate, and brainstorm with a group, a more meaningful and brighter ideas will emerge (Vygotsky, 1987).

Collaborative learning can be one of the important tools providing students with the learning activities which allow them to work together in a group but this is different

from group activities such as cooperative learning. Jacobs (2015) explained that collaborative learning is like a jigsaw puzzle where each student is required to research one section of the material and then teach it to the other members of the group. Compared to cooperative learning, it enables each student of a "home" group to specialize in one aspect of a topic. However, it differs from CL in that students in this kind of learning meet with members from other groups who are assigned the same aspect, and after mastering the material, return to the "home" group and teach the material to their group members.

When collaboration occurs among students, it helps to foster writing skills, including critical thinking skills. Moreover, collaborative learning is a learning strategy wherein two or more individuals are collaboratively engaged in a learning process. In this regard, among individuals within a learning group, they interact, negotiate to solve problems during learning, make use of their cognitive and metacognitive skills during interactions, and become responsible for their learning (Chatterjee and Correia, 2020; Hautala and Schmidt, 2019). Therefore, interactions are the key to CL. There are two kinds of interactions in CL, namely cognitive interactions in that learners will be actively involved in the processes of thinking, reasoning, analyzing, and elaborating with one another concerning the learned material. The other kind is socioemotional interactions whereby learners will understand each other, complete their competencies, be empathetic, and feel the essence of their collaborations with each other (Isohätälä, Näykki and Järvelä, 2019).

Furthermore, CL has advocated for the development of critical thinking skills in students (Hunaidah, et al., 2018; Kusumawati, Hobri and Hadi, 2019). Critical thinking abilities, according to Howard, Tang, and Austin (2015), are cognitive processes that make the most of one's knowledge and reflective experiences. Such cognitive processes enable students to describe an issue, appreciate the interrelationships between a problem and other connected elements, analyze and confirm facts linked to a problem, and develop a meaningful and representative conclusion so that the problem can be solved.

The importance of CL mentioned above and collaboration in writing has received increasing attention in the past decades (Zhang, 2018) and gained a growing interest among researchers and educators as an activity that can be simply defined as the involvement of two or more writers in the production of a single text (Storch, 2019).

Based on previous studies in the field of English as a Foreign Language (EFL) and a second language (L2) students in writing, there are some common problems that students usually face while they are writing an argumentative essay. The literature has claimed that these common problems are: organizational structure of writing, integrating academic sources, finding sources, writing topic sentences, grammar, writing counterclaims and refutation, punctuation, academic tone, and including unrelated information in writing (Derakhshan and Shirejini, 2020). Therefore, using collaborative writing activities would be helpful to enhance the students' argumentative writing ability which is required as a mode of academic writing and a common writing genre that college-level students use at universities (Ozfidan and Mitchell, 2020).

The benefits of collaborative writing (CW) is apparent when each learner benefits by helping the other by providing support as a peer reviewer in a process-based approach to writing class (Shehadeh, 2011), it can be seen that collaborative writing can encourage learners to learn from their peers. This is because the activity seems to promote higher achievement, deeper understanding, enjoyable learning, and positive attitudes. Furthermore, the activity seems to reduce learners' anxiety and foster their confidence when interacting with their peers or in group activities rather than individual work (Li and Kim, 2018; McDonough and De Vleeschauwer, 2019).

Hence, collaborative writing seems to have positive effects on language learners, not only in writing skills but also in critical thinking skills. According to McDonough and De Vleeschauwer (2019), it is believed that this activity could explore not only effective writing skills but also real-world social and professional skills. Furthermore, critical thinking is promoted among learners as negotiation or interaction occurring between them during collaborative writing activities (Vygotsky, 1987).

In this study, the students were trained to practice argumentative writing during collaborative writing activities because the activities seem to be valuable and vital instructional activity in classrooms that promotes the students' better learning outcomes. Furthermore, it facilitates their critical thinking. The characteristics of argumentative writing also allow students to learn what they would like to persuade readers to agree with about their ideas.

This type of writing allows students to research their topic and support their ideas using facts, evidence, statistics, or information.

From those advantages of CW, it would encourage students to collaborate, negotiate, or interact among themselves during activities (McDonough, Crawford and De Vleeschauwer, 2016) to complete their argumentative writing papers. Furthermore, the students would be encouraged to practice critical thinking which is a skill required in the 21st century while they are negotiating or interacting with their peers as well (Li and Kim, 2016).

However, there is a little research on argumentative writing difficulties in collaborative writing activities, as research has mainly concentrated on the diagnostic assessment of writing in individual works. Hence, there is a critical need to explore the use of effective collaborative strategies to improve students' argumentative writing ability at the tertiary level (Ozfidan, and Burlbaw, 2019). Moreover, according to Ka-kan-dee and Kaur (2015), research studies on argumentative writing difficulties in Thailand are limited resulting in a limitation of insights about difficulties that Thai students encounter with academic writing tasks. Collaborative writing activities which the researcher has tried to adapt and added more steps would also grant new helpful teaching techniques and a new optional writing model for English writing teachers instead of teaching writing traditionally that most EFL teachers teach language by lecturing and focusing on grammatical rules (Kawinkoonlasate, 2019). The result of this study would promote some recommendations and suggestions to enable university students in Thailand to develop their argumentative writing competence as well.

Furthermore, Kaweera (2013) and Kaweera, Yawiloeng, and Tachom (2019) looked at students' perceptions of talents employed in writing assignments, such as writing, thinking, engagement, and communication, as well as their satisfaction with these activities. Critical thinking abilities, which are the deeper thinking skills required in the twenty-first century, were not limited. Critical thinking abilities are highly regarded since they allow students to gain a more nuanced understanding of the information they receive and foster smart decision-making and problem-solving in real-world circumstances (Dwyer, Hogan, and Stewart, 2014).

Aims of the Study

1. To examine the effects of group, pair, and individual works on the students' argumentative writing ability by using collaborative writing activities.
2. To explore the students' self-assessments towards critical thinking practiced in collaborative writing activities.
3. To analyze the students' patterns of interaction during collaborative writing activities (groups and pairs).

Research Questions

1. What are the effects of group, pair, and individual works on the students' argumentative writing by using collaborative writing activities?
2. What are the students' self-assessments towards critical thinking practices in collaborative writing activities?
3. What are the students' patterns of interaction during collaborative writing activities (groups and pairs)?

Definition of Terms

In this study five terms namely collaborative writing, argumentative writing, critical thinking, patterns of interaction, and writing activities are defined as follows:

Argumentative Paragraph: this study refers to introducing the main idea to argue in the first topic sentence, supporting the main idea with the reasons, examples, evidence, facts, or details in the following sentences (2–5 sentences possibly), and drawing a conclusion while restating the main idea in the last sentence using at least 100 words. The argumentative structures were adapted from Conor (1987) and the scoring criteria were adapted from Zhang (2019).

Argumentative Writing Quality: this study refers to the text quality involved in content, language use, and organization. There are five scores based on the rubric for text quality Zhang (2019).

Collaborative Writing: this study refers to writing an argumentative paragraph. It includes eight steps: (1) providing an overview of writing guidelines; (2) studying the

argumentative paragraph model and grammatical structures; (3) pre-writing (brainstorming, outlining, listing, or freewriting); (4) drafting (creating a 1st rough draft); (5) revising (remove, move, or add) (2nd draft); (6) rewriting (3rd draft); (7) proofreading (check conventions such as spelling, grammar, punctuation, and mechanics) (4th draft); (8) publishing (write a final complete paper) based on White and Arndt (1991).

Collaborative Writing Activities: this study refers to writing activities in which two students (pair) and four students (group) worked together throughout the activity to complete an argumentative writing assignment. In the current study, the students freely selected their partners or group members. They were required to write collaboratively both in pairs and groups.

Critical Thinking: this study refers to the ability to think carefully about information or ideas and the ability to analyze or evaluate information that goes beyond the memorization and recall of information and facts. Critical thinking in the current study did not involve the area of educational psychology. It only investigated whether students realized and whether they could practice their thoughts deeply based on Revised Bloom Taxonomy (2001) in the aspects of these skills: creating, evaluating, and analyzing.

Patterns of Interaction: this study refers to the position of learners in a conversation using two indexes of 'equality' and 'mutuality' for distinguishing different patterns of interactions (Storch, 2013), which can be categorized into four patterns: collaborative, dominant/dominant, dominant/passive, and expert/novice.

Significance of the Study

The aims of this study are to examine the argumentative writing quality by comparing groups, pairs, and individuals, to explore the students' self-assessments towards critical thinking practiced in collaborative writing activities, and to analyze the students' patterns of interaction during collaborative writing activities (groups and pairs). Thus, the results of this study will benefit the students and writing teachers in English writing. Firstly, this study is significant because it will provide an optional collaborative writing activity model for writing teachers to apply the model with their students to help improve the students' writing ability by using collaboration steps.

Secondly, this study will also serve as the basis for plans by the writing teachers concerning the necessary considerations for the students' differences in English proficiency levels in participating in collaborative writing. It is significant because it will help teachers to focus on the levels of English proficiency when the students are assigned to work in pairs or groups. It will help the teachers monitor grouping the students at the same or different levels. The students should be allowed to choose their members even at different English proficiency levels to decrease their anxiety when they participate in collaborative writing.

Finally, this study will provide benefits for writing teachers as it will lead them to be aware of assigning the various genres of writing, specifically, argumentative writing which is the genre of writing that is essential for the university students and can promote critical thinking skills when they collaborate writing in pairs or groups. This is because there are more capable members in the groups, there is more interactions between group members and it will help the students in eliciting their critical thinking skills.

Chapter I presented the Background and Rationale of the Study, the Purposes of the Study, the Research Questions, the Definitions of Terms, and the Significance of the Study.

The next chapter presented Literature Review which included English Writing, Argumentative Writing, Related Research on Argumentative Writing, Collaborative Learning, Sociocultural Contexts Enhancing Language Learning, Collaborative Writing' Theoretical and Pedagogical Background, Related Research on Collaborative Writing, Critical Thinking, Integrating Critical Thinking into Classroom Instruction, Analytical Thinking, and Critical Thinking, Writing Process and Critical Thinking Combined, and Gaps of the Previous Research.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

This chapter presents a thorough review of the key concepts that relate to the theoretical groundwork for the empirical part of the present study. The content in this chapter consists of five main topics, namely, writing skills, writing instruction in ESL/EFL contexts, types of writing, the level of writing ability, approaches to the teaching of writing, argumentative writing, related research in argumentative writing, sociocultural contexts enhancing language learning, patterns of interaction framework, collaborative learning, the theoretical perspective of collaborative writing, related research in collaborative writing, critical thinking, integrating critical thinking into classroom instruction, analytical thinking and critical thinking, writing process and critical thinking combined, related studies in critical thinking skills, and research gaps, respectively.

Writing Skills

Writing is one of the skills that underpins speaking, reading, and listening skills in English. It is the system of written symbols, representing the sounds, syllables, or words of the language, with different mechanisms—capitalization, spelling and punctuation, word form, and function (Durga and Rao, 2018). Writing is also a multiplex activity claimed by Ling (2016). Writing activities need to be conducted among students so that the students can generate good pieces of writing in the future. Even though there are many subjects in schools, writing is known as one of the most vital academic subjects for students (Moses and Mohamad, 2019).

Furthermore, writing skills are also the skills a writer employs to communicate and express sentiments and ideas to a reader via the use of language and letters. The content, shape, style, and goal of writing must all be considered when writing. A writer must also be familiar with the vocabulary and grammatical rules, as well as be able to coherently organize thoughts and materials. Each student may face different challenges in learning writing. These challenges will somehow pull back the students from moving

forward to produce a good piece of writing. The following paragraphs are about challenges faced by students in writing.

Lack of vocabulary has caused the students to face challenges in acquiring writing skills claimed by Misbah, et al. (2017) because vocabulary is the fundamental element in constructing sentences which is the core of effective writing skills (Asep, 2014).

Some students are also having trouble with grammar because grammar plays an important role in writing. It provides information that helps the readers to understand its meaning. It is a structure that conveys the detailed meaning of the writer to the reader. Grammar also explains the forms and structure of words, called morphology, and how they are arranged in sentences, called syntax. By having very limited knowledge of grammar, students will face anxiety to write sentences with correct grammar. According to Muhammad Fareed, et al. (2016), students make mistakes in subject–verb agreement, pronouns, tenses, articles, prepositions, and basic sentence structures.

Therefore, writing skills has been widely regarded as a crucially essential skill in the teaching and learning of English as it is a comprehensive skill that helps reinforce vocabulary, grammar, thinking, planning, editing, revising, and other elements. (Yunus and Chien, 2016).

Writing Instruction in ESL/EFL Contexts

Writing is defined by the Oxford dictionary as “the action or ability to form coherent words on paper and construct text.” Within an organization, writing is the most important form of communication. Textual communication is used to complete practically all of our tasks. Writing is also necessary for reaching career, business, and a variety of other objectives in English as Second Language (ESL) and English as Foreign Language (EFL) contexts.

The age of information and technology is well known in the twenty–first century. All elements of our existence rely heavily on communication. Written language is essential for communicating, exchanging information and knowledge, and transferring information. Jiwprasat (2012) claims that people are required to write in a variety of contexts and for a variety of goals. People must compose business letters, text messages, and emails in as

part of their job. In the academic field, learners are required to write for many purposes: English exams, English writing assignments in classrooms, English for applying for jobs, and so on.

The teaching of writing in English as a second/foreign language (ESL/EFL) has been a challenging task and a difficult issue for many teachers due to its multifaceted nature for a long time because the instructors are required to teach not only grammatical and rhetorical devices but also of conceptual and judgmental elements (Safa, 2018). Even though there are a variety of methods for writing teaching in ESL or EFL settings, only a few ESL/EFL writing instructors have a thorough understanding of writing techniques. As a result, many writing teachers still rely on a conventional strategy, which is focused on learning concerning the evolution of language and writing as a result of the instructor's recommendations, which are delivered in the form of texts (Ka-kan-dee and Kaur, 2015). Therefore, writing is considered a tough process in the ESL/EFL environment, especially in argumentative writing, because it requires locating a thesis, gaining support for the claim, creating, altering, and finally editing the thesis to produce a useful, error-free writing output (Zhang, 2017).

Types of Writing

Narrative writing, persuasive or argumentative writing, expository writing, and descriptive writing are the four types of writing, according to Nami (2015).

Firstly, narrative writing is a style of writing that contains certain components that pique the reader's interest as well as the author's. Expository writing, on the other hand, provides knowledge about a person, place, thing, relationship, or idea. Next, descriptive writing paints an image in the audience's mind by describing a person, place, or item. Finally, it is a piece of persuasive writing. This paper explains the opposing viewpoint and uses facts or data to show that those viewpoints do not support the author's standpoint. This is most likely the most popular type of writing at the university level (Hirvela, 2013). Persuasive (or argumentative) writing aims to persuade the audience of the author's view or course of action. To accomplish this, the author must create a focused topic that is well-defined, debatable, and includes competing opinions. The author must comprehend the opposing

viewpoints to give the most powerful material to contradict the opposing viewpoints. These opposing viewpoints may be presented by the author, but they must be described at the outset and immediately countered (to refute something means to show it is false or not particularly important). While persuasive writing tries to persuade others to agree with the author, it's frequently written in a neutral, third-person perspective to establish neutrality. It's worth noting that some argue that argumentative writing is more rational and factual (i.e., based on facts), whereas persuasive writing frequently employs emotional appeals to elicit compassion from the reader. Most writing experts, on the other hand, consider the two phrases to be interchangeable; few essays are so coldly dispassionate that they won't utilize powerful, laden language to win an argument, and analytic facts are always a smart approach to persuade the reader of one side over another.

The Level of Writing Ability

Jagaiah, Olinghouse and Kearns (2020) divided the writing ability levels as follows: The mechanical-skill level is the expression of memory, first and foremost. The writer is not obliged to comprehend the topic of the text. It is the original text that has been written. Second, the knowledge level is the point at which the writer demonstrates their understanding of syntax and facts. The language's sounds and symbols must be known to the writer. It's also vital to be aware of grammatical norms. Furthermore, the transfer level is the point at which the author may apply what he or she has learned to new situations. At this level, the author may organize a discourse or a work using logical phases and sequences of events, as well as respond to queries based on the information provided. Finally, at the communication level, the author might employ a language as a medium of communication. Writing is a kind of self-expression. For example, the author can use it to communicate thoughts and other people's ideas. The reader's comprehension of the material is more important than strict grammatical requirements at this level of writing. Finally, the level of critique is the ability of the author to examine, synthesize, and assess the use of language. The author, for example, can explain the notion easily by utilizing idioms and vocabulary. And the writing's style corresponds to the subject and goals of the piece.

Furthermore, Paulston and Bruder (1976) distinguish two degrees of writing. The primary level is the first. This level focuses on generating correct sentences, punctuation, and content organization. The intermediate and advanced levels are the other two levels. This level focuses on paragraph and essay form, as well as the use of suitable vocabulary and sentence construction.

In conclusion, it has been demonstrated that the level of writing skill ranges from simple to more difficult and complex. The author must be aware of the issue and capable of analyzing, criticizing, and expressing the message to the readers using proper language. The author must use a variety of linguistic abilities and select the proper language for the sort of writing.

Approaches to the Teaching of Writing

Spada, Suzuki and Valeo (2014) divided writing into four distinct pedagogies: form-focused or product approach, which focuses on mastering correct grammatical structures; writer-focused or cognitive process approach, which focuses on skilled mental strategies to produce the finished paper; genre-based approach, which, in some ways, can be seen as an extension of the product approach. Like the product approach, the genre approach views writing as predominantly linguistic. The genre approach, however, places a greater emphasis on the social context in which writing is produced; and the process-genre-integrated approach, in which academic writing is linked to the knowledge base informing texts of the respective disciplines, while teaching is linked to the students' specific courses providing access to related cognitive skills, linguistics structures and information characterizing each discipline; and the reader-focused approach influencing the writing through values, expectations and conventions of the discourse communities in each discipline, following pedagogical practices as in the preceding approach (Nordin and Mohammad, 2017).

Product to Process-Based Approach

According to Sippel (2021), form-focused instruction has been a popular method of instruction in Thai university writing classes for many years. Instead of focusing on how the final paper is generated, the strategy focuses on the learners' final paper of work.

Grammar, mistakes, and structure are used to evaluate the written document. Despite its antiquated nature, it is nevertheless commonly utilized in Thailand due to time constraints and controlled assessment procedures. Tsui (2003), on the other hand, believed that the product approach is flawed for a variety of reasons. The fundamental reason is that it does not work. Despite the teacher's best efforts to correct and grade students' writing, students' writing does not appear to improve, and they are more likely to make the same faults and mistakes. Furthermore, pupils are prone to believe that it is the teacher's role to verify for flaws and blunders, reducing the teacher's job to proofreading.

As the limitations of this technique became apparent, the process approach emerged. Because it changes the focus from linguistic knowledge to writing abilities, the process method has become popular in writing classes (Badger and White, 2000). Flower and Hayes (1981) also devised a writing process model, which consisted of planning, writing, and revising. According to Yan (2005), the process approach to writing instruction highlights the writer's role as a self-contained text creator for teachers to provide students time and space to practice planning, defining a rhetorical problem, and proposing and evaluating solutions. The process approach emphasizes the importance of the writer's understanding of the writing processes in which he or she participates. To engage the schemata and come up with fresh notions, the writers employ brainstorming and pre-writing, which are personal background experiences that the authors use to connect to the subject and reveal everything they have to mention.

Genre-Based Approach

The genre approach is employed as a complement to it, according to Henry and Roseberry (1999). A genre-based approach to language instruction aims to raise learners' understanding of a genre's schematic structure, clarify the variety of methods available to writers to achieve their communicative goals, and show learners which linguistic characteristics are available to implement these tactics. The ultimate goal is to provide sociological and psychological justifications for these structural, strategic, and linguistic choices.

The communication goal for which a genre is established in a specific social setting is what distinguishes it (Swales, 1990). The premise behind genre pedagogy is that students should be more effective in learning to produce text if they have a clear

understanding of the language (Hyland, 2003). As a result, it is beneficial in preparing students for writing assignments.

Hyland (2003) concluded that writing is understood as a social behavior from a genre standpoint. As a result, writing differs from one community to the next. The teaching and learning cycle defined by Hyland (2003) highlighted the methods for developing genre control. The text is built in three stages: modeling, collaborative construction, and independent construction. A certain genre is provided at the modeling step. The students then discuss and analyze the target genre as a model. Students are then asked to collaborate with their teacher to create a comparable piece after learning about genres. Learners develop their drafts on their own during the independent construction stage. Students may receive peer review, self-editing, and teacher-student conferencing at this stage. Lastly, they confidently produce their own completed paper. This cycle of teaching and learning may assist learners in recognizing the steps of the writing process and comprehending how to utilize language in context to create meaning (Gao, 2007).

Process-Genre-Integrated Approach

To overcome the limitations of both disciplines, the process-genre-based method integrates process models and genre theories. The aspects of the process method, such as writing skill development and learner reaction, are combined with notions from the genre approach, such as writing purpose and context knowledge.

During the prewriting stage, teachers should construct and discuss a situation for students to choose the medium and purpose (a spoken or written text), topic (a specific issue), and audience (intended reader) of the writing (Gao, 2007). Furthermore, rather than focusing on just one genre, as the teacher does in the genre-based technique, the major purpose is to encourage students to consider a variety of genres. This purpose served to address the problem in the genre approach, which was an overemphasis on writing form. The process approach provides a framework for efficiently teaching text creation skills, while the genre-based method conceptualizes writing purpose, language, and context (Kaur and Chun, 2000). The following approach (Communicative Language Teaching (CLT) was considered to be crucial because it is a theoretical model which was also focused on in this study.

