



Enhancing Critical Thinking Skills through Collaborative writing in L2 classrooms

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Abstract

This research explores the effectiveness of implementing Group Work in L2 writing classes to improve students' critical thinking skills. This effective pedagogical practice, Collaborative Writing, is gaining popularity in L2 classrooms, as it allows for multiple stages of correction through various levels of feedback. The literature review argues that this method creates potential spaces where students can learn independently and through peer review, thereby creating opportunities for at least two levels of error correction. To test this hypothesis, this paper adopts a blended methodology that analyses both qualitative and quantitative data gathered in three stages. In Stage One, the researchers implemented group work in their L2 writing classes to observe students' development. Students used a checklist, peer review, and the teacher's feedback to correct their work. In Stage Two, each teacher conducted a group meeting to reflect on the students' experience. In the final Stage, students were required to correct an assignment independently. The findings reveal that the students experienced deep learning and learned how to correct the assignment, demonstrating that group work enhances critical thinking skills among L2 writing students. Other significant findings include: students improved their communication skills, the small groups created an accommodating environment, especially for introverts, and students had the opportunity to discover their leadership and time management skills.

Keywords: L2 Pedagogy, Critical Thinking, Collaborative Writing, L2 Writing Classroom, 21st Century Rubric.

1. Introduction

This paper examines the efficiency of collaborative writing (CW) in L2 courses in Higher Education by tracing the improvement of critical thinking skills demonstrated by students. To begin with, group work has become an essential characteristic of pedagogical practices, especially after the introduction of the 21st Century rubric, where collaboration is one of the five pillars of assessment [1], [2]. It is a student-centred approach that creates space for students to experience deep learning, involving self-assessment and peer review within the team, which comprises many layers of constructive feedback [3]. This method also allows interaction in and outside the class since students cooperate and discuss what they are producing, analysing, and structuring to complete their assigned task [4], [5]. Because it is based on a small group learning environment, students develop their personalities and interpersonal skills in a relatively comfortable environment, with a remarkable boost in self-esteem [6], [7]. Moreover, it is often argued that collaborative writing fosters an inclusive environment that accommodates introverts, passive, and average students, thereby enhancing student participation in general [8], [9]. Such literature advocates for collaborative writing, emphasising its benefits in the L2 learning environment and its connection to marketplace orientation through teamwork.

While such research highlights the merits of collaborative writing in L2 classrooms, group work could have further fields to explore. For instance, L2 collaborative writing could reveal the development of critical thinking skills among students, including self-assessment, autonomous education, and reflection on their performance during a given task or project [3], [10]. It could also lead to exploring the relationship between writing and accuracy, the students' success in experiencing deep learning, and whether it leads to increasing word count in L2 writing tasks [4]. [11]. However, certain points in collaborative writing hinder its



effectiveness in L2 classrooms. Since collaboration requires peer-level communication, students may spend a significant amount of time agreeing on what and how to write, which can lead to serious indicators [4], [10]. Problems include unequal task contributions, the dominance of students with high leadership skills, and failures in planning, or sometimes, overplanning [12]. Such issues, thus, cannot be overlooked as they hinder effective implementation of collaborative writing in L2 classrooms.

Within this context, this research addresses the main issues emerging when incorporating collaborative writing in L2 classrooms in Higher Education contexts. It poses the following questions as hypotheses that shape this research:

- How can collaborative work improve writing skills and fluency in L2 classrooms?
- To what extent can collaborative work improve students' L2 critical thinking skills beyond language problems?
- What are the common overlooked issues that could improve the efficacy of implementing collaborative writing in L2 classes?

2. Literature Review

In a rapidly changing world, education has made significant strides in incorporating critical thinking and collaboration skills in second language (L2) writing classrooms. A clear example is the wide attention given to collaborative writing (CW) in educational settings to meet the globalisation demands of the 21st century. This section explores the connection between integrating critical thinking and collaboration skills in CW and the use of multi-layered group feedback in L2 classrooms, as in previous study cases and research.

2.1 Collaboration and Critical Thinking Skills in L2 Writing

Critical thinking and collaboration are two of the five 21st century skills deemed essential for success in our world today, the other three being creativity, communication and innovation [6], [9]. Research indicates that integrating critical thinking and collaboration into curricula enhances students' higher-order thinking skills through effective identification of fallacies, analysing opposing arguments, deductive and inductive reasoning, and creating sound judgments [13], [14]. Besides, encouraging students to engage in group discussions and activities helps foster deep learning, which would eventually prepare students to face the challenges of real-world problems [15]. Research also indicates that CW is considered a substantially effective pedagogical method employing critical thinking and collaboration in L2 classrooms, in which a group has to produce a single text [16]. Such practice requires identification of problems together, analysing different opinions and arguments, evaluating evidence, and synthesising meaning in the form of a single product, which is found conducive to cultivating learners' ownership and responsibility [10], [16].