To sum up, teachers should focus in the classroom on enhancing students' encounters with texts and the expectations of the audience, including teaching them about the writing process, language forms, and writing genres (Saito, 2010). Therefore, to perform a good quality writing, those considerations would improve the students' argumentative writing skills in this study.

Argumentative Writing

A basic unit of organization in writing is an argumentative paragraph, which consists of a set of related phrases that develop one major theme. The writer's primary ideas (most significant notion) concerning that topic are explained in all of the sentences. It could be a section of a lengthier piece of writing, such as a book chapter or an essay (Oshima and Hogue, 1999).

Definition of Argument

The argumentative paragraph is a type of writing that demands students that research a topic, gather, synthesize, evaluate evidence, and develop a clear viewpoint on the topic. There may be some confusion between the argumentative and expository paragraphs. These two genres are comparable, but the argumentative paragraph requires more pre-writing (innovation) and study than the expository paragraph. The argumentative paragraph, according to Nami (2015), is typically assigned as part of an advanced composition course and requires extensive, meticulous research. Expository essays take less time to write and require less research. Expository essays are frequently utilized in writing tasks or assessments in class. Argumentative paragraph assignments, on the other hand, frequently necessitate extensive literature or previously published material investigation. Empirical research may be required for argumentative assignments, in which the student obtains data through interviews, surveys, observations, or experiments. Detailed research enables the student to learn about the issue and to comprehend various points of view on the topic so that she or he may take a position and back it up with facts gathered throughout the research (Ka-kan-dee and Kaur, 2015). Argumentative paragraphs must develop a clear thesis and follow solid logic regardless of the amount or type of research done. The following are the elements that hold the argumentative writing together.

A thesis statement that is clear, concise, and defined in the first sentence of the paragraph.

The opening line should establish the background by providing a general overview of the topic. The author should then explain why the topic is important (exigence) or why readers should be interested in the topic. Finally, the thesis statement should be presented. It will be tough to write an effective argumentative paragraph if the authors do not comprehend this section of the essay.

Transitions between the introduction, body, and conclusion are smooth and logical.

Transitions are the parts that bind the paragraph's foundation together. The author will be unable to follow the paragraph's argument if there is no logical progression of thinking, and the structure will collapse. Transitions should bring the previous section's idea to a close while introducing the next section's notion.

Body paragraphs with evidence-based support.

Each paragraph should only explain one main point. This will ensure that the paragraph is clear and well-directed. It is critical to remember that each paragraph in the body of the paper must have a logical connection to the thesis statement presented in the first paragraph. Some paragraphs will use evidence gathered during research to directly support the thesis statement. It's also crucial to explain how and why the evidence backs up your claim.

Argumentative paragraphs, on the other hand, should consider and explain several points of view on the subject. Students should devote one or two paragraphs of an argumentative paragraph to discussing opposing viewpoints on the issue, depending on the length of the assignment. Rather than stating flatly that these opposing viewpoints are incorrect, students should point out how those who disagree with their thesis may be ill-informed or out of date.

Evidence-based support (whether factual, logical, statistical, or anecdotal).

To support the thesis statement and examine various points of view, the argumentative paragraph demands well-researched, accurate, thorough, and recent material. The thesis should be supported by some empirical, logical, statistical, or anecdotal evidence. When gathering evidence, however, students must evaluate diverse points of view.

As mentioned in the previous paragraph, an effective and well-rounded argumentative paragraph will also examine opposing viewpoints. It is unethical to disregard evidence that contradicts the theory. It is not the student's role to point out how other viewpoints are incorrect outright; rather, it is the student's job to explain how other positions may be under-informed or out-of-date on the topic.

A conclusion that does more than reiterate the thesis; it also reconsiders it in light of the facts presented.

Students may start to have difficulty at this point in the passage. This is the writing section that will have the greatest impact on the audience's minds right away. As a result, it must be efficient and reasonable. In the conclusion, do not offer any new material; instead, summarize the information presented in the body of the paragraph. Restate the importance of the issue, go over the essential aspects, and revise your argument. In light of their study, the authors may additionally give a brief discussion of more research that should be conducted.

The Process of Argumentative Writing

The development of argumentative writing is a problem-solving cognitive process (Connor, 1987). The goal of this type of writing is to persuade and influence the reader's mind such that it agrees with the writer's final viewpoint. Furthermore, according to Connor (1987), Circumstance, problem, solution, and evaluation are common structural units in written argumentation. The circumstance provides context; the problem expresses the unwanted state of things, whereas the solution expresses the desirable state and is frequently followed by an evaluation. The framework of argumentative writing will be demonstrated in the following section.

Structure Elements of Argumentative Writing

A topic sentence, supporting sentences, and a concluding sentence make up a general paragraph.

1. Topic sentence

The topic sentence is a complete statement that expresses the primary concept and identifies the paragraph's subject. It should also keep the content to one main point and tell readers what each paragraph will cover.

2. Supporting sentences

Complete sentences that develop or support the topic sentence are known as supporting sentences. Supporting sentences include detailed details, personal experiences, descriptions, reasoning, examples, facts, figures, and quotations to further illustrate the topic sentence.

3. Concluding sentence

A concluding sentence is a complete sentence that marks the end of a paragraph or informs readers that the paragraph is complete. Concluding sentences frequently leave key things for readers to remember, concluding thoughts, opinions, or stories regarding the paragraph's theme.

At a higher level, students are expected to write more complex tasks. Hence, argumentative writing is one genre of writing that challenges the students' writing ability. It has been concluded that learners, particularly at the university level, should be encouraged to practice writing argumentatively for both theoretical and pedagogical reasons. Furthermore, teachers should teach and guide them on how to practice writing argumentatively.

So, the next section will demonstrate the writing teaching approach so that teachers will suitably implement it for their students.

Related Research on Argumentative Writing

Several researchers studied argumentative writing. Some researchers conducted content analyses on the rhetorical pattern of argumentation, while others conducted research based on this process and genre-based approach to teach argumentative writing in the following ways: Gomez-Laich, Miller, and Pessoa (2019) described a partnership between writing instructors with a linguistics background and a design professor at an English-medium university in the Middle East, where English is spoken by the majority of students. They look into how explicit instruction and collaborative writing workshops affect students' writing. The researchers compare the writing of students who participate in collaborative writing workshops to that of students who attend the course in a prior semester when the workshops are not provided, using a corpus-based tool. Some rhetorical functions appeared significantly more frequently in the writing of students who participated in collaborative writing

workshops (higher occurrence rhetorical functions), whereas others appeared significantly less frequently (lower occurrence rhetorical functions) (lower-occurrence rhetorical functions).

The students in two metropolitan school districts complete an integrated lesson on wolves, similar to Morris, et al's (2018)'s study. Direct instruction (DI) or collaborative group work are used in classes (CG). The findings show that CG students used more connective and contrastive terms, as well as the performative verb phrases I think and I know, in their classroom speaking than DI students. CG students use more logical connective, contrastive, and performative verbs, make fewer unelaborated arguments, and pose rhetorical questions than DI students, according to an analysis of written arguments about a controversial subject introduced by the course.

In another study by Ka-kan-dee and Karut (2015), they used a semi-structured interview and a stimulated recall interview to gather detailed information from two Thai EFL lecturers about the challenges of teaching argumentative essays, as well as the teaching strategies they used to help improve their students' argumentative writing skill. The findings suggest that pupils have difficulties due to a lack of understanding of the grammatical structure, lexical aspects, and argumentative elements. Furthermore, pupils struggle to arrange their thoughts and produce evidence to compose a well-organized essay. Their research also shows that students' inadequacies are the primary barriers to Thai EFL students authoring argumentative essays. Furthermore, Thai university students have less expertise with argumentative writing because it was not taught to them in their previous school. As a result, they use a variety of inputs and exercises to teach argumentative writing. To strengthen the university-level students' argumentative writing skills, the exercises include pair work, group discussion, explanation, illustration, and debate in class. The findings imply that when producing argumentative essays with successful collaboration and close guidance from their teachers in the writing classroom, EFL students can construct effective social and cognitive bridges.

The outcomes of the previous studies might be summarized as providing some practical advice for enhancing argumentative writing. Researchers and educators are becoming increasingly conscious of the crucial need to focus more on improving writing instruction for university students. As a result, it is advantageous for EFL professors in Thai institutions to

implement various collaboration activities, such as pair work or group work, to develop efficient instructions that help students to improve their argumentative writing skills.

Sociocultural Contexts Enhancing Language Learning

Interaction, based on Vygotsky's Sociocultural Theory (1978), is the basis for learning, mental activities, and mediation as well. Interpersonal interaction is communication between the person and his or her mind, private speech, or self-talk. Every stage of learning needs a lot of input which is essential to learning a second language, to activate linguistic and cognitive processes. Consequently, social interaction is one of the most important inputs and has been claimed to facilitate cognitive and linguistic development (Vygotsky, 1978).

In terms of theory, Vygotsky (1978) contends that communication is an important aspect of human cognitive development, and that language and cognitive abilities grow through interaction with others. Language, he believed, was the most important tool that mankind could use. External social speech, private speech, and inner speech are the three types of language, according to Vygotsky. External social speech is a type of communication that people employ to communicate with others. Internal communication that a person addresses to themselves is referred to as private speech. Inner speech entails the audibility of private communication being reduced until it becomes a self-regulating function. As a result, interaction is critical for knowledge construction since it allows learners to request expert assistance or simply explain phases in the problem-solving process through internal or external speakers.

When it comes to knowledge construction, it happens in a social context involving two or more participants (student-student) and expert-student collaboration on real-world problems or tasks that build on each person's language, skills, and bring to it different experiences and knowledge shaped by their culture (Vygotsky, 1978). According to Vygotsky (1978), social interactions can be examined in groups of two (dyads), three (triads), or larger groupings. The form of social interaction that will be studied in this study is dyadic interaction (pair), which is the smallest microcosm of social interaction, and bigger groupings (group of four).

Using Vygotsky's theory of cognitive development, an increasing amount of research has looked at peer response in second language contexts (1978). Learning a second language is a process that may be linked to a learners' engagement in social activities within the sociocultural context. Learners elicit their resources and co-produce new language knowledge when they collaborate (Dobao, 2012).

Patterns of Interaction Framework

Storch (2002; 2005; 2013) used sociocultural theory (SCT) to perform a series of experiments to better understand the dynamics of group collaboration, which were influenced by past research. They proposed the patterns of interaction framework with the goal of intending to characterizing learners' positions in conversations and explain the impact on knowledge building. Storch (2002) looked at peer relationships in collaborative conversations and used two indexes of 'equality' and 'mutuality' to differentiate between different kinds of interactions. Equality refers to the ability to govern the activity or task at hand. The level of participation with the contribution of others is referred to as mutuality. Storch (2013) then used two indices as intersecting axes to build four quadrants, which she labeled collaborative, dominant/dominant, dominant/passive, and expert/novice interaction patterns.

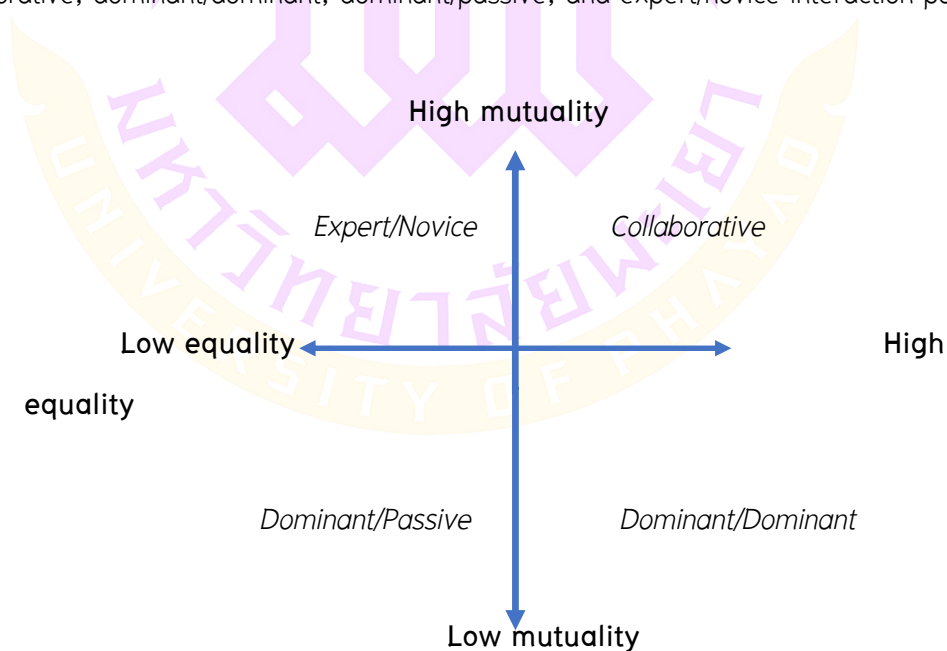


Figure 1 Storch's (2013) patterns of interaction framework

The first quadrant, collaborative, entails interaction with moderate to high equality and moderate to high mutuality, in which peers share responsibility for task completion in such a way that all learners work together on all parts of a task and create a problem-solving environment in which there are discussions and different points of view. They can come up with resolutions that are confirmed and adopted by all members. Learners complete the task and construct the target phrase using this pattern, which includes repetition, suggestion, completion, question, explanation, negotiation, and information and knowledge exchange.

In contrast, the second quadrant: *a dominant/dominant* refers to moderate to low mutuality and high equality. Both students are equally responsible and contribute equally to the assignment, yet they frequently disagree with each other's ideas. They are unable to collaborate and completely engage with the contributions of their peers. Learners in this quadrant tackle the job by disputing it, reacting negatively, and repeating it.

Moreover, *a dominant/passive* pattern involves one of the members taking a dominant role. The rest of the group plays a more passive role. The small discussions that take place between the students do not result in an agreement. Learners in this quadrant complete the writing tasks by extending turns, and deciding on the target. In addition, dominant participants use private speech by using a self-directed question because they are unaware of the passive participants' existence.

Last but not least, an *expert/novice* interaction shows moderate to high mutuality and moderate to low equality. In this scenario, one of the participants plays the role of an expert who contributes more throughout the assignment and aggressively encourages the novice to join in the task completion and problem-solving process. The peer relationship is marked by numerous explanations and repetitions in which the expert encourages the novice to take a more active part. Learners in this pattern produce the text by asking for a novice's opinion, providing an invitation, scaffolding (direct instruction), confirming, and repeating.

Roberson (2014) videotaped five pairs of non-native English speakers speaking in conversation. The correlation between the detected patterns and the students' second composition drafts demonstrated that they linked their increased performance to better

interpersonal interactions developed when taking either a collaborative or an expert/novice posture.

Tan, Wigglesworth, and Storch (2010) enhanced the concept by discovering a new type of pair interaction collaboration: a cooperative pattern. In this pattern, pair members take turns finishing the work while ignoring each other's input. In a revised version of Storch's concept, this new type of collaboration was incorporated (2013). A cooperative pattern falls into the same quadrant as a dominant/dominant pattern due to high equality and poor mutuality. Despite this, unlike a dominant/dominant couple that displays disputes, cooperative pattern learners focus solely on their contribution without displaying their tension.

Storch's (2013) model has been widely employed in collaborative writing research to investigate the dynamics of collaboration in a range of situations. Storch's method was used in some studies (Storch and Aldosari, 2013; Newmann and McDonough, 2015; Li and Zhu, 2017; Ahmadian and Tajabadi, 2017; Yim and Warschauer, 2017; Zhang, 2018) to investigate how the nature of collaboration might relate to proficiency pairing and language learning opportunities in the task (Storch and Aldosari, 2013; Newmann and McDonough, 2015; (face-to-face versus CMC). Chen is a more contemporary research project that employs Storch's concept (2018). She studied the patterns of interaction in collaboration among intermediate Chinese EFL students through the assignments.

The majority of existing research has focused on how collaborative dynamics influence L2 learning opportunities and learners' L2 performance in CW tasks. More cooperation tends to (1) generate more possibilities for L2 learning, (2) elicit more scaffolding, and (3) allow learners to transfer more linguistic knowledge covered in pair discussions to subsequent individual output (Storch and Adosari, 2013).

The connection between collaborative conversation and written texts by students was investigated by Neumann and McDonough (2015). Nonetheless, their research only looked at collaborative pre-writing talks, not engagement during collaborative writing activities.

More recently, Li and Zhu (2017) investigated how the quality of co-produced writing in CW was connected to the relationship that small groups created in computer-mediated communication (CMC) situations. The findings revealed that a group with high quality but

low mutuality produced the lowest quality texts, whereas a group with high quality but low mutuality produced the lowest quality texts. Li and Zhu (2017)'s findings, on the other hand, cannot be applied to CW tasks in face-to-face circumstances.

Later, Chen (2018) looked at how a group of Chinese intermediate EFL learners interacted in dyads on a dictogloss problem. It looked at dyadic communication interaction patterns. Collaborative patterns of engagement are more favorable to L2 acquisition than other patterns (e.g. dominant/dominant, dominant/passive), according to the findings. Intermediate learners were also able to change their dyadic interaction connection from non-collaborative to more collaborative, according to the study.

Another study is from Zhang (2019). The study's purpose was to complement Storch's model by proposing a dyadic interaction model that considers learners' contributions to various aspects of CW and defines collaboration types from the bottom up. The findings indicated that there were five forms of collaboration: non-collaborative organization, non-collaborative language use, non-collaborative task management, non-collaborative content, and collaborative type. Each collaboration type, on the other hand, indicates a distinct interactional pattern in pair talks' involvement in critical areas of CW.

Collaborative Learning

Collaboration, according to Hyland (2006), is compatible with the move from a product to a process approach in teaching writing, as well as the writing process, numerous drafts, and thorough editing, all of which are prominent in a process approach to writing. This shift opposes “the traditional method of teaching writing using a reductionist and mechanistic paradigm” and aims to build cognitive models of what writers do while writing (Hyland, 2003).

Writing alongside other language learners in a group or as partners can be intimidating for many language learners. They may be working with more proficient language users in these contexts, and they may be apprehensive about their capacity to contribute and the attitudes they may encounter from others in the group (Leki, 2001). Writing collaboratively in the language classroom can be a valuable practice for learners to gain

the experience they will need once they enter higher education or the workforce (see Wigglesworth and Storch, 2009).

Collaborative engagement is acknowledged as a beneficial technique that can be seen in the writing process. Collaborative tasks, according to Swain (2001), are communicative tasks because they require “learners to interpret, manipulate, produce, or engage in the target language while their attention is primarily focused on meaning rather than form.” Collaborative tasks, on the other hand, necessitate learners working in pairs or groups to produce collaboratively produced material. The collaborative writing assignment encourages students to think about and explore language.

Reid (1993) also valued the writing process and underlined the importance of this approach to process education in terms of how the process is tied to how writers tackle problems using a problem-solving strategy in areas like target audience, goal, and writing scenario. Hyland (2003) builds on this approach by highlighting that writers are self-contained text makers and addresses the subject of what teachers should do to help students with writing assignments. This method is also “consistent in recognizing basic cognitive processes as central to a writing activity and in emphasizing the need to develop students' abilities to prepare, define a rhetorical problem, goal, and evaluate the solution”, according to him.

Collaborative activity can emerge from this writing process method when students assist one another in planning, drafting, and revising their assignments. This can be a useful learning method since it allows pupils to learn via discovery. In a process writing class, Swain (2006) recognizes the advantages of collaborative activity: “ Collaborative writing activities thus provide a chance for collaborative conversation.” Collaborative dialog occurs when learners are working together to solve an issue. Swain (2006) defined it as “the process of making meaning and molding knowledge and experience through language,” and it is a type of language. Learners participate in knowledge-building tasks such as proposing and testing hypotheses, as well as correcting themselves and others, through collaborative conversation. They collaborate to build new language knowledge using language as a tool. They can scaffold each other and achieve a level of performance that is beyond their level of competence by combining their resources (Donato, 1994; Ohta, 2001; Swain, 2000).

As a result, the next section analyzes the theoretical and pedagogical background while seeking to apply this method in the context of a writing workshop employing collaborative activity.

Theoretical Perspective of Collaborative Writing

The sociocultural theory has been emphasized over the last two decades, in particular CW (Bhowmik, et al., 2019; Li and Kim, 2016; Zhang, 2018). Sociocultural theory-based initiatives make learning activities more dynamic and interactive, and learning and development encourage collaboration and interaction among learners (Vygotsky, 1978). In CW, learners can develop ideas and organize them better and improve linguistic aspects through peer feedback. The quality of the written text is improved in performing difficult tasks (Liu, et al., 2018) and more accurate texts are produced (McDonough, De Vleeschauwer and Crawford, 2018). CW activities promote social interaction, resource sharing, and knowledge expansion, a phenomenon Vygotsky (1978) called the “Zone of Proximal Development” (ZPD). Vygotsky (1978) claimed that cognitive development is enhanced by ZPD through assistance and scaffolding provided by more capable peers and knowledgeable adults. Vygotsky believed that individual intellectual development and knowledge discovery are bound to personal experiences and are interceded through social interactions (Poehner and Infante, 2019). Through positive interactions and support, individual learners develop their mental ability at higher levels, such as thinking critically, finding a useful technique to memorize, learning a language in more productively, or manipulating the acquired knowledge for future use (Pessoa, Mitchell and Miller, 2018). Thus, the concept of ZPD has developed as a driving force to address cognitive development and the process of how humans acquire knowledge. Furthermore, he claimed that learning will take place through exchanges between students, professors, and other specialists. Interactions are thus an important tool for promoting critical thinking and writing abilities (Vygotsky, 1978).

While much of the early research in the L2 classroom focused on collaborative oral tasks like decision-making, information exchange, consciousness-raising, and picture-narration tasks, instructors and researchers are now paying more attention to collaboration during writing activities (Kaweera, et al., 2013; McDonough and De Vleeschauwer, 2019;

McDonough, De Vleeschauwer and Crawford, 2018; Neumann and McDonough, 2015; Zhang, 2019; 2018, and Storch and Aldosari, 2013). Vygotsky (1978) also highlights the critical role of society in the acquisition of knowledge, claiming that learners require one another to acquire and communicate what they have learned. Social connection with a more capable member of society improves cognitive development. By providing the peer with the proper level of assistance, the more able member expands the peers beyond their current level of growth and towards their potential level of development. Learners should be encouraged to participate in collaborative activities that foster interaction and co-construction of knowledge, according to social constructivists (Vygotsky, 1978).

On the theoretical level, the social constructivist learning viewpoint supports collaborative writing (pair or group works) (Vygotsky, 1978). According to Donato (1994), learners engage in meaning–negotiation concerning the second language while communicating with one another in meaningful ways. Furthermore, according to Roberson (2014), the communicative language education strategy, which emphasizes actual interactions between learners, supports peer reaction. Because collaborative and cooperative learning has different meanings, collaborative learning as a pedagogical strategy was introduced into higher education at the same time as cooperative learning. Although collaborative learning is a group work methodology, it is predicated on distinct epistemological assumptions than traditional group work. Collaborative learning is rooted in social constructivism, which holds that knowledge is socially constructed through peer consensus. Social constructivists think that reality is created and understood through interactions between people, shared objects, and activities as individuals form and experience meaning together (Vygotsky, 1978).

Knowledge and the knower, according to constructionists, are intertwined and embedded in history, context, culture, language, and experience. “Knowledge is no longer viewed as a ‘mirror of reality,’ but rather as a ‘social construction of reality,’ with the emphasis on the interpretation and negotiation of the world's meaning” (Kvale, 1996, p. 41). When Bruffee, who has built a reputation for himself as a proponent of collaborative learning in higher education, says that knowledge is “something individuals develop by talking together and finding agreement,” he embodies this viewpoint (1993, p. 3). As a result,

it's critical to understand that organizations build knowledge by cultivating a culture of common objects with shared meanings.

According to Shehadeh (2011), collaborative writing is based on the social constructionist theory of learning and the process-based approach to writing, in which students work together to accomplish a writing task, evaluate their peers' writing performance, or cooperatively rewrite their written texts. Various aspects of collaborative writing in a second language context have been studied.

According to Storch (2005), pair and small group activities are one of the most popular techniques in communicative second language classes, and both psycholinguistic and sociocultural perspectives on L2 acquisition support this theory. Group collaboration in writing classes has traditionally been limited to brainstorming and peer review activities. However, several studies in recent years have highlighted the advantages of collaborative writing activities, which force students to collaborate in pairs or groups throughout the writing process. According to sociocultural research, collaborative writing activities encourage learners to reflect on their language use and collaborate to solve a language-related problem (Swain, 2000). Learners engage in language-mediated cognitive tasks that are taught to assist the co-construction of language knowledge and a higher level of performance by pooling their linguistic resources to solve issues (Donato, 1994; Ohta, 2001; Swain, 2000).

The social constructivist learning approach theoretically supports the use of pair and group work in the second language classroom. This opinion was held by Vygotsky (1978) and Swain (2010), who claimed that learners who participate in collaborative activities can think at greater intellectual levels than those who work alone. This is based on linguistic development, which enhances social engagement when learners are aided by a more experienced member of society. Learners of various levels of language competence, learning styles, and backgrounds are also expected to contribute to this collaborative process, thereby improving “their problem-solving strategies” (Farah, 2011). Learners who perform activities cooperatively are more successful than those who work alone, according to Swain (1998); Storch and Wigglesworth (2007), and this could help learners overcome language obstacles that are beyond their abilities.

Several scholars have looked into the benefits of collaborative action in L2 learning from a pedagogical standpoint. According to Swain (2000, 2001), collaborative writing exercises encourage learners to reflect on their language use and collaborate to solve language – related difficulties. According to McDonough (2004), learners may feel less frightened and more confident when conversing with peers in pairs or small groups than while participating in whole–class conversations. McDonough (2016) also found that prewriting tasks promoted student discussion regarding content and arrangement. This exercise, according to Dunne and Bennet (1990), allows students to communicate with and learn from one another. In this activity, the students assist one another without feeling humiliated. As a result, this learning approach will help their learning more effectively. Johnson and Johnson (1987) identified the following qualities and phases of collaborative learning to properly comprehend this activity:

1. The group's collective duty will be shared by all pupils. They must work together to complete the activity with a shared purpose in mind, as well as share knowledge and materials among themselves.

2. The students communicate with one another. They debate and share their thoughts and views with the other members.

3. Each student has his or her responsibility with the identical goal of the task.

4. In both studying and working, the students in the group put the method into practice. The group process entails good leadership and membership, as well as a proper work method, such as knowing their responsibilities, what they will do, why they will do it, and where they will do it. The evaluation of completed work, the performance of the group, and the performance of individual group members are all included.

5. The members of the group use the group method to collaborate. The goal of the group process is to recognize good leadership and membership, as well as a suitable work method.

It can be concluded that collaborative writing activities have several advantages: first, they encourage learners to reflect on their language use and work collaboratively to solve language–related problems; second, they make students feel less uncomfortable and more confident when they interact with classmates in pairs and small groups rather than in whole–class discussions; third, they elicit student talk about content and organization;

and finally, they reduce feelings of isolation. As a result, collaborative activities in this study were thought to benefit learners without making them feel humiliated, resulting in improved language learning. Furthermore, it was useful for designing the writing activities model to enhance the students' writing quality, critical thinking, and participation during writing activities.

Related Research on Collaborative Writing

In an English for Academic Purposes (EAP) course, Neumann and McDonough (2015) investigated the link between collaborative prewriting interactions and students' papers. Nineteen English L2 students took part in the study (eight men & eleven women). The audio recorders were placed strategically around the classroom to catch the voices of the students in each pair or group, as well as the various sorts of interactions (whole-class, pair work, and small group activities) that occur in a typical lesson. The findings demonstrate that structured collaborative prewriting exercises can stimulate subject and organization discussions among students. The task materials promote group debate and engagement, which leads to students debating how to arrange their writing. The data also suggest that the task's format helps students to reflect on the content and order of their thoughts. This is because, to assess their appropriateness for the argument, students must examine their partners' comments and critically engage with their partners' arguments.

Jalili and Shahrokhi (2017) studied the effects of solitary and collaborative (co-writing) (in pairs) writing on the complexity, correctness, and fluency of Iranian intermediate EFL learners' second language (L2) written products. A total of sixty EFL students were split into two groups. Participants in both groups were given a photo sheet and asked to create a tale based on it. The first group worked alone, whereas the second worked in pairs. Individual writing produces more accurate L2 written productions than collaborative writing (pairs), according to the findings.

After comparing the text features and analytic rating of paragraphs written by 128 EFL learners in Thailand under three conditions: collaborative writing (while writing), collaborative prewriting (pre-writing), and no collaboration, McDonough, De Vleeschauwer and Crawford (2018) compared the text features and analytic rating of paragraphs written by 128 EFL learners in Thailand under three conditions: collaborative writing (while writing), collaborative

prewriting (pre-writing), and no collaboration (individual). Three categories were used to grade the pupils' paragraphs (content, organization, and language). The results show that collaborative text produces more accurate messages. Jalili and Shahrokhi (2017) found that collaborative writing texts are more accurate than non-collaborative writing texts.

Despite assertions to the contrary, pre-writing planning (planning before writing) has not consistently shown positive impacts on linguistics metrics of accuracy, fluency, and complexity. McDonough and De Vleeschauwer (2019) compared the effects of solitary and collaborative prewriting planning (pre-writing) on the writing growth of 60 EFL students. Over the course of the semester, the students completed three practice writing assignments. Half of the students prepared independently during the tasks, whereas the other half collaborated before splitting off to write individual texts. The pre-test and post-test tasks were completed independently by each student. Their assignments were graded using an analytic rubric (content, organization, grammar, and vocabulary), and linguistic metrics of accuracy (errors/word), coordination (coordinated phrases/clauses), and subordination (dependent clauses/ clauses) were coded. The data demonstrate that students who collaborated on their plans improved their accuracy. The results of comparing solitary and collaborative prewriting planning (pre-writing) are similar to those of previous studies by Jalili and Shahrokhi (2017); McDonough, De Vleeschauwer, and Crawford (2018, 2019).

From the previous studies, it is believed that the collaboration fosters the students' writing accuracy more than when there was no collaboration. Nevertheless, the collaboration in most previous studies (McDonough and De Vleeschauwer, 2019; McDonough, De Vleeschauwer and Crawford, 2018; Jalili and Shahrokhi, 2017) focused on prior planning (pre-writing) and while-writing. Consequently, this research will look into the students' collaboration throughout the writing process (pre-writing, while-writing, and post-writing).

To sum up, collaborative writing activities are believed to enhance the students' writing skills (pair and small group). Apart from writing skills, critical thinking skills seem to be encouraged during collaborative writing activities as well because writing in groups or pairs encouraged the students' discussions, and sharing information or ideas. These activities motivated them to practice critical thinking during collaborative writing activities. The next part

will review the various critical thinking definitions defined by some experts or educators as follows.

Critical Thinking

Previous authors provided several ways of defining these concepts due to the range of criteria for critical thinking and the absence of agreement among scholars. According to Lai (2011), the author's field should be used to group the items. She also differentiates between psychological, philosophical, and educational methods to define and incorporate critical thinking into schooling.

Cognitive talents are widely mentioned in psychological definitions, according to Lai (2011). Critical thinking is viewed as a process in this sense. As a result, the definitions concentrate on the mental operations that are required when employing this ability. Dwyer, Hogan, and Stewart (2014), for example, defined critical thinking as “a metacognitive process that raises the possibilities of creating a logical conclusion to an argument or solution to a problem by conscious, reflective assessment” (p. 43).

The origins of philosophical definitions can be traced back to ancient Greece and Socratic philosophy, both of which are still important today. The outcome of critical thinking is emphasized rather than the process itself in this strategy. Two of the most commonly cited definitions of critical thinking come from Ennis (1985), who defined it as “reflective and reasonable thinking that is focused on deciding what to believe or do,” and de Paul (2009), who defined it as “disciplined, self-directed thinking that exemplifies the perfections of thinking appropriate to a particular mode or domain of thought.”

Barnett (1997) recognized the difficulties of defining critical thinking, saying that it is dependent on how the talent is applied. As a result, he sees critical thinking in at least four different ways: disciplinary expertise, practical knowledge, political participation, and strategic thinking. This range of meanings, combined with the multifaceted character of the proposed constructions, confirms that critical thinking is a difficult concept to put into practice (Bensley, et al., 2016).

Finally, Bloom's taxonomy employs critical thinking interchangeably with the concept of higher-order thinking in the field of education, based on Bloom (1987); (Anderson, et al.,

2001). Cognitive skills can be categorized based on their level of complexity, according to Bloom's taxonomy. In this approach, higher-order thinking skills are associated with the levels of analysis, synthesis, and assessment.

To characterize critical thinking skills in this study, a provisional framework (see Table 1) was constructed for the current study. A speculative framework on CT (see Figure 2) is built using general CT models as inspiration. It covers all three CT phases. Distinct CT talents and CW are used on different CW steps at different stages. As a result, higher-stage CT is built on the foundation of lower-stage CT. Higher-stage CT skills must be used in conjunction with lower-stage CT skills. To evaluate a text, for example, knowing the literal meaning of the lines is insufficient. Writers must be able to comprehend and interpret the content well. They must then perform some analysis and review to determine the inferential meanings between the lines. In a nutshell, higher-stage CT is impossible to achieve without first performing lower-stage CT.

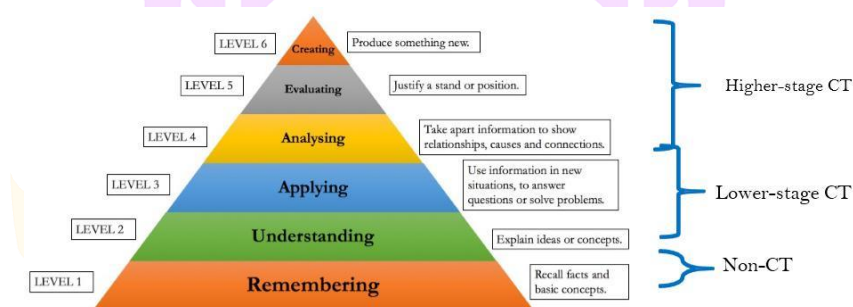


Figure 2 Tentative framework: Taxonomy of CT skills and CW

Table 1 The six categories of revised Bloom's taxonomy for the teaching and learning process.

Learning Levels	Definition	Sample cues
Creating	Generating new ideas, products, or ways of viewing things, designing, constructing, planning, producing, inventing.	generate, plan, produce
Evaluating	Justifying a decision, checking, hypothesizing, critiquing, experimenting, judging	check, critique, judge

Table 1 (cont.)

Learning Levels	Definition	Sample cues
Analyzing	Breaking information into parts to explore understanding and relationships, comparing, organizing, deconstructing, interrogating, finding	Differentiate, organize, attribute
Applying	Using the information in another familiar situation, implementing, carrying out, using, executing	Execute, implement, apply
Understanding	Explaining ideas or concepts, interpreting, summarizing, paraphrasing, classifying, explaining	Explain, interpret, classify, summarize, infer, compare, explain,
Remembering	Recalling information, recognizing, listing, describing, retrieving, naming, finding	Recall, recognize, write, list, label

Source: Anderson and Krathwohl, 2001

As a result, rather than discussing what critical thinking includes in theory, understanding what it entails in practice may be more important (Davies and Barnett, 2015; Moore, 2013). Critical thinking research, according to Moore (2013), has tended to characterize the talent in abstract terms, separating it from its practical uses. According to Davies and Barnett, critical thinking is often limited to a series of mental processes that occur on an individual level rather than being analyzed in the context of social relationships (2015). As a result, the next section will demonstrate how teachers might include critical thinking in the classroom.

Integrating Critical Thinking into Classroom Instruction

Critical thinking has received relatively less attention than other abilities by researchers on cognitive abilities (Goodsett, 2020). Regardless of how critical thinking is defined, various ways of teaching it in the classroom have been presented. Ennis (1989) proposed a classification system (Abrami, et al., 2014) that categorizes various instructional methods into three categories: general, infusion, and immersion.

According to the general approach, critical thinking is a cross-curricular skill that requires specialized knowledge of how it works. Instruction in critical thinking should focus on explicitly teaching the skill's underlying concepts as well as putting the skill into practice through exercises that stimulate its use. Early critical thinking studies focused on this type of intervention (Paul and Elder, 2009).

Critical thinking principles and abilities are expressly taught as part of infusion strategies but as part of a different curriculum. Swartz and Parks (1994) provided a plethora of resources for introducing critical thinking into important areas of the curriculum, as well as advice on how to select the best topics. Bensley and Spero (2014) tested the efficiency of explicitly teaching alternative approaches for developing metacognition and assessing arguments to a group of psychology students in their first year, both of these are considered essential components of critical thinking by them. Finally, McLaughlin and McGill (2017) recommended that a high school history class be taught how to spot pseudoscientific information, defining critical thinking as the ability to critically assess assertions based on evidence.

Immersion, the third set of methods, claims that critical thinking may be nurtured by completely explaining subjects and encouraging students to question and participate in deep thought. They do not, however, believe that precise critical thinking requirements are required. According to authors who use this technique, students should engage in rigorous thinking, an exchange of ideas, or involvement (Huber and Kuncel, 2016).

In their meta-analysis, Abrami, et al. (2008) found that the most effective strategies are those that directly teach critical thinking while applying it to a specific subject. Despite the quantity of research advocating for the explicit teaching of critical thinking, there is no evidence that such knowledge and skills can be transferred to different contexts or domains

(Pellegrino and Hilton, 2012). As a result, there has been a surge in interest in developing strategies for certain fields in recent years, including psychology (Stupple, et al., 2017), healthcare (Carvalho, et al., 2017), and the humanities (Carvalho, et al., 2017); (McLaughlin and McGill). There are even fewer examples of how to integrate critical thinking teaching into numerous courses in the classroom.

Professionals in the field of critical thinking have produced a variety of methods for integrating and teaching critical thinking in the classroom. These can be classified into four categories (Abrami, et al., 2014). Individual study is the first of them, and it comprises pupils working on their own to finish the activities. The concentration on dispute distinguishes the second, discourse. The third style of training, authentic or grounded instruction, involves choosing real-life problems or situations that students are interested in. Finally, mentorship refers to strategies that link novices with an expert in their field. According to Abrami, et al. (2014), when a discussion is joined with authentic or embedded education, the best effects are achieved. However, there is little evidence on how teachers use these strategies in the classroom.

Analytical Thinking and Critical Thinking

The terms “thinking” and “critical thinking” are not interchangeable. Thinking entails breaking down large amounts of data into smaller chunks. Critical thinking, on the other hand, entails more than merely assessing data. Critical thinkers take into account outside knowledge when examining data (Wabisabi Learning, 2019). Breaking down tough data to assist in the examination of given data may still be a component of the information evaluation process. It is acceptable to argue that critical thinking is ingrained in thinking.

This section examines the writing process as well as critical thinking skills. The next section concentrates on merging critical thinking and the writing process.

Writing Process and Critical Thinking Combined

A close examination of the qualities mentioned in Table 2 of the writing process in working memory reveals traits that are comparable to those stated in Haase's critical thinking process (2010). The skills needed for conceptualizing and implementing knowledge are mirrored in the planning stage. These two critical thinking skills must be used by the

writer at the outset of the writing process. The writing-up stage, also called the translation stage by Flower and Hayes, is where critical thinking skills such as analyzing and synthesizing information are put to use (1981). Finally, the critical thinking stage's knowledge assessment is similar to Flower and Hayes' review stage (1981).

Table 2 Relationship between the writing process and critical thinking skills

The writing process in the working memory	Relationship	Critical thinking skills
Planning	↔	Conceptualizing Information Applying Information
Translating	↔	Analyzing Information Synthesizing Information
Reviewing	↔	Evaluating Information

Source: Flower and Hayes (1981); Haase (2010) shows the cognitive process model of the composing process by Flower and Hayes (1981).

Table 2 The table elaborates on the whole writing process that the writer goes through. When a writer is given an essay to write, he or she is faced with three important issues and they are (a) task environment, (b) long-term memory, and (c) working memory. At the start of the writing activity, the writer is faced with task environment issues such as the requirements of the writing assignment. The writer may worry about the topic, the audience of the essay, and even his/her motivating cues. He or she may or may not like the writing assignment given. The writer may also depend on external storage (previous essays) to help support his/her essay. Next, the writer uses his /her long-term memory to decide if the writing assignment is familiar or otherwise. This long-term memory includes the knowledge of the topic, knowledge of the audience, and also the stored writing plans he/she had learned before the writing assignment. The writer begins activities in the working memory. The working memory is where the “real action” takes place for a writer. This is the stage where the writer goes through the planning, translating, and reviewing stages.

At the planning stage, the writer organizes and sets a goal for the writing task. This is the stage where the writer goes back and forth to generate ideas to prepare for the actual writing stage.

The translation stage can be understood in two ways. First, after reading from sources, the writer now translates his /her ideas from oral thoughts (through reading and research) into written form. Next, some writers discuss the ideas with their peers and the translation stage would be transferring spoken form into written form.

The reviewing stage is the stage where the writer reviews what he/she had written. He/she may or may not like what he/she has written. The person edits and makes improvements to the essay.

Related Studies in Critical Thinking Skills

Choy and Cheah (2009) studied certain teachers at Malaysian higher education institutions. Thirty people were asked to answer eight questions, all of which were aimed at eliciting their opinions on critical thinking. The questionnaire was distributed. An initial list of 15 themes was pared down to eight. The technique of topic ordering, coined by Radnor (2002) to define the process of arranging qualitative data for analysis, was utilized to analyze the replies to the questionnaire. The transcripts were examined inductively using this method. Through repeated readings of the data, the primary categories were able to emerge from the data. The transcripts were read several times to categorize the important points that arose. Another researcher double-checked the final categorization of the data for consistency. Teachers' judgments of critical thinking fell into six groups, according to the data. Teachers' judgments of students' critical thinking have an impact on their classroom behavior.

Flores, et al. (2012) conducted another study to investigate the use of critical thinking abilities among students. Critical thinking skills were said to be lacking among the students. Once in the workforce, they were unprepared to think critically. Previous research has shown that leaders with low cognitive processing skills are less effective. As critical thinking is linked to constructivism, leadership, and education, several definitions of critical thinking are considered to build a general construct to guide the conversation. The majority

of pedagogy, according to the report, is content-driven and focused on deep knowledge.

Tuzlukova, et al. (2017) looked at English Language instructors' conceptual conceptions of critical thinking, their beliefs about the relevance of critical thinking in language teaching, and the links between critical thinking and language teaching approaches. A survey was used as the instrument. On the wiggio.com platform, the survey was conducted online. The survey was completed by the participants during and after the Language Center's in-house professional development courses. The study included twenty-four teachers. The instructors' propensity for integrating their teaching techniques with the functional-communicative approach was linked to Ennis's (2011) critical thinking categories, according to the findings.

According to research, Nold (2017) altered three business classes to include tasks that help students develop critical thinking skills. The Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich, et al., 1991) was used to assess changes in 15 learning components over the course of a semester, with the results linked to grades. At the start and end of eight-week courses, a modified MSLQ (Boyer and Usinger, 2012) was used to assess how students self-judge success criteria. The outcomes of classes held over 15 months in 2013 and 2014 revealed that 14 of the 15 success criteria increased, with three of them statistically significant (intrinsic goal orientation, self-efficacy, and critical thinking).

Alidmat and Ayassrah (2017) looked into how English for Specific Purposes (ESP) courses could assist students to develop critical thinking abilities by presenting them with appropriately chosen English writing difficulties. In the qualitative inquiry, the instrument used was in-depth. It investigated the viewpoints of ten undergraduates on issues related to their English writing assignments. The outcomes of the study demonstrated that there is no link between writing activities in an ESL curriculum and critical thinking abilities. This is because the writing tasks in the curriculum stressed mechanical writing above critical thinking.

The next section presents the previous research limitations related to collaborative writing, critical thinking skills, and patterns of interaction.

Research Gaps

From the previous studies, it is believed that collaborative writing activities promoted writing skills (Amiryousefi, 2017; Jalili and Shahrokhi, 2017; Storch, 2017; McDonough, De Vleeschauwer and Crawford 2018; and McDonough and De Vleeschauwer, 2019) and critical thinking skills (Carter and Creedy, 2017). Therefore, the purposes of this study were to look into the effects of collaborative writing (pair and group work) and individual writing in the area of Thai EFL students on the argumentative writing and to analyze the students' patterns of interaction toward collaborative writing activities (pairs and groups) and critical thinking skill during CW activities. However, the previous research on CW still has some limitations. Consequently, this study attempted to fill some gaps as follows:

Firstly, concerning the variety of the genre of writing, one of the most difficult aspects of university-level is argumentative writing (Hirvela, 2013). However, few studies have concentrated on teaching students how to construct argumentative paragraphs, and there is currently a scarcity of research on argumentative collaborative writing skills (Lukomskaya, 2015). Thus, writing activity needed to vary according to the cognitive demands of other tasks (argumentative paragraph).

Secondly, because some research focuses on intermediate and advanced learners, the findings cannot be applied to all levels of ability (Dabao, 2012; Chen and Yu, 2019; McDonough and De Vleeschauwer, 2019). Therefore, collaboration was conducted in this study (advanced, intermediate, and novice levels) to provide broader information on collaborative writing approaches.

Next, according to Liu (2018), there is little research that looks into critical thinking throughout the collaborative writing process. The majority of research focused only on students' cognitive abilities (Kaweera, Yawiloeng and Tachom, 2019, Kaweera, 2013) and their satisfaction when they engaged in the writing process (McDonough and De Vleeschauwer, 2019; Chen and Yu, 2019; Liu, 2018). As a result, it was important and intriguing to look into students' critical thinking skills in an EFL writing classroom, as critical thinking is one of the most important skills to encourage collaborative learning in the twenty-first century.

Finally, Zhang (2019) investigated the nature of collaboration in pair conversations as well as the learning possibilities that the work entails. The pair talks were compiled into

a single document, and collaborative writings were created. However, the data came from only intermediate EFL learners and pair talks (dyadic interaction) which cannot be generalizable to other levels of proficiency (novice and advanced). Consequently, this study analyzed the students' patterns of interaction during collaborative writing tasks at various levels (advanced, intermediate, and novice) both in pairs and groups.

As a result, it was hoped that the findings of this study would contribute to bridging certain gaps in the previous research about collaborative writing's impacts: grammatical structures, lexical characteristics, and argumentative features problems, especially in a practical EFL environment. Furthermore, the findings prompted comments and proposals to help Thai university students improve their argumentative writing skills and collaborate on writing projects. Consequently, the researcher developed and adapted a writing activities model which granted new helpful writing teaching activity and a new optional writing model for English writing teachers instead of teaching writing traditionally (focusing on forms and final product).

In conclusion, Chapter II presents English writing; argumentative writing; related research on argumentative writing; collaborative learning; theoretical and pedagogical background of collaborative writing; related research on collaborative writing; critical thinking; incorporating critical thinking into classroom training; critical thinking research; sociocultural contexts enhancing language learning and forming the present study to provide more information of EFL writing in collaborative activity and fill the methodological flaws of previously conducted research.

Chapter 3 presented the research methodology which included participants of the study, research instruments, data collection, and analysis.

CHAPTER III

RESEARCH METHODOLOGY

This chapter is comprised of four parts: participants of the study, research instruments, data collection, and data analysis. This study answered the research questions as follows:

1. What are the effects of group, pair, and individual work on the students' argumentative writing by using collaborative writing activities?
2. What are the students' attitudes towards critical thinking skills practiced in collaborative writing activities?
3. What patterns of interaction can be found during the students' collaborative dialogues?

Participants of the Study

Thirty-two second-year English students (19 females, 13 males) enrolled in Writing II (1551116) took part in this study. All participants were selected by purposive sampling. Based on their grades in Writing I (1551115) in the first year of the academic year 2019, they were sorted into a heterogeneous group with three levels: novice, intermediate, and advanced learners (18 novices, 8 intermediate, 6 advanced). Students in a heterogeneous group with a wide range of abilities are shown in Table 3.

Table 3 Numbers of participants in different proficiency levels

English Proficiency Levels	Novice 0-59	Intermediate 60-74	Advanced 75-100	Total
Numbers of Students	18	8	6	32
Percentage	56.25	25	18.75	100

The students were allowed to choose their partners independently. Based on Mulligan and Garofalo (2011), giving a chance to choose their group members freely would strengthen the learning atmosphere when implementing collaborative writing methods.

Though, the students, in this study, selected their partners independently when working in pairs and groups of four students.

Regarding the students' experiences, they had never previously encountered co-writing, but they had other types of co-learning activities, for example, group conferences and group presentations. Most of them had spent more than ten years in school studying English before enrolling at university.

The reason for selecting the second-year English major students was that in the English curriculum of the English Department at Lampang Rajabhat university they were required to study Writing I (1551115) for the compulsory subject with 3 credits. Next semester, they were required to study Writing II (1551116) as well to study more complexity of writing. The majority of them scored average to low on the Writing I competence test. Though, the researcher tried to enhance their complex writing ability argumentatively by using collaborative writing activities.

This study was a mixed-method (quantitative and qualitative). The study focused on three aspects. Firstly, for quantitative data, the writing quality of students was collected from the argumentative written by the second-year English major students who were instructed by the collaborative learning approach to compare the effects of three various writing activities: groups of four, pairs, and individuals.

Secondly, the students' critical thinking attitudes in CW were investigated by using a questionnaire, semi-structured interview, and observation.

Finally, the students' interaction patterns between learners during CW conversations were observed, then the conversations were transcribed and analyzed into the analytical framework of Storch's 2013 model.

Research Instruments

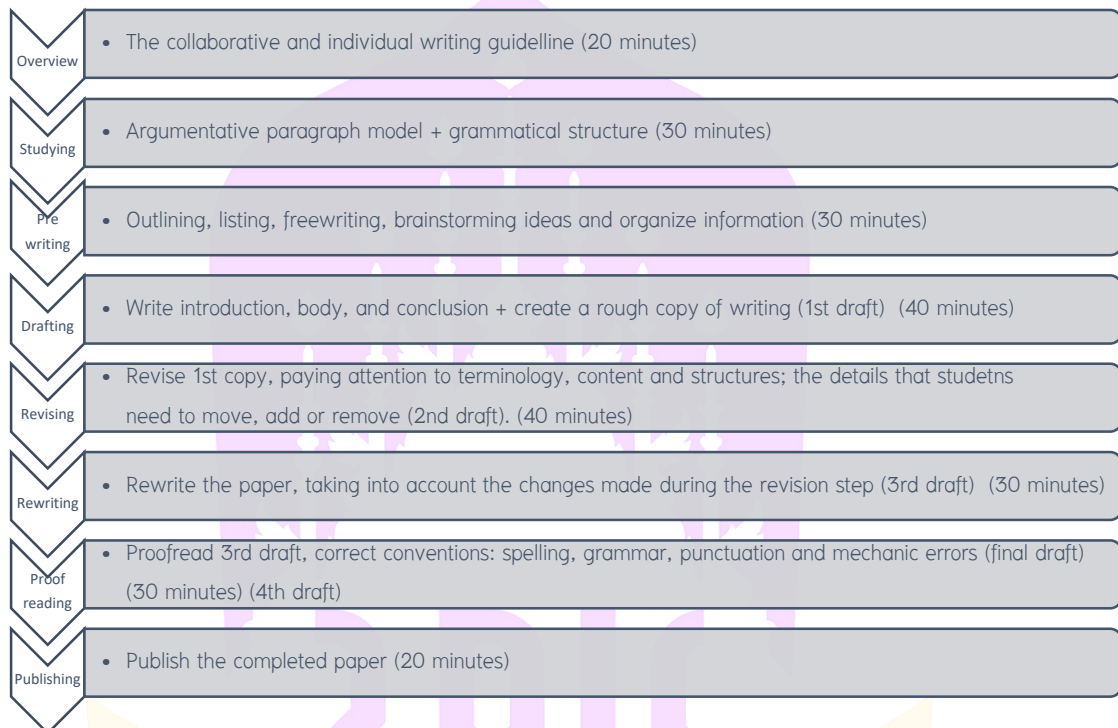
Experimental and data-gathering research tools were separated into two types.

Writing Activity Model

Six collaborative learning lessons were included in the experiment instrument. Each session lasted 240 minutes and lasted four hours per week. Experts were tasked with reviewing, proving, and revising the instructional programs. The lesson plans were

subsequently tested with the participants in the Writing II (1551116), employing the collaborative writing model inspired by White and Arndt (1991), which contained eight steps to increase students' argumentative writing ability:

Total 240 minutes:



(Week 12th/Writing in groups) (Week 13th/Writing in pairs) (Week 14th/Individual Writing)

Figure 3 Writing activity model adapted from White and Arndt (1991)

1. Overview step (20 minutes): the teacher instructed the pupils on writing in groups and writing alone. The instructor started by introducing to the students the basic concepts of four-person group, pair, and writing alone. Before moving on to the next level, students were allowed to ask questions.

2. Studying step (30 minutes): The teacher demonstrated a brief writing pattern and described all grammar rules of argumentative language, which included defending or opposing a relevant topic to the students. The teacher began by introducing the example of an arguing essay and encouraging pupils to think about the writing style used in this type and the language used in their arguments, the objective of argumentation, as well as

the kind of reader for the argumentative text. The students were subsequently given the argumentation structures.

3. Pre-writing step (30 minutes): Students devised a paragraph or structured outline framework for themselves, as well they produced and organized thoughts for a suitable argumentative topic. They then used outlining, listing, freewriting, and brainstorming ideas to study an argumentation topic before organizing all of the information.

4. Drafting step (40 minutes): students worked in four-person groups (week 12), couples (week 13), and individuals to write their first rough draft based on the framework blueprint (week 14). The teacher was accessible to assist the pupils or to provide advice on the writing process. They concentrated on the introduction, body, and conclusion in the first draft.

5. Revising step (40 minutes): the students rewrote the first copy, focusing on terminology, topic, as well as structures. To develop the second draft, rewriting was targeted at the alterations found during the revision step.

6. Rewriting step (30 minutes): The students revised the manuscript, adding the revisions noted during the revision step, to write the third copy.

7. Proofreading step (30 minutes): students submitted their papers to the teacher after finishing the third draft. They were then instructed to revise their paper during the step of revision. To correct their document, the students examined the final manuscript for spelling, grammar, punctuation, and technical faults, resulting in the fourth copy.

8. Publishing phase (20 minutes): pupils finished the argumentation paper and handed it to the teacher (four-person groups, pairs, and individuals). Group works were required to submit one piece of paper, just like pair works. Unlike separate assignments, the teacher received each student's paper.

The material and techniques for the lesson plans were offered to experts at the English Language Department, School of Liberal Arts, University of Phayao, who checked, proofed, and edited them.

Data Collecting Instruments

This study focused on three main areas: students' argumentative writing quality, students' critical thinking skills practiced, and students' patterns of interaction. In this investigation, four data gathering tools were used: argumentative writing tasks, a questionnaire of the students' attitudes regarding critical thinking abilities practiced in CW, as well as a semi-structured interview, and observation.

Writing Tasks

The students were given five argumentative paragraphs to measure their argumentative writing skills. The topic of the writing task is "English is important for getting a job".

The following are the scoring criteria adapted from Zhang (2019), which included some very important criteria and definitions:

1. Content: Content creation employing relevant and appropriate examples, facts, and proof, as well as a constant and clear point of view on the subject;
2. Language use: Show a wide range of syntax, suitable wording, and expressions, as well as a few errors in the lexicon and grammar that do not detract from the message;
3. Organization: Ensure that concepts and transitions are employed properly and coherently all through the paper and that the arguments are presented in the proper order.

Table 4 Argumentative Writing Scoring Criteria adapted from Zhang (2019)
(15 points)

Scores	Content	Language Use	Organization
5	<ul style="list-style-type: none"> - The students' position on the subject is clear and constant. - Arguments are well-developed, including examples, facts, evidence, and details that are relevant and suitable. 	<ul style="list-style-type: none"> - It illustrates grammatical variety, idiomaticity, and proper word choice. - Minor lexical or grammatical errors that do not affect meaning is possible. 	<ul style="list-style-type: none"> - Ideas are interconnected to one another throughout the essay by employing proper connectives or transitional phrases. - It exhibits cohesion and evolution of thoughts.

Table 4 (cont.)

Scores	Content	Language Use	Organization
4	<ul style="list-style-type: none"> - The students' opinions on the subject is often clear and constant. - Although some ideas may not be fully explained or supported, most arguments are well-developed and use relevant and acceptable examples, facts, evidence, or details. 	<ul style="list-style-type: none"> - It exhibits a wide range of vocabulary and grammatical variation. - It is likely to contain small flaws in structure, word form, or idiomatic language that does not detract from the message. 	<ul style="list-style-type: none"> - The majority of thoughts are rationally linked together utilizing proper connectives or transitions. - It may have repetitions, distraction, or ambiguous relations on occasion.
3	<ul style="list-style-type: none"> - Students' opinions on the subject can be derived and are largely stable. - Some arguments may have a scarcity of pertinent and adequate examples, facts, proof, or specifics. 	<ul style="list-style-type: none"> - It may exhibit a wide range of grammatical structures, but it is limited. - It may contain a few visible flaws in phrase construction and word usage, resulting in a lack of clarification and occasionally obfuscated meaning. 	<ul style="list-style-type: none"> - Nearly half of the ideas are interconnected to one another, with the majority of the transitions or sentences appearing appropriate. - The connections between ideas can be confused sometimes.
2	<ul style="list-style-type: none"> - Students' opinions on the subject is frequently ambiguous and inconsistent. - The majority of arguments do not include relevant and acceptable examples, facts, proof, or specifics. 	<ul style="list-style-type: none"> - It may have a restricted terminology and grammatical structures range. - It may have a collection of improper word choices or lexical units, as well as faults in sentence construction and/or usage, which usually impede meaning. 	<ul style="list-style-type: none"> - It may have insufficient structure or connectivity of thoughts, which frequently distorts the linking of ideas.

Table 4 (cont.)

Scores	Content	Language Use	Organization
1	<ul style="list-style-type: none"> – The students' opinions on the subject is unknown. – Arguments aren't established on the basis of relevant and appropriate examples, facts, evidence, or specifics. 	<ul style="list-style-type: none"> – It could have substantial and regular flaws in sentence structure or language that make it difficult to understand. 	<ul style="list-style-type: none"> – It could be fragmented to the point where understanding the development of thoughts is problematic.

According to Table 4, a total of 15 points was given to each paragraph. The scores of students were tallied to determine the proportion of their scores that were higher than the required scores and to grade their ability to write an argumentative essay in each exercise.

The total score for their argumentative writing abilities was determined using the five arguing paragraphs. Furthermore, each student's total scores for the results of five argumentative writing exercises were evaluated to determine their argumentative writing quality level.

A Questionnaire of the Students' Assessment towards Critical Thinking Skills Practiced in Collaborative Writing

The questionnaire adapted from Alan (2006) was developed using the Revised Bloom's Taxonomy (Anderson and Krathwohl, 2001) six levels of learning, and the collaborative learning concept developed by (Vygotsky, 1978). Alan (2006) adapted the questionnaire, which was divided into three stages of critical thinking skills: producing, assessing, and analyzing. To eliminate central tendency bias, the instrument used a 5-point Likert scale (1 = The Least, 2 = Less, 3 = Neutral, 4 = Much, and 5 = The Most) (Kostoulas, Nielsen, Browne and Leontides, 2013). The items were written in Thai to help the participants comprehend the contents of the questionnaire. The questionnaire is shown in Table 5.

Table 5 The questionnaire of students' critical thinking skills practiced levels in collaborative writing adapted from Alan (2006)

No	Statements	The Most	Much	Neutral	Less	The Least
Creating						
1	Producing new sentences, using what has been learned from the members.					
2	Collecting all the information and designing a paragraph according to ideas shared by the members.					
Evaluating						
3	Making decisions and critiquing the sentences which involved or did not involve the topic.					
4	Selecting the appropriate ideas which were brainstormed by the members.					
5	Breaking information into parts to explore better understanding such as arguments, supporting evidence, thesis statements, reasons, etc.					
6	Categorizing the types of ideas shared by members such as supporting or arguments.					
Total						

Interview Question

Regarding the interview question, the question was used to elicit more details about the students' self-assessments regarding critical thinking skills practiced levels. The question was "What are your attitudes towards critical thinking skills practiced in writing activities?".

Validity of the Instruments

The questionnaire was evaluated by three professionals employing the Index of Item Objective Congruence (IOC). The IOC was set to 1.00.

Ethical Approval

The current study has been approved by the Human Ethics Committee for Ethical Considerations in Human Subjects Research at the University of Phayao and issued the authorization certificate with the number 2.1/004/63. Before data was collected, the public was informed of the study's goals and asked to enroll willingly. The volunteers who consented to take part in the project then submitted the consent form. The surveys were stored in a safe place, and the information was saved on a laptop that needed to be accessed with a password. For a period of three years, the information will be kept on file. The hard copy of the data will be destroyed with a paper shredder, and the soft files containing the data will be deleted.

Observation/Audio and Video-Recordings

Observation and transcriptions of the students' interaction patterns during CW was carried out. According to Zhang (2019), the participants' engagement ensures the smooth transmission of critical information that affects the production process.; furthermore, students' participation in the writing process improves their ability to work together. The participants were allowed to interact in Thai during the tasks. Hence, to understand the patterns of students' interactions during the tasks, data was collected using direct observation, audio recordings, and video recordings to analyze patterns of interaction among students using Collaborative, dominant/passive, expert/novice, and dominant/dominant interactions which

are all part of Storch's (2013) framework as shown in Figure 3. To collect data from observation, audio recordings, and video recordings, the researcher selected six pairs and two groups to analyze the interaction patterns.

Because this study focused on student collaboration, the interaction between an individual student and teacher will be excluded. The researcher observed, used audio and video were used to record each pair and group conversation during CW activities throughout the class.

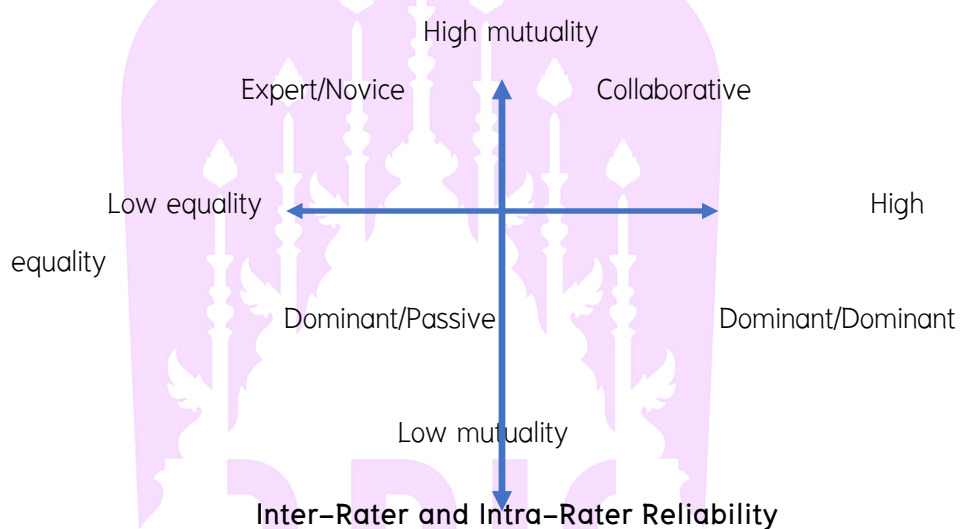


Figure 4 Storch's (2013) Interaction Pattern Framework

Three raters were appointed to rate the students' linguistic analysis to obtain data on argumentative writing quality. Rater 1 is a Thai English instructor who has been teaching English at Lampang Rajabhat University's English Department for 15 years. Rater 2 is a native speaker who has been teaching English for 12 years at Lampang Rajabhat University's English Department and is also an English instructor, and Rater 3 is a researcher who has been teaching English for 13 years.

Language Used in the Activity

Students were allowed to engage in Thai rather than English. According to Shehadeh (2011), students would be relieved to engage in writing activities; yet, if they were compelled

to negotiate in English, it would limit their vocabulary as well as their capacity to use their imagination or come up with new ideas.

Statistical Method

The information was grouped into three main types: investigating the effectiveness of collaborative writing exercises (four-person groups, pairs, and individuals) to improve students' argumentative writing ability; exploring students' attitudes toward using critical thinking skills in collaborative writing activities; and analyzing students' interaction patterns during collaborative writing conversations. The following are the statistics utilized in this study:

1. To analyze the writing quality using the collaborative writing activities (four-person grouping, pairings, and individuals), mean and standard deviation were employed.
2. To examine the students' self-assessments regarding critical thinking skills practiced in the CW process, mean and standard deviation and semi-structured interviews were involved.
3. To analyze the students' interaction patterns occurring during collaborative writing (groups and pairs). The four quadrants of Storch's (2013) model were used to categorize the interaction patterns.

Data Collection

The data were acquired during the 2019 academic year's Writing II in a northern Thai university. It was only gathered information once after receiving ethical approval.

This research looked at three important areas: students' writing quality scores, their attitudes toward using critical thinking abilities in collaborative writing, and their interaction patterns during collaborative writing.

The following data was collected:

1. In June 2020 (11th week), the students were required to write one pre-survey argumentative paragraph to track the improvement after starting the experimental study. A pre-survey is one of the tools that may be used to assess the effectiveness of a learning intervention. Its goal was to see how much pupils' argumentative writing abilities had improved.
2. From June–October 2020, the six lessons of collaborative writing activities teaching lasted sixteen weeks with six lessons. Students were required to write five drafts

of argumentative paragraphs. The current study aimed to examine the student's argumentative writing quality in the various writing activities: groups of four, pair, and individual works. The data was obtained from the students' writing and evaluated by three raters using Criteria for Argumentation adapted from Zhang (2019). The holistic scoring rubric was the scale used for assessing the argumentative paragraph writing. The goal of this research was to determine the content, organization, and language used. Because it includes descriptors of syntactic and rhetorical aspects of five levels of writing assessments, the scale was chosen to assess the students' writing quality. The criteria were clarified to the students at the beginning of the writing process as one of the writing criteria and guidelines the students should meet throughout the course.

3. In August–October 2020, in the 12th–14th weeks, writing activities started.

In the 12th week, the students were assigned to write in groups of four members of their own selection. The total time was 240 minutes for each class. The students were assigned to write argumentatively on the topic of “English is important for getting a job.” The students followed the eight steps of the collaborative writing model that the teacher explained and guided at the beginning of the lesson.

In the 13th week, the students were assigned to write in pairs for which they selected their partners. The total time was 240 minutes for each class. The students were assigned to write argumentatively on the topic of “English is important for getting a job.” The students followed the eight steps of the collaborative writing model that the teacher explained and guided at the beginning of the lesson.

In the 14th week, the students were assigned to write individually. However, the students were required to follow the same steps as group writing and pair writing.

In the last step of the writing activities, the completed paper was published. The group writing students sent one final piece of writing from each group to the teacher. Pair writing students who were asked to send one piece of paper from each pair. In contrast, in individual writing, every student was required to hand in their own paper.

While the students were writing their drafts, observation was started to observe the critical thinking skills employed by students. In this study, only two pairs and two groups' conversations were observed. During the writing activities, the teachers walked around and

observed and listened to their conversations. Some conversations that were not related to the topic were excluded. Then, the data was transcribed and categorized according to Revise Bloom's Taxonomy (2001).

Regarding analyzing the students' interaction patterns that occurred during collaborative writing activities (groups and pairs), conversations during collaborative activities (group and pair works) were observed throughout the classroom to analyze the students' patterns of interactions (six pairs and two groups). This occurred for the entire class period and were classified sentences among them were classified in order to identify the patterns of interaction between learners. Video and audio recordings were set before starting the writing activities. During the activities, the teacher also walked around and took some field notes. Then, the conversations were transcribed, categorized, and assigned to one of Storch's (2013) frameworks (collaborative, dominant/passive, expert/novice, and dominant/dominant).

4. At the end of the semester, to measure the students' attitudes toward critical thinking skills practices in CW, a questionnaire, a semi-structured interview, and an observation were used.

At the end of class, the teacher distributed a questionnaire to the students who wrote the consent form to participate in this study. It took about 20 to 30 minutes after the questionnaire was distributed.

Then, in semi-structured interviews, six students (two advanced, two intermediate, and two novice students) were selected randomly and were interviewed. There was three question as follows: 1) What are your attitudes towards critical thinking skills practiced in group writing activities? 2) What are your attitudes towards critical thinking skills practice in pair writing activities? and 3) What are your attitudes towards critical thinking skills practice in individual writing activities? Each student was asked to answer the questions freely in a separate room and their answers were not related to the writing quality scores. The semi-structured interview took 20-30 minutes each time. Then, all data from the interview sessions was transcribed.

Data Analysis

The data analysis approaches were divided into three segments based on the study's purposes.

1. To examine the students' writing quality, the students' argumentative writing tasks were evaluated by three raters. The total scores were calculated to find the mean values and standard deviation of the Microsoft Excel Program. The total scores were 15 points using the rubric of text quality adapted from Zhang (2019).

2. To explore the students' self-assessments towards critical thinking practiced in writing activities, the questionnaire adapted from Alan (2006) was conducted by using the 5 Likert point scale to find the mean values and standard deviation. To interpret mean values, the following criteria based on the Likert Scale were utilized:

5.00–4.21 = students have the highest level of critical thinking skills practice

4.20–3.41 = students have a high level of critical thinking skills practice

3.40–2.61 = students have a neutral level of critical thinking skills practice

2.60–1.81 = students have less level of critical thinking skills practice

1.80–1.00 = students have the least level of critical thinking skills practice

Regarding a semi-structured interview, the three questions adapted from Aguelo (2017) were conducted after the students finished rating the questionnaire. The linguistic data from the interview sessions was analyzed.

Also, the students' conversations during collaborative writing activities were observed. The linguistic data gained from these conversations were transcribed, analyzed, and categorized using Revised Bloom's Taxonomy (2001) to explore the students' critical thinking employed in CW.

3. To analyze the students' patterns of interaction, observation was used to collect linguistic data during conversations. Then, the linguistic data gained from the activity was transcribed and analyzed using the four quadrants of Storch's (2013) model.

Chapter 3 presented the Research Methodology which consisted of the Participants of the Study, Research Instruments, Validity of the Instruments, Ethical Approval, Statistical method, Data Collection, and Data Analysis.

The next chapter reports the results of the study including the Quality of Students' Argumentative Writing, the Level of Critical Thinking Skills Practiced Level, Patterns of Interaction, and the Conclusion.



CHAPTER IV

RESULTS

This chapter aims to present the findings of the current study. As mentioned in Chapter I, the study focused on answering three research questions: 1) What are the effects of group, pair, and individual work on the students' argumentative writing quality across three different writing activities? 2) What are the students' attitudes towards critical thinking skills practiced in collaborative writing activities? and 3) What are the students' interaction patterns during collaborative writing activities (groups and pairs)? This chapter illustrates the quantitative and qualitative findings regarding these three research questions.

Answer to Research Question 1:

What are the effects of group, pair, and individual work on the students' argumentative writing by using collaborative writing activities at all levels of the students?

Regarding the first research question, the statistical findings reveal as follows:

The Quality of Students' Argumentative Writing

A recent study examined the mean writing ability scores across various writing tasks. The study's specific genre was focused on the same issue as in Chapter III. The results of the data are shown in Table 6.

Table 6 Writing quality mean score

English Proficiency	Number of Students	Group (n = 8)		Pair (n = 16)		Individual (n = 32)	
		\bar{X}	S.D.	\bar{X}	S.D.	\bar{X}	S.D.
Novice	18	11.22	.96	10.19	1.14	8.98	1.29
Intermediate	8	11.50	.53	10.32	.66	9.04	0.70
Advanced	6	11.95	.80	10.45	.78	9.45	.78
Total	32	11.35	.92	10.27	.96	9.08	1.07

Overall, students received the highest post-writing scores in groups ($\bar{X} = 11.35$), followed by pair work ($\bar{X} = 10.27$) and independent work ($\bar{X} = 9.08$) on a scale of 15 points.

According to the data, students with varying levels of English ability scored differently on several writing assignments. When beginner students worked in groups of four, they got the best results ($\bar{X} = 11.22$), followed by pairs ($\bar{X} = 10.19$) and individuals ($\bar{X} = 8.98$), respectively. When writing in groups, the outcomes were similar to those of intermediate students who received the highest scores when producing papers in groups ($\bar{X} = 11.50$), followed by pairs ($\bar{X} = 10.32$) and individuals ($\bar{X} = 9.04$), respectively. They also received the highest results in advanced groups when participating in collaborative writing in groups ($\bar{X} = 11.95$), followed by pairs ($\bar{X} = 10.45$), and individuals ($\bar{X} = 9.45$), respectively. A comparison of pupils' writing abilities is seen in Figure 5:

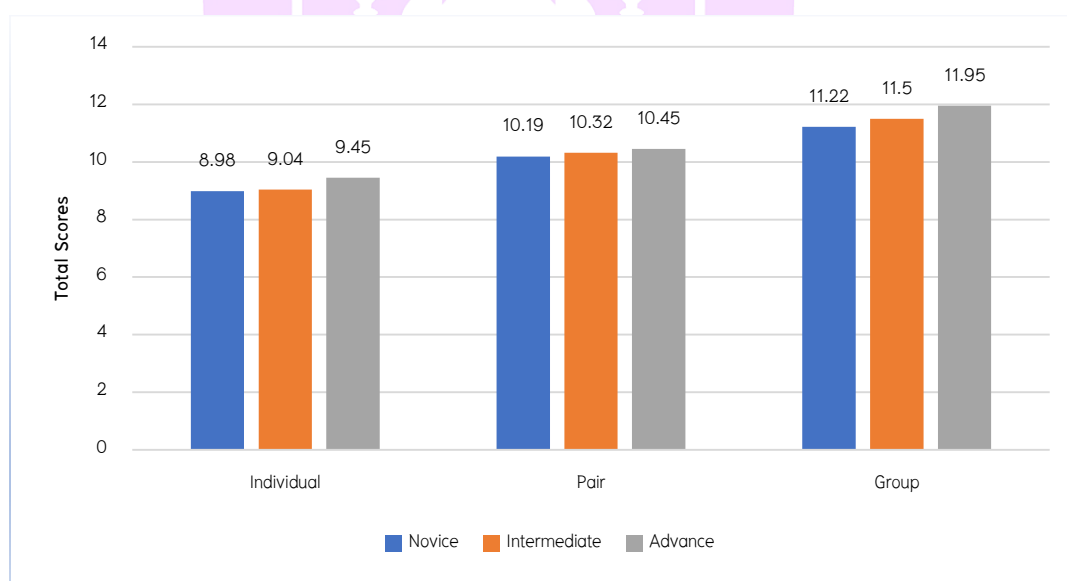


Figure 5 The Students' Writing Quality (15 points)

Answer to Research Question 2:

Based on Revised Bloom's Taxonomy (2001), the related critical thinking skills in this study were creating, evaluating, and analyzing. The questionnaire was used to measure the critical thinking skills employed in writing activities by using a 5-point Likert scale (1 = The Least, 2 = Less, 3 = Neutral, 4 = Much, and 5 = The Most). The findings of the

quantitative and qualitative analyses were administered concerning the research question: what are the students' self-assessments towards critical thinking practiced in CW activities?

Level of Practiced Critical Thinking Skills

Table 7 reveals the students' self-assessment levels towards critical thinking skills practiced regarding related critical thinking skills employed.

Table 7 The levels of critical thinking skills practiced in collaborative writing (groups)

No.	Statements	Mean	Meaning
Creating			
1	Producing new sentences, using what has been learned from the members.	4.25	Highest
2	Collecting all the information and designing a paragraph according to ideas shared by the members.	4.62	Highest
Total		4.43	Highest
Evaluating			
3	Making decisions and critiquing the sentences which involved or did not involve the topic.	4.37	Highest
4	Selecting the appropriate ideas which were brainstormed by the members.	4.25	Highest
Total		4.31	Highest
Analyzing			
5	Breaking information into parts to explore better understanding such as arguments, supporting evidence, thesis statements, reasons, etc.	4.75	Highest
6	Categorizing the types of ideas shared by members such as supporting or arguments.	4.87	Highest
Total		4.81	Highest

Table 7 demonstrates critical thinking skills practiced in collaborative writing (in groups) regarding related critical thinking skills in this study (creating, evaluating, and analyzing). For creating, the students working in groups employed creating skills at the highest level (Mean = 4.43). They practiced often, producing new sentences and collecting all the information, and designing a paragraph according to ideas shared by peers. For evaluation, it was at a high level (Mean = 4.31). The students in the group usually made decisions and critiqued the sentences, including choosing the appropriate ideas. Regarding analyzing skills, the skills practiced were at the highest level (Mean = 4.81). When working in groups; for example, the students often separated information into parts and categorized the kinds of ideas shared by their peers.

Table 8 The levels of critical thinking skills practiced in collaborative writing (pairs)

No.	Statements	Mean	Meaning
Creating			
1	Producing new sentences, using what has been learned from the members.	3.56	High
2	Collecting all the information and designing a paragraph according to ideas shared by the members.	3.43	High
Total		3.5	High
Evaluating			
3	Making decisions and critiquing the sentences which involved or did not involve the topic.	3.31	Neutral
4	Selecting the appropriate ideas which were brainstormed by the members.	3.56	High
Total		3.43	High
Analyzing			
5	Breaking information into parts to explore better understanding such as arguments, supporting evidence, thesis statements, reasons, etc.	3.68	High
6	Categorizing the types of ideas shared by members such as supporting or arguments.	3.81	High
Total		3.75	High

Table 8 revealed the results of critical thinking skills employed in pair work. For creating skills, the students employed the skills at a high level (Mean = 3.5), but the levels were lower than the students' levels who worked in groups. They often produced new sentences that were shared with their peers. For evaluating skills, the students working in pairs also employed the skills at a high level (Mean = 3.43). They always had to make decisions and select the appropriate ideas. Regarding analyzing skills, when working in groups, the students employed analyzing skills at a high level (Mean = 3.75). They practiced breaking information into parts to explore better understanding and categorized the ideas into the types. However, the critical thinking skills employed in pair work were lower than in group work.

Table 9 Table 9 The levels of critical thinking skills practiced in collaborative writing (individuals)

No.	Statements	Mean	Meaning
Creating			
1	Producing new sentences, using what has been learned from the members.	3.03	Neutral
2	Collecting all the information and designing a paragraph according to ideas shared by the members.	2.88	Neutral
Total		2.95	Neutral
Evaluating			
3	Making decisions and critiquing the sentences which involved or did not involve the topic.	3.06	Neutral
4	Selecting the appropriate ideas which were brainstormed by the members.	3.13	Neutral
Total		3.09	Neutral
Analyzing			
5	Breaking information into parts to explore better understanding such as arguments, supporting evidence, thesis statements, reasons, etc.	3.34	Neutral
6	Categorizing the types of ideas shared by members such as supporting or arguments.	3.38	Neutral
Total		3.36	Neutral

Table 9 demonstrated the related critical thinking skills levels employed when writing individually. The students employed their creative skills at a neutral level (Mean = 2.95). They rarely employed their created skills, for example, in producing sentences and phrases. They designed a paragraph, but there were not any ideas shared by friends. For evaluation, when writing alone, the students employed evaluation at a neutral level (Mean = 3.09). The students sometimes made decisions and selected the ideas to create sentences. Regarding analyzing, the students employed the skills when writing alone at a neutral level (Mean = 3.36). They sometimes separated ideas into parts and chose the suitable information to manage them into categories. In this kind of writing activity, the students working individually employed critical thinking skills lower than in the two other kinds of writing activities (pairs and groups). Figure 6 shows the overall comparison for related critical thinking skills employed in writing activities.

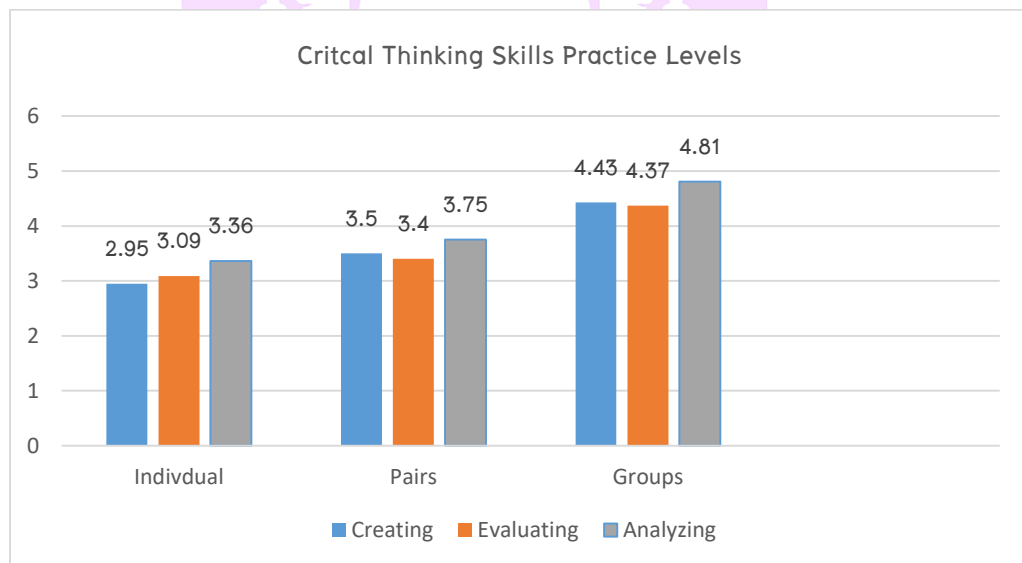


Figure 6 The overall comparison of related critical thinking skills employed in writing activities

The Students' Self-Assessments towards Critical Thinking Skills Practiced in Collaborative Writing

In the second phase, semi-structured interviews were employed to acquire additional data on how learners self-assessed their critical thinking practices in a writing procedure. Six participants enrolled in this in-depth interview, each with a different level of English proficiency. Students 1-2 (S1-S2) were chosen at random from beginner groups, 3-4 (S3-S4) from medium groups, and 5-6 (S5-S6) from high-level groups.

In pairing assignments, novice and intermediate students claimed they had to make comparisons with their peers' texts. The students in the two-level class did not compose many sentences, though, because they did not feel comfortable enough to write a complete paper. Student 3 said, "I did not construct many phrases and sentences because I am worried about grammar." High-level pupils, on the contrary, claimed that they produced their sentences with what they acquired from their peers, as student 4 said, "I collected ideas from friends, then I produced sentences". They studied and obtained data from their peers to create completed writing.

When it came to group activities, by examining, evaluating, and generating, all students felt they were able to increase their critical thinking abilities. Advanced pupils indicated they selected information from their friends before writing them in a text, as Student 5 said, "I chose information and ideas from my friends." After selecting ideas, I tried to write and produce some sentences". Before creating new phrases, novice students sorted thoughts that were connected to the theme. They categorized and constructed all the material from peers into a paragraph in the same way that intermediate students did. Students sorted and selected appropriate ideas to achieve a consensus and produced their writings as group activities fostered by engagement among classmates. Advanced students realized that their critical thinking regarding analyzing, evaluating, and creating was improving as student 6 reported, "When I worked in groups and pairs, I thought my critical thinking skills were improved. I practiced separating information and ideas into categories, selecting words or phrases related to the topic, and producing sentences".

According to the in-depth interview, it could be assumed that the advanced students considered themselves to have critical thinking skills, for example, producing sentences,

selecting information, and categorizing all related parts of information during group and pair activities. Intermediate students also realized that in group and pair work they could practice critical thinking skills such as inventing phrases, sentences, and paragraphs. As student 4 said, “In group writing, I practiced my critical thinking skills. For example, I practiced separating ideas, choosing information, and constructing sentences and phrases”. Moreover, they considered that they employed evaluating skills; for example, they made decisions to collect or delete content, and they broke information into parts to explore better understanding. Regarding novice students, they considered writing in groups and pairs encouraged them to practice critical thinking skills because peers were encouraging each other to think, analyze, choose, delete, and design all information. Student 2 said, “I practiced critical thinking skills when I worked in groups and pairs. Furthermore, when working with peers, they encouraged me to think, analyze, and separate all ideas. I and my friends helped each other build sentences.” Novice students reported that in groups and pairs, they helped each other to complete a paper. Therefore, it could be assumed that the students in different levels considered their critical thinking skills to be practiced a lot in group and pair writing activities.

Observation

The findings from the classroom observations are also presented in this part. Two pairs and two groups were chosen at random so that critical thinking skills could be used to examine their behavior. Pairs 1–2 were randomly selected. The first pair consisted of one intermediate student and one novice student, and the second pair consisted of two intermediate students. For group 1 consisted of one advanced, two intermediates, and one novice. The second group included three intermediates and one novice student. The teacher collected handwritten field notes for each group observed, documenting noteworthy occurrences and the students' conduct during the CW exercises. The teacher walked around the classroom on occasion, chatting with pupils about their activities during class time. They categorized and examined each data observation using Revised Bloom's Taxonomy's learning levels (2001), which include analyzing, evaluating, and creating, as shown in Table 10.

Table 10 Definitions and Sample Cues of Critical Thinking Skills Based on Revised Bloom Taxonomy (2001)

Critical Thinking	Definitions	Sample Cues
Creating	Generating new ideas, products, or ways of viewing things, designing, constructing, planning, producing, inventing.	generate, plan, produce
Evaluating	Justifying a decision, checking, hypothesizing, critiquing, experimenting, judging	check, critique, judge
Analyzing	Breaking information into parts to explore understanding and relationships, comparing, organizing, deconstructing, interrogating, finding	Differentiate, organize, attribute

The following are the students' critical thinking skills as observed during their writing assignments.

Table 11 Pair 1 (One intermediate and one novice)

Activities	Critical Thinking Skills
Each student <u>evaluated</u> sentences which were brainstormed by their peers after they finished proposing ideas. Students made decisions based on criticism of their friends.	Evaluation
Students <u>created</u> phrases and sentences by selecting relative pronouns to be used correctly with sentences.	Creation
Students <u>generated</u> new sentences, using what has been learned from their peers.	

Table 12 Pair 2 (Two intermediates)

Activities	Critical Thinking Skills
Students <u>broke information</u> into parts to explore better understanding.	Analyzing
Students <u>made decisions</u> based on criticism of their friends.	Evaluating
Students <u>generated</u> new sentences, using what has been learned from their peers.	Creating

Table 13 Group 1 (Two intermediates, one advanced, and one novice)

Activities	Critical Thinking Skills
Students <u>categorized</u> jobs in which people used English in their work.	Analyzing
Students <u>evaluated</u> which ideas were not involved in their topic.	Evaluating
Students <u>invented</u> their paragraphs according to ideas shared by friends.	Creating

Table 14 Group 2 (Three intermediates and one novice)

Activities	Critical Thinking Skills
Students <u>analyzed</u> which pronouns they found incorrectly.	Analyzing
Students <u>evaluated</u> the sentences which were not involved in the topic.	Evaluating
Students <u>gathered</u> all the information and wrote their paragraphs.	Creating

The subjects of this study were a total of 32 students enrolled in Writing II. However, the data for the last research question was available from only 20 learners, who were selected from 2 pairs and 2 groups participating in the observational part. The following table shows critical thinking skills observed when they participated in collaborative writing (pairs and groups). Table 10 showed that in pair 1 (intermediate and novice), the students employed critical thinking skills (e.g., creating and generating, and evaluating). Only analyzing skills could not be observed. In the second pair, the students practiced critical thinking skills

(e.g., generating, making a decision, and breaking down information). Regarding groups 1 and 2, the students in both groups employed critical thinking skills such as inventing, gathering, evaluating, categorizing, and analyzing. Table 15 reveals the critical thinking skills observed during collaborative writing activities.

Table 15 Critical thinking Skills observed during collaborative writing activities

Critical thinking skills	Creating	Evaluating	Analyzing
Pair 1	created and generated	evaluated	–
Pair 2	generated	made decision	broke information
Group 1	invented	evaluated	categorized
Group 2	gathered	evaluated	analyzed

Answer to Research Question 3:

The results of the qualitative data were applied to the following research question: What are the students' interaction patterns during collaborative writing activities (groups and pairs)?

Patterns of Interaction

During CW, the interaction patterns of the pupils were observed. According to Zhang (2019), interaction among participants allows the smooth transmission of critical information that affects the production process. Additionally, participation in the writing process increases participant cohesion. During the tasks, the participants were allowed to converse in Thai. As a result, data was obtained via direct observation, audio recordings, and video recordings to examine patterns of interaction among students using Storch's (2013) framework (collaborative, dominant/passive, expert/novice, and dominant/dominant). The definitions and sample cues were described as shown in Table 16.

Table 16 The Definitions of Patterns of Interaction

Patterns of Interaction	Definitions
Collaborative	<p>Learners' engagement is moderate to high equality and moderate to high mutuality. Learners display willingness to offer and engage with each other's ideas. They create and maintain "joint problem space." Learners offer and discuss, which leads to resolutions acceptable to both partners (Storch, 2002, p. 128)</p>
Dominant/dominant	<p>Learners display moderate to high equality, but a moderate to low level of mutuality. Although both learners may equally contribute to the task, they are not willing or unable to fully engage with each other's contributions.</p>
Dominant/passive	<p>Learners show a low level of mutuality and equality. The dominant partner leads the task with little negotiation with the other passive partner, who either cannot or does not contribute to the task or challenges the other.</p>
Expert/novice	<p>The level of equality may be moderate to low, but the level of mutuality ranges from moderate to high. It differs from dominant/dominant in terms of the willingness of the expert to actively encourage the novice to participate in the task.</p>

Source: Kos, 2019, p. 10

The audio and video recordings featured interactions between six pairs and two groups on the Writing II classroom exercises. Most of the recordings were generated by students throughout class time sessions. The researcher made records throughout regular English classes. For the qualitative analysis, only one to two interactions per pair and group were chosen. To increase validity, talks that occurred in the middle and towards the end of the full duration were chosen for study. Another explanation for this stage was that students would have had a chance to operate the microphones or digital recorders that were provided to them for the course of the unit of work (Philp, et al., 2010, p. 264).

On-task and off-task talk were first separated from the data (Storch, 2001). On-task dialogue, in which students were fully engaged in their work, was found to be effective and was further investigated. However, off-task discussion, in which learners engage in conversation that is unrelated to the task, was, however, excluded. A high rate of off-task conversation, for example, indicates that students are disengaged from the task. Table 17 displayed the patterns of interactions between pair talks during collaborative writing activities.

Table 17 The results of the patterns of interaction in pair talks

Pair number	Name	Gender	Relative proficiency	Patterns of Interaction
Pair 1	Louis	M	Advanced	Dominant
	Nam	F	Advanced	Dominant
Pair 2	Grace	F	Intermediate	Collaborative
	First	F	Intermediate	Collaborative
Pair 3	Om	F	Intermediate	Dominant
	Jing-Jung	M	Novice	Passive
Pair 4	Up	M	Advanced	Dominant
	Tae	M	Novice	Passive
Pair 5	Kim	F	Intermediate	Collaborative
	Bo	M	Advanced	Collaborative
Pair 6	Pond	M	Advanced	Expert
	LIn	F	Novice	passive

The following shows the students' conversations during pair writing activities. They consisted of seven conversations, as follows:

Pair 1: Advanced and Advanced (Louis and Nam)

Table 18 Conversation 1: Dominant/ Dominant in move 3

Move	Participants	Dialogues	Patterns of Interaction
1	Louis	We should, revise our first paragraph and then, rearrange it, do you agree?	-
2	Nam	first paragraph here?	-
3	Louis	Yeah, our first paragraph. You check one sentence here and correct it. Then you write the details and summary.	<i>Dominant/ Dominant</i> (Learner displays moderate to high quality, but a moderate to low level of mutuality ¹)
4	Nam	Why don't you write the first paragraph? I will write the second paragraph. Then, we revise or rearrange them together.	<i>Dominant/ Dominant</i> (Learner displays moderate to high quality, but a moderate to low level of mutuality ¹)
5	Louis	Yeah. Then includes two points. You, you add a point here and a point there. The points start with a primary opinion, followed by the information and conclusion.	-
6	Nam	Ok. The point is English is important to getting a job.	-
7	Louis	Yes. It's difficult to get a job without English.	-

Conversation 1 provided a quick overview of an organization's non-collaborative pair interaction. When the two-talked organization, Louis controlled the conversation by suggesting structure and determining which elements to include for the CW job (move 3), while Nam rejected Louis' suggestion. Nam gave his opinion on the proposed construction or suggested alternatives. When the topic changed to generating new thoughts, nevertheless, they commonly contributed similarly. Nam made an argument in move 5, which Louis evaluated it and refute in move 7.

Pair 2: Intermediate and Intermediate (Grace and First)

Table 19 Conversation 2: Collaborative in move 3

Move	Participants	Dialogues	Patterns of Interaction
1	Grace	Important.	-
2	First	Important? How to spell?	-
3	Grace	<u>l-m-p-o-r-t-a-n-t.</u>	Collaborative (Learner's engagement is moderate to high quality and moderate to high mutuality)
4	First	No. Are you sure? We need a noun.	-
5	Grace	Ah, importance.	-

According to the interpersonal characteristics of this collaboration genre, students collaborated on terminology as well as task organization. For example, Grace and First were both actively gaining terminology, presenting and evaluating lexical items, and seeking or contributing mechanic-related lexis information in Conversation 2.

Pair 3: Intermediate/ Novice (Om and Jing–Jung)

Table 20 Conversation 3: Dominant/Passive in move 4

Move	Participants	Dialogues	Patterns of Interaction
1	Om	Um, get their job, job? Jobs, plural.	–
2	Jing–Jung	Ok.	–
3	Om	They can't rely on their confidence any longer. You have the ability to modify your word, rely on.	–
4	Jing–Jung	How?	Dominant/ passive (Learners show low level of mutuality and equality.)
5	Om	We should choose a different phrase. I believe we overuse the term rely on. Is it possible to use a different expression?	–
6	Jing–Jung	... [silent]	–
7	Om	Rely on, depend on.	–

Conversation 3 illustrates the dominant/passive type's interactional pattern. Om dominated the language use conversation in this conversation, as she greatly contributed to obtaining various proper language elements (jobs, not any longer, relying on self-correcting was the most common way (moves 1, 3, and 7), while Jing–Jung mostly preserved the conversation and contributed less to the word use conversation.

Pair 4: Advanced and Novice (Up and Tae)

Table 21 Conversation 4: Dominant/Passive in moves 1, 3, and 5

Move	Participants	Dialogues	Patterns of Interaction
1	Up	“Technology is important to many people to get knowledge and for contacting people,” for contacting people, to contact with people . . . because it is, because it is a word in this context.	Dominant/Passive Learners show low level of mutuality and equality. The dominant partner leads the task with little negotiation with the other passive partner, who cannot or does not contribute to the task or challenges the other.
2	Tae	for contact	-
3	Up	<i>Yeah, what can I say, I have some doubts about this sentence. Why don't we put it here?</i> “People can contact” is something we can [write]. <i>Anyway, some sounds, some of it [is] a little weird. People, on the other hand, freely communicate with one another.... I don't know. For our essay, “people can communicate using technology.”</i> <i>Ahh . . . no no no, I'm not sure . . . No, I don't believe that is the case.</i>	Dominant/Passive Learners show low level of mutuality and equality. The dominant partner leads the task with little negotiation with the other passive partner, who cannot or does not contribute to the task or challenges the other.
4	Tae	can communicate . . . mm.	-
5	Up	<i>Anyway, we could . . . yeah, it might be better.</i>	Dominant/Passive Learners show low level of mutuality and equality. The dominant partner leads the task with little negotiation with the other passive partner, who cannot or does not contribute to the task or challenges the other.
6	Tae	. . . perhaps this is a better option.	-

It is indicative of the dominant/passive pattern in Excerpt 4. Up (advanced), the dominant student, and Tae (novice), the unengaged partner, had unequal contributions. Up appeared to view the assignment as an individual task rather than a team one, and he made no attempt to include Tae. Up made a lot of self-directed statements (moves 1, 3). Tae's contribution was confined to echoic repetitions, and there was minimal negotiation between them (moves 2, 4, 6). There were no discussions or questions exchanged between them. Vygotsky defined it as “private speech involving internal communication directed at oneself” (1978).

Pair 5: Intermediate and Advanced (Kim and Bo)

Table 22 Conversation 5: Collaborative in move 5, 9, and 14

Move	Participants	Dialogues	Patterns of Interaction
1	Kim	It is a characteristic that ... don't, didn't, don't.	-
2	Bo	Doesn't	-
3	Kim	Yes	-
4	Bo	Appreciate other people. It's a characteristic that respects other people.	-
5	Kim	Great. When, when we manage a meeting.	Collaborative Learners' engagement is moderate to high equality and moderate to high mutuality. Learners display willingness to offer and engage with each other's ideas, they create and maintain “joint problem space”. Learners offer and discuss, which lead to resolutions acceptable to both partners
6	Bo	When we manage a meeting (writing and saying to herself).	-

Table 22 (cont.)

Move	Participants	Dialogues	Patterns of Interaction
7	Kim	The president invested his body and spirit into the organization; yet, we...	-
8	Bo	It should be done before our meeting, before our meeting, our president.	-
9	Kim	Um, right, right, before our meeting.	Collaborative Learners' engagement is moderate to high equality and moderate to high mutuality. Learners display willingness to offer and engage with each other's ideas, they create and maintain "joint problem space". Learners offer and discuss, which lead to resolutions acceptable to both partners

Conversations 5 and 6 were typical of a collaborative pair's discussion on content. The pair's talk was highly reciprocal. Kim (intermediate) and Bo (advanced) proposed ideas (moves 1, 5, 7, 10), helped each other complete an idea (move 4, 12), revised a proposed idea (move 8, 13), and showed agreement on or praised a pair member's input (moves 5, 9, 14). This cohesive and reciprocal interaction pattern could also be found when a collaborative pair discussed organization, language use, and task management.

Pair 6: Advanced and Novice (Pond and Lin)

Table 23 Conversation 7: Expert/Passive in moves 1 and 9

Move	Participants	Dialogues	Patterns of Interaction
1	Pond	What's the next thing you'd like to tell?	Expert/ Passive The level of equality may be moderate to low but the level of mutuality ranges from moderate to high"
2	Lin	I'd like to say something . . . that um . . . honestly, I'd like to write, how it, not how, I want to add it's really um . . . useful, useful in getting a job.	-
3	Pond	Yeah, yeah, yeah.	-
4	Lin	It was quite useful to me.	-
5	Pond	Ah, I understand how essential it is to you.	-
6	Lin	Yep.	-
7	Pond	Yet ah . . .	-
8	Lin	Yeah but in general	-
9	Pond	Yes, I understand, but in this section, we must discuss the value of thought.	Expert/ Passive The level of equality may be moderate to low but the level of mutuality ranges from moderate to high"
10	Lin	thinking about it	-
11	Pond	Yeah.	-

In Conversation 7, Pond (advanced) seemed to assume or was afforded the role of the conversation and led the task. However, unlike a dominant role, Pond actively encouraged Lin, the novice, to participate in the task (move 1) and provided assistance that would help Lin learn from the interaction (move 9). Though Pond was authoritative, he was not necessarily authoritarian (Van Lier, 1996).

In conclusion, the results showed types of collaboration detected through an analysis of the students' conversations in two groups and six pairs. The findings from this study had an impact on the patterns of interaction formed by pairs (see Storch, 2001). Within the on-task talk, learners talked mainly about: 1) the task at hand, 2) language use and choices, and 3) other task-related content such as main characters or events. Episodes in which learners talked about how to go about completing the task at hand, negotiated or assigned roles, and announced or negotiated the next stage in the task (Storch, 2001a) were referred to as task-related episodes (TREs).

The patterns of interaction in student discourse during the group activity were investigated. Meanwhile, a chat demonstrated collective knowledge exchange (Milson, 1973). Directed lines connected four students in each category in the data. It's worth noting that only the discussion was studied. As a result, if a student did not participate in the conversation analysis, it is likely, he or she did not have meaningful engagement.

Information on each participant's ability is useful to acquire a better picture of how peers in each group interact throughout an activity. Information about each participant's ability with the results of group talks' patterns of interaction is provided here in Table 24.

Table 24 The results of the patterns of interaction in group talks

Group Number	Name	Gender	Relative proficiency	Pattern of interaction
Group 1	Om-tang	F	Intermediate	Passive
	Pang	F	Novice	Passive
	Kim	F	Intermediate	Expert
	Pond	M	Advanced	Expert
Group 2	Nui	M	Novice	Collaborative (Excerpt 3)/ Passive (Excerpt 4)
	Beaw	F	Intermediate	Collaborative (Excerpt 3)/ Passive (Excerpt 4)
	First	F	Intermediate	Collaborative (Excerpt 3)/ Dominant (Excerpt 4)
	Grace	F	Intermediate	Collaborative (Excerpt 3)/ Dominant (Excerpt 4)

The following are the conversations observed in group talks during writing activities.

Group 1

Table 25 Conversation 1: Expert/Passive

Move	Participants	Dialogues	Patterns of Interaction
1	Kim	<p>“The feelings” ...feelings [instead of feeling] (looks at Pang) ... because their, their [feelings]? ... "was thinking" ... thoughts.” Thoughts ... because thinking is ... Ahh! Do you know why this one? He [the reformulator] put thoughts [instead of thinking]?</p>	<p>Expert/ Passive The level of equality may be moderate to low but the level of mutuality ranges from moderate to high”</p>
2	Pang	Thoughts.	—
3	Kim	Yeah.	—
4	Om-tang	Ohhh ... (silence)	—
5	Pond	<p>It’s not a gerund, feelings or thoughts, noun. So, this is kind of parallel ... so we have to put two nouns, not one noun with a one gerund, ah gerund. So that’s why he put thoughts [...] “So, studying English is also important because it is useful to get a job and our thoughts and feelings when we work with foreigners, right? Not my feeling, so we have to put ‘s’, right? Understand?</p>	<p>Expert/ Passive The level of equality may be moderate to low but the level of mutuality ranges from moderate to high”</p>
6	Om-tang	Yeah.	—
7	Pang	Okay.	—
8	Pond	<p>“In short, because English affects our life.” Not on our life. First ... Do you know why?</p>	—

Because of Kim's extensive monologues and Pang's repetition and recognition during the observational stage, their interaction pattern could be classified as dominant/passive, according to the dialogue. An examination of the conversation in more depth, however, led to conjecture that Kim was attempting to persuade Pang to talk. Base on Pond and Om-tong 's interaction, it was the same as Kim. Pond's interaction pattern, which consisted of Pond's long monologues and Om-tang's agreement, may be classified as dominant/passive. In contrast, Pond's conversation led to encouraging Om-tang to answer or speak to check her understanding. As a result, the advanced (Pond) and intermediate (Kim) intended roles and interaction patterns, result in a typical Expert/Passive situation.

Table 26 Conversation 2: Expert/Passive

Move	Participants	Dialogues	Patterns of Interaction
9	Pond	What's the next thing you'd like to write?	Expert/ Passive The level of equality may be moderate to low but the level of mutuality ranges from moderate to high”
10	Pang	I want to write um ... that um ... actually I want to write, how it, not how, I want to write it's very um ... an important, an important tool in getting a job.	-
11	Om-tang	Yeah, yeah, yeah.	-
12	Pang	It's very important to get a high salary.	-
13	Pond	Ah, I understand how vital it is to you.	-
14	Pang	Yes.	-
15	Om-tang	But ah ...	-
16	Kim	Yes, but in general	-
17	Pond	Yes, I understand, but we need to talk about how vital it is in this paragraph.	Expert/ Passive The level of equality may be moderate to low but the level of mutuality ranges from moderate to high”
18	Pang	about English?	-
19	Pond	Yes.	-

In Conversation 2, Pond appeared to carry on or be granted the position of master and led the action. In contrast to a dominant role, Om-tang actively encouraged Pang, the novice, to participate in the task and assisted Kim in learning from the engagement. Pond, as a result, had authority.

Group 2

Table 27 Conversation 3: Collaborative

Move	Participants	Dialogues	Patterns of Interaction
13	Beaw	[...] decline, decreased, as in lessened? But not decreased.	-
14	Grace	Reduced?	-
15	Beaw	Reduced, yeah... yes.	-
16	First	Time of?	-
17	Nui	Time?	-
18	Beaw	I hope.	-
19	Nui	I'm not sure... it's time. What type of time do you have?	Collaborative Learners' engagement is moderate to high equality and moderate to high mutuality. Learners display willingness to offer and engage with each other's ideas, they create and maintain "joint problem space". Learners offer and discuss, which lead to resolutions acceptable to both partners
20	First	Time ... ah	-
21	Beaw	It's time to start learning English.	-
22	Grace	No no no ... time of working.	-
23	Beaw	Working?	-
24	Grace	Just time for work?	-
25	Nui	Well. Yeah. English is useful for... ah, but we may also learn Business English.	-
26	First	What do you wanna talk about? Business English?	-

Conversation 3 showed how all members collaborated on all aspects of the task and were glad to give and discuss each other's suggestions. Furthermore, they responded to each other's recommendations carefully but creatively (moves 19–22), resulting in resolutions that looked appropriate to all of them.

Table 28 Conversation 4: Dominant/Passive

Move	Participants	Dialogues	Patterns of Interaction
27	Grace	"For many people, English is highly vital for getting a good job," since it's because it's a word here.	Dominant/ passive: "learners show low level of mutuality and equality"
28	Nui	to get a good job.	–
29	First	But, what can I write, I have some doubts about this phrase. Why don't we type it down this way? "Anyone can have a good job," we can write. In any case, certain jobs are hired with a low salary. People, on the other hand, may have a good job. ... I'm not sure. "Anyone may find a good job," we said in our essay. Ah ... no no no, I don't know ... No, I don't think so.	Dominant/ passive: "learners show low level of mutuality and equality"
30	Beaw	may find a good job ... mmm.	Dominant/ passive: "learners show low level of mutuality and equality"
31	Grace	Anyway, we may ... Yes, it could be nicer.	–
32	Beaw	... it could be nicer.	–

Conversation 4 demonstrated a clear difference in contribution between Grace and First, the dominating participants, and Nui and Beaw, the passive participants. Grace and First seemed to view the assignment as a solo project rather than a collaborative effort, and they made no effort to include Nui and Beaw. Many of Grace and First's words were self-directed (moves 27, 28, 30). Vygotsky (1978) described it as There was no talk

or questions between them. It was a private speech that involved internal communication that a person directs at themselves. There was little negotiation between them, and Nui and Beaw's contributions were limited to repetition (moves 27, 29, 31).

Conclusion

The quantitative, qualitative, and combination approach results were all displayed throughout this chapter. The quantitative findings revealed that students with varying levels of English ability scored differently in different writing assignments. The pupils who were novices in the class received the highest marks when participating in groups of four, followed by pairs and individuals, respectively. The findings were similar to those of intermediate students, who scored best while working in teams, then in pairs, and lastly, alone. Advanced students received the greatest results in group, followed by pair and individual, respectively.

Regarding students' self-assessment of critical thinking skills practiced in collaboration, critical thinking skill practiced level was found at the highest level in the skill of creating, at a high level in evaluating, and at a neutral level in the skills of analyzing, respectively.

In the second phase, semi-structured interviews were conducted to collect more information about how learners interpreted the development of critical thinking skills in a writing procedure. There were six students selected to participate during the interview process, each with a different level of English proficiency. At random, students 1-2 (S1-S2) from low-level groups, 3-4 (S3-S4) from medium-level groups, and 5-6 (S5-S6) from advanced groups were chosen. Novice and intermediate learners claimed they practiced making comparisons and contrasts between ideas based on their peers' texts during pair exercises. The two types of learners practiced published phrases; however, they lacked the confidence to create a full paper. Advanced students, on the contrary, said that the sentences were based upon what they learned from their peers. They studied and gathered information from their colleagues to create a finished paper.

When it came to group activities, all students said that they practiced their critical thinking skills. Advanced students stated that they gathered suggestions from their peers before drafting a paragraph. Before creating new phrases, novice students isolated thoughts

that were connected to the topic. They grouped and organized all peer materials into sections in the same way that intermediate students did. Students sorted and chose relevant concepts to achieve a consensus and write their works, since group activities increased involvement among peers. Advanced students noticed that their critical thinking skills had increased in terms of analyzing, assessing, and inventing.

According to the interview sessions, in collaboration, critical thinking skills such as analyzing and evaluating, were frequently employed. Students must compare and select information, including argumentation and supported facts. Both the beginner and moderate groups of students said they used the ability to think critically frequently when it came to analyzing and evaluating. Advanced pupils, on the other hand, invented creative words and sentences, selected the best thoughts, and structured the supportive components with peer assistance.

Regarding the observation of patterns of interaction in CW activities and in pair and group talks, it could be considered that there was a relationship between the students' interactions and their levels of competency. Concerning the advanced and intermediate levels, they engaged and interacted better than novice participants. The role of advanced and intermediate students in their interaction was shown to be expert and collaborative, whereas the novice students were found to be passive. As for the advanced and intermediate levels in pairs and groups, they engaged and encouraged by asking an idea and some questions to novice students to encourage them to answer or express ideas. Advanced students, on the other hand, could be self-directed and appeared to view the task as an individual rather than a collaborative effort when they acted as dominant and made no effort to include novice students in the task.

In short, when the advanced and intermediates were either collaborative or expert, they tended to engage and participate in the writing process more than those who acted as dominant and passive. On the other hand, when the advanced students' position was dominating, they appeared to have more authority over the activities than the collaborators (expert/passive). Additionally, all of the dominating and skilled (advanced) students outperformed their passive peers on the task. The results require a detailed discussion, which is presented in the next chapter.

CHAPTER V

CONCLUSION

This chapter contains the conclusion of the study and discussion of the results of collaborations (pairs and groups) and individual works on argumentative writing, self-assessments regarding critical thinking employed through collaboration tasks, and patterns of interaction of students during collaborative writing activities.

Summary of the Study

1. Summary of the Effects of Groups, Pairs, and Individuals on the Argumentative Writing Task

Regarding examining the argumentative writing quality of groups, pairs, and individuals, the results revealed that students with varying levels of English ability received varying results in several writing assignments. In advanced groups, they gained the best results when engaging in collaborative writing in groups (Mean = 11.95), followed by pairs (Mean = 10.45), and individuals (Mean = 9.45), respectively. The results were the same as in intermediate students who had the highest mean scores when writing in four-person groups (Mean = 11.5), followed by pairs (Mean = 10.32) and individuals (Mean = 9.04). The novice students also obtained the highest marks when participating in four-person groups (Mean = 10.22), followed by pairs (Mean = 10.19) and individuals (Mean = 8.98), respectively. Therefore, it could be assumed that students at all proficiency levels tended to conduct their argumentative writing tasks best when writing collaboratively (in groups, followed by pairs) rather than as individuals.

2. Summary of the Students' Self-Assessment of Critical Thinking Skills Practiced in Collaborative Writing

This section presents the students' self-assessment of critical thinking skills practiced in different writing activities (groups, pairs, and individuals). Considering overall students' self-assessment of critical thinking skills, in groups they were at the "highest" (Mean = 4.54), followed by pairs at a "high" level (Mean = 3.55), and at a "neutral" level, in the individuals (Mean = 3.13).

The findings from the interview sessions and the observation confirmed the practice of CT in CW and matched that of Nold's (2017) that students in collaborative groups improved their writing substantially by employing critical thinking skills like analysis, evaluation, and invention. In this study, the students worked on higher-order thinking skills such as analyzing, evaluating, and inventing. They did, however, engage in lower-level thinking, such as applying, comprehending, and memorizing. When composing separately, all learners stated they were unable to practice their critical thinking skills since they did not have the opportunity to engage, share, or discuss their thoughts with their peers. Therefore, students seemed to practice critical thinking skills when they wrote collaboratively in groups and pairs.

3. Summary of Patterns of Interaction During Collaborative Writing Activities

Regarding interactional patterns in CW activities, it could be concluded that there was a relationship between the students' patterns of interaction and their proficiency levels. EFL learners with higher English proficiency levels (advanced and intermediate students) were found to take an active role in CW since they had a distinct advantage over their less capable peers in matters concerning linguistic resources. On the contrary, novice students were reluctant to contribute for fear of making errors.

Discussion of the study

1. Discussion of the effects of groups, pairs, and individuals on the argumentative writing task

The results of the writing quality fostered the study of McDonough, De Vleeschauwer and Crawford (2018) that compared the text features and analytic rating of paragraphs by EFL learners in Thailand. Their paragraphs were also evaluated in three categories (content, organization, and language). The findings confirmed that the collaborative text results from group and pair work were also better than individual tasks in terms of content and language. It was also a coincidence with Jalili and Shahrokhi's (2017) study that collaborative writing texts were better than no collaboration texts. Furthermore, the results also coincided with the study of McDonough and De Vleeschauwer (2019). The writing tasks of the students who wrote collaboratively were more accurate in terms of

content, organization, grammar, and vocabulary. The current study backed up Swain's (2000); Gillan and Neomy's (2012) findings that language learning was best completed by learners who engaged in collaborative activities that allowed them to become aware of and learn from social interaction with the help of their peers or more capable members of society. Furthermore, the findings also supported the study of Doboia (2012); Li and Kim (2018); McDonough and Vleeschauwer (2019) that collaboration in writing seemed to foster their writing quality when interacting with their peers or in group activities rather than individual work.

In short, the findings revealed that students who wrote collaboratively showed accuracy gains. It can be seen that the results of comparing individual and collaborative writing activities were similar to previous studies by Jalili and Shahrokhi (2017); McDonough, De Vleeschauwer and Crawford (2018, 2019). Therefore, it was believed that the collaboration fostered the students' writing skills more than no collaboration and seemed to enhance the students' writing skills when it came to pairing and group activities.

2. Discussion of the Students' Self-Assessment of Critical Thinking Skills Practiced in Collaborative Writing

According to Vygotsky (1978), more interactive activities, such as, debates, comments, and collaboration, would increase cognitive progress. The students, on the other hand, practiced all levels of thinking skills, according to the observation data. As a result, higher-level CT appeared to be impossible to achieve without first doing the fundamental stage of CT. In the writing classroom, Figure 9 demonstrated the relationship between low and high-order thinking levels, as well as the connections between basic understanding, critical thinking, and creativity.

As a result, writing professors should examine a variety of writing tasks and encourage creative thinking to strengthen students' critical thinking skills in writing teaching. It can encourage learners to improve and employ their critical thinking.

Finally, the horizontal lower/higher-order thinking spectrum is crucial to notice. In many representations of stages of thinking, it is frequently shown as a vertical line (Dummett and Hughes, 2019). It seems to indicate that lower-order cognition is "lesser," or that it must be completed before learners are supposed to perform higher-order thinking. This isn't the case at all. Learning to write requires knowledge and comprehension, which

are not worse in any sense. Moreover, thinking in the classroom isn't a set of steps in which we move from one level to the next. An excellent language course may begin with creativity, then move on to understanding, and lastly to critical thinking. Therefore, the thinking process infrequently follows a straight line (Dummett and Hughes, 2019).

Regarding critical thinking skills, using the approach of collaborative writing tasks as an active learning process, learners will be able to learn better and be motivated to write. It also helps to improve learners' collaborative, linguistics and critical thinking skills (Kwan and Yunus 2015) and overall active learning. Learners present critical thinking, evaluate and analyze the ideas for decision-making, and produce solutions when they collaborate (Woodrich and Fan 2017). These are among the important aspects for learners to grasp in order to effectively complete the writing tasks given. In general, writing activities have valuable effects on learners' writing development. However, collaborative writing injects more fun into the usually boring learning environment (Zain 2015; Kwan and Yunus 2015), which proves that learners' interests can be sustained throughout the process. Learners can share appropriate information with peers while doing the task (Hanbidge, et al., 2017), and discuss and process the information critically with others (Limbu and Markauskaite 2015). Previous literature has identified reflective thinking as one of the benefits of collaborative writing (Li and Zhu 2017; Woodrich and Fan 2017). The results of this study supported the previous studies (Li and Zhu 2017; Woodrich and Fan 2017) of more L2 learning chances, more scaffolding, more critical thinking, and the ability to transfer more linguistic knowledge. The results of this study appeared to be associated with a higher level of collaboration (collaborative) and supported the Sociocultural Theory of Cognitive Development (Vygotsky, 1978) that learning with the assistance of peers and more able members leads to the development of greater cognitive capabilities (e.g. critical thinking). Through examination and reflection, collaboration enables increased involvement with the views of others. Students can increase the quality of their thoughts by working together. Collaboration also resulted in more participation in language-related challenges among pairs and four-person groups.

3. Discussion of Patterns of Interaction During Collaborative Writing Activities

According to the pair talk results, this study coincided with the study of Chen (2018). On a dictogloss task, it looked at how a group of Chinese intermediate EFL learners interacted in pairs. It looked into how people connect in pairs. The results of this study showed that collaborative contact was more conducive to L2 acquisition than other patterns (e.g. dominant/dominant, dominant/passive). Moderate learners were also found to be able to change their interaction style from non-collaborative to more collaborative.

In group talks, the role of advanced and intermediate students in their interactions was shown to be expert and collaborative, whereas the novice students were found to be passive. As for the advanced and intermediate levels, they engaged and encouraged by asking an idea and some questions to novice students to encourage them to answer or express ideas. However, advanced students sometimes used self-talk (private speech) and seemed to see the task as an individual rather than a joint construction when they acted as dominant and made little attempt to involve novice students in the task. This was reflected by the collaborative behavior in groups. These findings are congruent with those of previous studies (Dong and Liu, 2020; Hsiu-Chen, 2019), in which the researchers found that EFL learners with higher language proficiency levels would produce more language-related episodes, and put more effort into the work. On the contrary, learners with limited linguistic resources passively contributed to the group task (Zhang, 2019). As claimed by Lewis (2006), Asian learners, including Indonesian, Lao, Malaysian, and Thai, are docile and obedient, and they tend to avoid confrontation, save face by speaking less, and show respect to their more knowledgeable peers while engaging in group projects. This phenomenon gives way for high-skilled learners to have more room to contribute and occasionally ignore the efforts of their less capable peers (Ghufron and Ermawati, 2018; Le, et al., 2018). This implies that learners' language proficiency and leadership roles exhibited by a more capable writer in the team help shape interaction patterns and influence members' contributions. Therefore, this study supported Vygotsky's sociocultural theory (1978) that human development is a socially mediated process in which children acquire their cultural values, beliefs, and problem-solving strategies through collaborative dialogues with more knowledgeable members of society.

Furthermore, the findings of this study also confirmed the study of Zhang (2019) in the aspect of the differences in interactional patterns in students' engagement in CW tasks. This study revealed that there was a different pattern of interaction when the students participated in different aspects of CW tasks, as in the study of Zhang (2019). For example, some intermediate students were passive when they talked about grammatical structures; whereas, they were collaborative or dominant when they talked about organization or content.

It can be concluded that the students of different proficiency levels interacted in different patterns depending on the aspects of the CW task. Furthermore, when the advanced and intermediate students were either collaborative or expert, they tended to engage and participate more in the writing process than those who acted as dominant and passive. In contrast, when the advanced students' roles were dominant, they seemed to control the task more than those who acted as collaborative or expert (in the expert/passive pattern). Additionally, all the dominant and expert students (advanced) engaged in the task better than their passive or novice members.

In conclusion, Storch's model (2013), nevertheless, is not beyond limitations. One restriction is that participation in CW work is flexible. Storch (2013, p. 63) states that "In any one activity, learners may demonstrate instances of different connections." While eliciting content for a CW assignment, for example, a couple may have identical engagement but different collaboration characteristics when addressing other elements of the writing. In other words, Storch's model indicates that when students work in couples or teams, there is always a dominating interaction that can be used to characterize the entire collaboration process.

Pedagogical Implications for Collaborative Writing Tasks

According to the findings of this study, students with varying degrees of proficiency may respond differently during a CW activity as a result of their different attitudes toward the activity. Differences in the pairs' and groups' patterns of interaction and production resulted from the students' differing views regarding CW. This study has some pedagogical implications and some new ideas for instructional practices.

Firstly, it's crucial to understand how students' views shift since the results revealed that having a good attitude towards CW might lead to more collaboration, which can enhance the quality and quantity of Language Related Episodes (LREs).

Secondly, instructors can introduce learners to the idea of CW to encourage them to develop beneficial attitudes regarding it. "Given that attitudes toward language learning may be taught," Smith (1971) writes. Instructors can promote CW as a valuable method for assisting students in producing high-quality writing. Teachers could, for example, highlight the advantages of CW with their students before a CW exercise as well as present instances of how EFL authors can utilize scaffolding to enhance their writing quality. As a result, teachers could encourage learners who benefit from scaffolding to recognize the requirement for peer collaboration. Students' attitudes toward the CW activity will improve as a result of this method. Because students who showed collaborative behaviors had a higher rating of the activity and more opportunities to learn, teachers may find it beneficial to model a collaborative style as well. Students would be able to work more efficiently with their peers.

Finally, regarding grouping criteria in the CW application, teachers should assess their students' views about CW before assigning them to groups, and try to avoid grouping students who have similar unfavorable opinions. Teachers must carefully examine students' changes in attitudes throughout activities for positive-negative grouping, and it is preferable to allow pupils to choose their members if possible. Hyland (2003) suggested a writing environment, where students can choose their partners or members, as this allows for the most effective collaboration dynamics to be maintained. There are some limitations that future research would consider in the next section.

Limitations of the Study

1. Because this study focused on only two and four students in collaborative writing activities, as well as on a university in northern Thailand, there was less attention paid to other groups and the probability that their experiences that could have influenced attitudes.

2. Because CW has been described as a method for producing high-quality writing, it would be useful to learn more about how changes in attitude toward the procedure influence writing performance.

3. Because this study focused on only thirty-two second-year English major students at a northern university in Thailand, the data obtained might not be generalizable to other situations.

Recommendations for Further Studies

It's crucial to look at learners' involvement in different sections of the work to account for the varying nature of learners' collaboration in CW. As a result, a method for detecting collaboration patterns that takes into account the fluid nature of interaction patterns in CW was developed. The following are some suggestions for further research:

1. Application of this research in other contexts in different parts of Thailand or at different levels of students.

2. Instead of a holistic examination, examine patterns of interaction in each aspect of the task i.e. content, organization, language use.

3. An investigation of the relationship between students' attitudes and a qualitative assessment of their collaboratively written paper. This would give a better picture of how important a learner's mindset is in attaining the potential benefits of CW since only attitude and motivation are frequently studied together (Dornyei, 2003).

4. Investigation of the relationships between students' attitudes and motivations in CW and how these two aspects determine patterns of interaction and language learning chances during the CW process, both separately and together.

Chapter V contains the summary of the study and the discussion of the study, followed by pedagogical implications in collaborative writing tasks, then limitations of the study, and recommendations for further studies.

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APPENDIX

APPENDIX A Lesson Plan: Writing II

Lecturer' s name: Jitlada Moonma	Date:
Course: Writing II	Duration: 4 hours/week (16 Weeks)
Course Description: Writing paragraph, writing topic and supporting sentences, clarity and accuracy in writing, selecting appropriate words to contexts, ordering correct event, and practicing writing various types of paragraph (argumentative writing).	
Objectives: Students will be able to write a paragraph effectively (argumentative writing).	
Resources: Power Point presentation, assignments, and handouts	
Assessment: – Writing paper pre–test and post–test – Writing paper (individuals, pairs, and groups of four)	
Key skills to be addressed: Structure of argumentative Writing	



First Week

Time	Content & Teacher Activity	Student Activity
1 hour	1. Teacher greets students and introduce his/herself with warm up activity by asking about the students' experiences about English writing.	1. Students greets teachers and friends. 2. Students introduce themselves and sharing experiences in English writing.
1 hour	2. Teacher explains the course description. 3. Teacher describes about a paragraph writing and another kind of writing which is required for higher education (an argumentative writing).	3. Students ask questions if any.
1.30 hour	4. Teacher assigns students to write pre-test writing about argumentative writing individually.	4. Students write individually an argumentative writing as pre-test.
30 minutes	5. Teacher collect all pre-test writing assignments. 6. Teacher concludes the whole picture of the course.	5. Students recheck their pre-test argumentative writing and hand it to the teacher.

Second Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation:</u></p> <p>Outline of the Essay (Introduction/Body/Conclusion)</p> <p>1. Teacher presents students about the outline of the essay (Introduction/Body/Conclusion).</p>	<p>1. Students study the structure of an essay.</p>
2 hour	<p><u>Practice</u></p> <p>2. Teacher lets the students read the first example in the material.</p> <p>3. Teacher lets the students read the second example in the material.</p> <p>4. Teacher let students underline the outline of the essay</p> <p>5. Teacher presents the structure of essay in the both examples.</p>	<p><u>Practice</u></p> <p>2. Students read the “Attendance Should Not Be Required” article in the first example.</p> <p>3. Students read the “Owning a Car in an Urban Area” article in the first example.</p> <p>4. Students underline the outline of essay.</p> <p>5. Students study the outline of essay.</p>
1 hour	<p><u>Revision</u></p> <p>6. Teacher concludes the ideas of writing essay.</p>	<p><u>Revision</u></p> <p>6. Students conclude the structure of the essay together.</p>

Third Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation</u></p> <p>Paragraph Writing:</p> <ul style="list-style-type: none"> – Topic Sentence – Supporting Sentences <p>1. Teacher lets students read the example in the material and ask students to think and underline what the topic sentence and supporting sentences are.</p> <p>2. Teacher explains and shows the examples of the topic sentence and supporting sentences.</p>	<p><u>Presentation</u></p> <p>1. Students read the sentence examples and underline topic sentence and supporting sentences.</p> <p>2. Students study how to write effectively topic sentence and supporting sentences.</p> <p>3. Students conclude the structure of topic sentence and supporting sentences together.</p>
1 hour	<p><u>Practice</u></p> <p>3. Teacher lets students do the exercises in workbook.</p>	<p><u>Practice</u></p> <p>4. Students do the exercise in workbook.</p>
30 minutes	<p>4. Teacher and students check the answer together.</p>	<p>5. Students check the answer.</p>
1 hour	<p><u>Production</u></p> <p>5. Teacher shows the examples of topic sentence and supporting sentences and assign students to write them.</p> <p>6. Teacher facilitates students as a facilitator while they are writing.</p>	<p><u>Production</u></p> <p>6. Students study examples and write their topic sentence and supporting sentences.</p>
30 minutes	<p><u>Revision</u></p> <p>7. Teacher concludes and check students' topic and supporting sentences writing.</p>	<p><u>Revision</u></p> <p>7. Students hand in their topic sentence and supporting sentences.</p>

Fourth Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation</u></p> <p>Transitional Expressions for Illustration:</p> <ul style="list-style-type: none"> – For instance, for example, To illustrate, etc. – Discourse markers <ol style="list-style-type: none"> 1. Teacher lets students study about transitional expressions for illustration. 2. Teacher lets students read examples in the material; moreover, asks students to think and underline transitional expressions for illustration. 3. Teacher lets students study about discourse markers. 4. Teacher lets students read examples in the material; moreover, asks students to think and underline discourse markers. 	<p><u>Presentation</u></p> <ol style="list-style-type: none"> 1. Students study transitional expressions for illustration and discourse markers. 2. Students underline expressions for illustration. 3. Students study discourse markers. 4. Students underline discourse markers in workbook.
1 hour	<p><u>Practice</u></p> <ol style="list-style-type: none"> 5. Teacher lets students do the exercises in workbook about writing transitional expressions for illustration in paragraph. 6. Teacher lets students do the exercises in workbook about writing discourse markers in 	<p><u>Practice</u></p> <ol style="list-style-type: none"> 5. Students do the exercises in workbook about writing transitional expressions for illustration in paragraph. 6. Students do the exercises in workbook about writing discourse markers in paragraph.

Time	Content & Teacher Activity	Student Activity
	paragraph.	
30 minutes	7. Teachers check students' exercises.	7. Students check their answer together.
1 hour	<p><u>Production</u></p> <p>Writing</p> <p>8. Teacher shows the examples of transitional expressions for illustration and discourse markers in paragraph and assign students to write their own paragraph by using expressions for illustration and discourse markers.</p> <p>9. Teacher facilitates students as a facilitator while they are writing.</p>	<p><u>Production</u></p> <p>Writing</p> <p>8. Students write their own paragraph using expressions using expressions for illustration and discourse markers.</p>
30 minutes	<p><u>Revision</u></p> <p>10. Teacher concludes and check students' paragraph.</p>	<p><u>Revision</u></p> <p>9. Students hand in their assignment.</p>

Fifth Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation</u></p> <ul style="list-style-type: none"> – Comparison and Contrast – Cause and Effects <ol style="list-style-type: none"> 1. Teacher lets students study about comparison and contrast. 2. Teacher lets students read examples in the material; moreover, asks students to find out comparison and contrast sentences in paragraph. 3. Teacher lets students study about cause and effects 4. Teacher lets students read examples in the material; moreover, asks students to find out cause and effects sentences in examples. 	<p><u>Presentation</u></p> <ol style="list-style-type: none"> 1. Students study comparison and contrast and cause and effects. 2. Students find out comparison and contrast. 3. Students study cause and effects. 4. Students find out cause and effects sentences in workbook.
1 hour	<p><u>Practice</u></p> <ol style="list-style-type: none"> 5. Teacher lets students do the exercises in workbook about comparison and contrast. 6. Teacher lets students do the exercises in workbook about cause and effects. 	<p><u>Practice</u></p> <ol style="list-style-type: none"> 5. Students do the exercises in workbook about comparison and contrast. 6. Students do the exercises in workbook about cause and effects.
30 minutes	7. Teachers check students' exercises.	7. Students check their answer together.

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Production</u></p> <p>8. Teacher assign students to write their own sentences by using comparison and contrast including cause and effects.</p> <p>9. Teacher facilitates students as a facilitator while they are writing.</p>	<p><u>Production</u></p> <p>8. Students write their own sentences by using comparison and contrast including cause and effects.</p>
30 minutes	<p><u>Revision</u></p> <p>10. Teacher show some students' sentences and ask students to review together.</p>	<p><u>Revision</u></p> <p>9. Students show their sentences to the class and discuss together.</p>



Sixth Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation</u></p> <p>– Agreement of subject and verb</p> <ol style="list-style-type: none"> 1. Teacher lets students study examples about agreement of subject and verb. 2. Teacher assign students to find out agreement of subject and verb in examples. 3. Teacher explains subject and verb agreement. 4. Teacher lets students read examples in the material; moreover, asks students to find out subject and verb agreement. 	<p><u>Presentation</u></p> <ol style="list-style-type: none"> 1. Students study examples about agreement of subject and verb. 2. Students study subject and verb agreement. 3. Students find out agreement of subject and verb.
1 hour	<p><u>Practice</u></p> <ol style="list-style-type: none"> 5. Teacher lets students do the exercises in workbook about subject and verb agreement. 	<p><u>Practice</u></p> <ol style="list-style-type: none"> 4. Students do the exercises in workbook about agreement of subject and verb.
30 minutes	<ol style="list-style-type: none"> 6. Teachers check students' exercises. 	<ol style="list-style-type: none"> 5. Students check their answer together.
1 hour	<p><u>Production</u></p> <ol style="list-style-type: none"> 7. Teacher assign students to write their own subject and verb agreement sentences by 8. Teacher facilitates students as a facilitator while they are writing. 	<p><u>Production</u></p> <ol style="list-style-type: none"> 6. Students write their own sentences by using subject and verb agreement.
30 minutes	<p><u>Revision</u></p> <ol style="list-style-type: none"> 9. Teacher show some students' 	<p><u>Revision</u></p> <ol style="list-style-type: none"> 7. Students show their sentences to

Time	Content & Teacher Activity	Student Activity
	sentences and ask other students to find out correct sentences about subject and verb agreement. Then, teacher summarizes the lesson.	the class and discuss together.



Seventh Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation</u></p> <ul style="list-style-type: none"> – argumentative essay outline: – Introduction – Arguments to back up your opinion – Arguments that prove the weakness of opposing claims <ul style="list-style-type: none"> – Conclusion – Cited works <p>1. Teacher lets students study examples about argumentative essay outline.</p> <p>2. Teacher assign students to find out the structures of argumentative essay and underline them in a provided example.</p> <p>3. Teacher shows all the answer.</p>	<p><u>Presentation</u></p> <ol style="list-style-type: none"> 1. Students study examples about argumentative essay outline. 2. Students find out the structures of argumentative essay and underline t them. 3. Students check their answer.
2 hour	<p><u>Practice</u></p> <ul style="list-style-type: none"> – Intro: Hook, Background, and thesis <p>4. Teacher explains the first structure of argumentative essay (Introduction: Hook) and provides students an example.</p> <p>5. Teacher explains the first structure of argumentative essay (Introduction: Hook)</p>	<p><u>Practice</u></p> <ol style="list-style-type: none"> 4. Students study an Introduction of argumentative essay: Hook, Background, and thesis in provided example. 5. Students study an Introduction of argumentative essay: Hook in

Time	Content & Teacher Activity	Student Activity
30 minutes	<u>Production</u> 10. Teacher let students practice to write introduction of argumentative essay.	<u>Production</u> 10. Students practice to write introduction of argumentative essay.
30 minutes	<u>Revision</u> 11. Teachers discuss about students' assignments and identify the correct assignment to show the classroom.	<u>Revision</u> 11. Students study and discuss about the correct introduction of argumentative essay.



Eighth Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Presentation</u></p> <ul style="list-style-type: none"> – Argumentative essay outline: – Arguments to back up your opinion <ol style="list-style-type: none"> 1. Teacher lets students study examples about Claim 1–Evidence or arguments to back up your opinion. 2. Teacher assigns students to find out about Claim 1–Evidence or argumentative sentence to back up your opinion in a provided example. 3. Teacher shows all the answer. 	<p><u>Presentation</u></p> <ol style="list-style-type: none"> 1. Students study examples about argumentative essay outline. 2. Students find out the structures of argumentative essay and underline them. 3. Students check their answer.
1 hour	<p><u>Practice</u></p> <ul style="list-style-type: none"> – Argumentative essay outline: – Arguments that prove the weakness of opposing claims <ol style="list-style-type: none"> 4. Teacher lets students study examples about Claim 2–Evidence or arguments to back up your opinion in provided examples. 5. Teacher assigns students to find out about Claim 2–Evidence or argumentative sentence to back up your opinion in a provided example. 6. Teacher shows all the answer. 	<p><u>Practice</u></p> <ol style="list-style-type: none"> 4. Students study examples about Claim 2–Evidence or arguments to back up your opinion in provided examples. 5. Students find out about Claim 2–Evidence or argumentative sentence to back up your opinion in a provided example. 6. Students check and discuss the answer.

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Practice</u></p> <p>7. Teacher lets students to write about argumentative sentences that back up an opinion and also that prove the weakness of opposing claims.</p>	<p><u>Practice</u></p> <p>7. Students practice to write argumentative sentences that back up an opinion and also that prove the weakness of opposing claims.</p>
1 hour	<p><u>Revision</u></p> <p>8. Teachers discuss about students' assignments and identify the correct assignment to show the classroom.</p>	<p><u>Revision</u></p> <p>8. Students study and discuss about the good examples of argumentative sentences that back up an opinion and prove the weakness of opposing claims.</p>
1 hour	<p><u>Presentation</u></p> <p>– Debunking opponents' arguments:</p> <p>Opposing view 1 Opposing view 2</p> <p>1. Teacher explains and presents debunking opponents' arguments sentences.</p> <p>2. Teacher shows some examples of opposing view 1 sentences.</p>	<p><u>Presentation</u></p> <p>1. Students study debunking opponents' argumentative sentences from provided examples.</p> <p>2. Students study examples of opposing view sentences.</p>

Ninth Week

Time	Content & Teacher Activity	Student Activity
1 hour	<p><u>Practice</u></p> <p>3. Teacher lets students underline the sentences that show opponents' argumentative sentences from provided assignments.</p>	<p><u>Practice</u></p> <p>3. Students underline the sentences that show opponents' argumentative sentences from provided assignments.</p>
1 hour	<p><u>Production</u></p> <p>4. Teacher lets students practice to write their opponents' argumentative sentences.</p>	<p><u>Production</u></p> <p>4. Students write their opponents' argumentative sentences.</p>
1 hour	<p><u>Revision</u></p> <p>5. Teacher reviews and concludes the lesson about how to write opponents' argumentative sentences.</p> <p>6. Teacher discusses about the writing assignments give feedback to students.</p>	<p><u>Revision</u></p> <p>5. Students study and discuss about opponents' argumentative sentences.</p> <p>6. Students study feedback of assignments from teacher and try to improve their writing.</p>

Tenth Week

Time	Content & Teacher Activity	Student Activity
30 minutes	<p><u>Presentation</u></p> <p>1. Teacher explains and presents the structures of conclusion and some examples of conclusion of argumentative paragraph.</p>	<p><u>Presentation</u></p> <p>1. Students study structures of conclusion from examples provided.</p>
2 hour	<p><u>Practice</u></p> <p>2. Teacher assigns students to find out conclusion paragraph from provided essay.</p> <p>3. Teacher assigns students to identify the structures of conclusion in the provided essay.</p> <p>4. Teacher assigns students to do some exercises to find out conclusion paragraph and identify the structures.</p> <p>5. Teacher presents all answer and check students' exercises.</p>	<p><u>Practice</u></p> <p>2. Students find out conclusion paragraph from provided essay.</p> <p>3. Students identify the structures of conclusion in the provided essay.</p> <p>4. Students do some exercises to find out conclusion paragraph and identify the structures.</p> <p>5. Students check their answer and try to rewrite answer correctly.</p>
1 hour	<p><u>Production</u></p> <p>6. Teacher assigns students to write conclusion paragraph.</p>	<p><u>Production</u></p> <p>6. Students write conclusion paragraph.</p>
30 minutes	<p><u>Revision</u></p> <p>7. Teacher summarizes all the structures of conclusion in an argumentative essay.</p>	<p><u>Revision</u></p> <p>7. Students study and discuss the structures of conclusion in an argumentative essay together.</p>

Eleventh Week

Time	Content & Teacher Activity	Student Activity
	Midterm Test	Midterm Test

Twelfth Week (Pair Work)

Time	Content & Teacher Activity (Week 12)	Student Activity
20 minutes	<u>Review</u> 1. Teacher gives an overview of collaborative (pair work) writing guidelines to students.	<u>Review</u> 1. Students study collaborative (pair work) writing guidelines.
30 minutes	<u>Reading and Discussing</u> 2. Teacher assigns students to study argumentative short text model. Furthermore, teacher explains grammatical structure of argumentative writing.	<u>Reading and Discussing</u> 2. Students study argumentative short text model and grammatical structure of argumentative writing.
30 minutes	<u>Prewriting (Pair Work)</u> 3. Teacher lets students choosing partner independently. Then, teacher lets students brainstorming to gather ideas, contents, grammar, etc.	<u>Prewriting (Pair Work)</u> 3. Students choose their partner independently. Then, students brainstorm to gather ideas, contents, grammar, etc.
40 minutes	<u>Drafting (First Draft)</u> 4. Teacher assigns students to start writing (first draft) introduction, body, and conclusion.	<u>Drafting (First Draft)</u> 4. Students start writing (first draft) introduction, body, and conclusion.
40 minutes	<u>Revising</u> 5. Teacher asks students to revise their first draft by paying attention to vocabulary, content and	<u>Revising</u> 5. Students revise their first draft by paying attention to vocabulary, content and organization: the details

Time	Content & Teacher Activity (Week 12)	Student Activity
	organization: the details that students need to move, add or remove.	that students need to move, add or remove.
30 minutes	<u>Rewriting (Second Draft)</u> 6. Teacher lets students to rewrite the draft including the changes identified in the revision stage.	<u>Rewriting (Second Draft)</u> 6. Students rewrite the draft including the changes identified in the revision stage.
30 minutes	<u>Proofreading (Final Draft)</u> 7. Teacher ask students to correct conventions: spelling, grammar, punctuation and mechanic errors.	<u>Proofreading (Final Draft)</u> 7. Students correct conventions: spelling, grammar, punctuation and mechanic errors.
20 minutes	<u>Publishing</u> 8. Teacher asks students to publish a completed paper.	<u>Publishing</u> 8. Students publish a completed paper.

Thirteenth Week (Group Work)

Time	Content & Teacher Activity (Week 13)	Students' Activity
20 minutes	<u>Review</u> 1. Teacher gives an overview of collaborative (group work) writing guidelines to students.	<u>Review</u> 1. Students study collaborative (group work) writing guidelines.
30 minutes	<u>Reading and Discussing</u> 2. Teacher assigns students to study argumentative short text model. Furthermore, teacher explains grammatical structure of argumentative writing.	<u>Reading and Discussing</u> 2. Students study argumentative short text model and grammatical structure of argumentative writing.
30 minutes	<u>Prewriting (Group Work)</u> 3. Teacher lets students choosing group members of four independently. Then, teacher lets students brainstorming to gather ideas, contents, grammar, etc.	<u>Prewriting (Group Work)</u> 3. Students choose their group members of four independently. Then, students brainstorm to gather ideas, contents, grammar, etc.
40 minutes	<u>Drafting (First Draft)</u> 4. Teacher assigns students to start writing (first draft) introduction, body, and conclusion.	<u>Drafting (First Draft)</u> 4. Students start writing (first draft) introduction, body, and conclusion.
40 minutes	<u>Revising</u> 5. Teacher asks students to revise their first draft by paying attention to vocabulary, content and organization: the details that students need to move, add or remove.	<u>Revising</u> 5. Students revise their first draft by paying attention to vocabulary, content and organization: the details that students need to move, add or remove.

Time	Content & Teacher Activity (Week 13)	Students' Activity
30 minutes	<u>Rewriting (Second Draft)</u> 6. Teacher asks students to rewrite the draft including the changes identified in the revision stage.	<u>Rewriting (Second Draft)</u> 6. Students rewrite the draft including the changes identified in the revision stage.
30 minutes	<u>Proofreading (Final Draft)</u> 7. Teacher ask students to correct conventions: spelling, grammar, punctuation and mechanic errors.	<u>Proofreading (Final Draft)</u> 7. Students correct conventions: spelling, grammar, punctuation and mechanic errors.
20 minutes	<u>Publishing</u> 8. Teacher asks students to publish a completed paper.	<u>Publishing</u> 8. Students publish a completed paper.



Fourteenth Week (Individual work)

Time	Content & Teacher Activity (Week 14)	Student Activity
20 minutes	<p><u>Review</u></p> <p>1. Teacher gives an overview of collaborative (individual work) writing guidelines to students.</p>	<p><u>Review</u></p> <p>1. Students study collaborative (individual work) writing guidelines.</p>
30 minutes	<p><u>Reading and Discussing</u></p> <p>2. Teacher assigns students to study argumentative short text model. Furthermore, teacher explains grammatical structure of argumentative writing.</p>	<p><u>Reading and Discussing</u></p> <p>2. Students study argumentative short text model and grammatical structure of argumentative writing.</p>
30 minutes	<p><u>Prewriting (Group Work)</u></p> <p>3. Teacher lets students brainstorming to gather ideas, contents, grammar, etc.</p>	<p><u>Prewriting (Group Work)</u></p> <p>3. Students brainstorm to gather ideas, contents, grammar, etc.</p>
40 minutes	<p><u>Drafting (First Draft)</u></p> <p>4. Teacher assigns students to start writing individually (first draft) introduction, body, and conclusion.</p>	<p><u>Drafting (First Draft)</u></p> <p>4. Students start writing individually (first draft) introduction, body, and conclusion.</p>
40 minutes	<p><u>Revising</u></p> <p>5. Teacher asks students to revise their first draft by paying attention to vocabulary, content and organization: the details that students need to move, add or remove.</p>	<p><u>Revising</u></p> <p>5. Students revise their first draft by paying attention to vocabulary, content and organization: the details that students need to move, add or remove.</p>

Time	Content & Teacher Activity (Week 14)	Student Activity
30 minutes	<u>Rewriting (Second Draft)</u> 6. Teacher asks students to rewrite the draft including the changes identified in the revision stage.	<u>Rewriting (Second Draft)</u> 6. Students rewrite the draft including the changes identified in the revision stage.
30 minutes	<u>Proofreading (Final Draft)</u> 7. Teacher ask students to correct conventions: spelling, grammar, punctuation and mechanic errors.	<u>Proofreading (Final Draft)</u> 7. Students correct conventions: spelling, grammar, punctuation and mechanic errors.
20 minutes	<u>Publishing</u> 8. Teacher asks students to publish a completed paper.	<u>Publishing</u> 8. Students publish a completed paper.

Fifteenth Week

Time	Content & Teacher Activity	Student Activity
4 hour	Teacher evaluates all argumentative writing paper (individual, pair, and group work)	–

Sixteenth Week

Time	Content & Teacher Activity	Student Activity
	Final Examination	Final Examination

APPENDIX B Rubric for text quality adapted from Zhang (2019)

Scores	Content	Language Use	Organization
5	<ul style="list-style-type: none"> - The students' position on the subject is clear and constant. - Arguments are well-developed, including examples, facts, evidence, and details that are relevant and suitable. 	<ul style="list-style-type: none"> - It illustrates grammatical variety, idiomaticity, and proper word choice. - Minor lexical or grammatical errors that do not affect meaning is possible. 	<ul style="list-style-type: none"> - Ideas are interconnected to one another throughout the essay by employing proper connectives or transitional phrases. - It exhibits cohesion and evolution of thoughts.
4	<ul style="list-style-type: none"> - The students' opinions on the subject is often clear and constant. - Although some ideas may not be fully explained or supported, most arguments are well-developed and use relevant and acceptable examples, facts, evidence, or details. 	<ul style="list-style-type: none"> - It exhibits a wide range of vocabulary and grammatical variation. - It is likely to contain small flaws in structure, word form, or idiomatic language that do not detract from the message. 	<ul style="list-style-type: none"> - The majority of thoughts are rationally linked together utilizing proper connectives or transitions. - It may have repetitions, distraction, or ambiguous relations on occasion.
3	<ul style="list-style-type: none"> - Students' opinions on the subject can be derived and are largely stable. - Some arguments may have a scarcity of pertinent and adequate 	<ul style="list-style-type: none"> - It may exhibit a wide range of grammatical structures, but it is limited. - It may contain a few visible 	<ul style="list-style-type: none"> - Nearly half of the ideas are interconnected to one another, with the majority of the transitions or

Scores	Content	Language Use	Organization
	examples, facts, proof, or specifics.	flaws in phrase construction and word usage, resulting in a lack of clarification and occasionally obfuscated meaning.	sentences appearing appropriate. – The connections between ideas can be confused sometimes.
2	<ul style="list-style-type: none"> – Students' opinions on the subject is frequently ambiguous and inconsistent. – The majority of arguments do not include relevant and acceptable examples, facts, proof, or specifics. 	<ul style="list-style-type: none"> – It may have a restricted terminology and grammatical structures range. – It may have a collection of improper word choices or lexical units, as well as faults in sentence construction and/or usage, which usually impede meaning. 	<ul style="list-style-type: none"> – It may have insufficient structure or connectivity of thoughts, which frequently distorts the link of ideas.
1	<ul style="list-style-type: none"> – The students' opinions on the subject is unknown. – Arguments aren't established on the basis of relevant and appropriate examples, facts, evidence, or specifics. 	<ul style="list-style-type: none"> – It could have substantial and regular flaws in sentence structure or language that make it difficult to understand. 	<ul style="list-style-type: none"> – It could be fragmented to the point where understanding the development of thoughts are problematic.

APPENDIX C The questionnaire of students' self-assessments towards critical thinking skills practiced levels in Writing Activities adapted from Alan (2006)

No	Statements	The Most	Much	Neutral	Less	The Least
Creating						
1	Producing new sentences, using what has been learned from the members.					
2	Collecting all the information and designing a paragraph according to ideas shared by the members.					
Evaluating						
3	Making decisions and critiquing the sentences which involved or did not involve the topic.					
4	Selecting the appropriate ideas which were brainstormed by the members.					
Analyzing						
5	Breaking information into parts to explore better understanding such as arguments, supporting evidence, thesis statements, reasons, etc.					
6	Categorizing the types of ideas shared by members such as supporting or arguments.					
	Total					

Interview question

What are your attitudes towards collaborative writing activities?

APPENDIX D Revision checklist for Argumentative paragraph

DIRECTIONS: Use this checklist to revise your own essay. If most of the items on this list are not covered all items, be sure to recheck again by consulting handbooks or other resources.

1. ____ Is your thesis statement specific and includes your: Topic? Opinion? Reasons?
2. ____ Do you use a variety of sentence structure in your essay?
3. ____ Is the opposing viewpoint described throughout the essay (in the intro, body paragraphs, and conclusion)?
4. ____ Does the conclusion include a clear call to action that requires immediate response?
5. ____ Is there a hook/lead included at the beginning of the introduction?
6. ____ Are quotes/examples/evidence used in the essay to support the thesis? If not, suggest something from an article to use?
7. ____ Is all evidence clearly connected to the thesis (no unrelated details)?
8. ____ Is a variety of higher-level vocabulary used throughout the essay?
9. ____ Is the essay free of repetition (repeated ideas, phrases, or words)?
10. ____ Does the essay have clear transitions between paragraphs, as well as a topic & concluding sentence for each paragraph?

****CONVENTIONS**

1. ____ Are all proper nouns such as names of products or articles cited capitalized?
2. ____ Is the beginning of each sentence capitalized?
3. ____ Is the letter I by itself capitalized?
4. ____ Do all sentences have an ending punctuation mark?
5. ____ Are all contractions eliminated?
6. ____ Are other punctuation marks such as commas, colons, and semicolons used correctly?
7. ____ Are all words spelled correctly?
8. ____ Are all verb tenses correct?
9. ____ Are all nouns, pronouns, and possessives are used correctly?
10. ____ Are all the sentences fragmented?

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