Moreover, encouraging students to work in groups through CW activities provides them with opportunities to receive multi-layered feedback, one that can come from different sources, including peer feedback, feedback from instructors or in the form of self-assessment [12]. Creating such an environment would enrich students' collaborative learning experiences and encourage critical thinking skills, ultimately leading to deep learning. Furthermore, research advocates incorporating multi-modal CW activities in L2 classrooms (texts, pictures, speech, and videos), especially those involving technology, since they prepare students for 21st-century workplace skills.

2.2 Advantages of Collaborative Writing

Several studies have reported different benefits of CW in L2 contexts [1], [6], [4]. One study demonstrates that CW activities enhance audience awareness and reflective thinking, thereby exposing participants to the development of an understanding of diverse audience needs and the writing process through group discussions during the writing process [5]. CW also promotes the co-construction of knowledge through scaffolded interactions, especially 'collective scaffolding' where students with mixed proficiency levels pool their resources together to solve problems and produce shared L2 knowledge [17], [18]. Such collective knowledge is evident not only in the linguistic accuracy of the written composition but also in the enhancement of the overall writing quality. In this vein, CW helps students enhance their writing mechanics as groups produce compositions which are syntactically more accurate and coherent [14]. Additionally, CW fosters a sense of community, motivation and engagement among learners, creating a shared sense of responsibility to accomplish the writing task together, which facilitates peer negotiations and feedback [19].

2.3 Challenges Facing Collaborative Writing

Although CW has many advantages, it has potential challenges as reported in some studies [1], [7]. One of the main issues with collaborative writing (CW) is the potential scenario of unequal participation among



group members, which occurs when some students find it difficult to participate, either because of shyness, introversion or marginalisation by dominant students [1]. Another drawback for CW is that students may receive conflicting multi-layered feedback from peers and instructors, leading to confusion and difficulties in decision-making, which can ultimately impact the quality of their written work. A third main challenge to CW is the time constraints in the classroom, particularly for students who require time to engage in meaningful discussions within the limited timeframe of a CW activity.

2.4 Collaborative Writing around the World

Several studies have employed CW in L2 classrooms, whether in face-to-face (F2F) settings or through computer-mediated communication (CMC). The findings of a study in Japan tracing the attitudes of three adult English as a Second Language (ESL) learners exhibit that the participants benefited from the collaborative groups, which reflected positively on the participants' learning experience [20]. The study suggests that CW employing peer feedback has a positive impact on students' writing proficiency in F2F interactions. Another case study that applied CW in a South Korean CMC L2 classroom examined the interactions of two ESL groups in writing activities using *Wiki* as a computer-mediated tool; the findings show that students have benefited from technology-mediated CW outcomes through positive interaction and high levels of engagement [21]. While the first two studies exhibit the benefits of CW on L2 classrooms, another study conducted in Spain highlights the importance of contextualising CW to meet learners' needs [22]. The researcher recruited 14 high-intermediate/advanced L2 English as a Foreign Language learners (EFL) and concluded that attention needs to be paid to students' needs, especially those related to learner factors (proficiency level, learning styles, motivation levels, etc.) and task type (form-focused vs. Meaning-focused). Similar research findings are also found in the Middle East region. A study involved a five-day CW activity in a Moroccan university through the use of a project-based learning (PBL) approach that examines scientific articles [19]. It concluded that the students witnessed improvement in motivation levels, time management skills, self-organisation, confidence, and adaptability. In another case study, a Saudi researcher conducted an eight-week longitudinal study involving forty-six university-level students, who were evenly divided into an experimental group and a control group; the results reveal that the CW intervention has provided opportunities for pooling linguistic resources, collective scaffolding and languaging, which in turn have an impact on writing achievement [23]. In addition, a study by a UAE researcher, who has examined the effects of using Google Docs-based CW by 46 high school students in the UAE, shows that the use of Google Docs does not have a significant effect on students' writing whereas qualitative findings reflect positive students' perceptions of CW, mirrored in increased motivation, high confidence levels and improved language skills [24].

2.5 Research Gaps

Despite the wealth of research on CW in the last decade, this field appears to be in its infancy. First, there seems to be a need for more longitudinal studies on the impact of CW on L2 writing [1]. Such studies could investigate the impact of CW on L2 writing proficiency over time and determine factors that contribute to sustaining its improvement. Second, there is also a need to explore multi-modal CW, particularly focusing on how technology can enhance CW experiences and how technological tools can be effectively integrated into L2 CW activities. Third, this literature review identifies the gap in investigating diverse learner backgrounds and their influence on collaboration. Exploring learners' backgrounds, proficiency levels, and learning styles can help researchers customise their approaches.

All in all, the above review summarises the status of CW and the integration of critical and collaboration skills within L2 writing in the context of the 21st-century rubric. While CW offers numerous benefits, including enhanced student awareness, reflective thinking, and improved writing quality, as well as the co-construction of knowledge through scaffolding interactions, it is equally important to address the challenges CW faces. These challenges include unequal participation among group members, potential confusion caused by multi-layered feedback, and time constraints. Despite the plethora of research in the area of CW, there is a need for continued exploration in the field, especially in integrating technology-based modalities. One of the key conclusions drawn from the above literature review is that CW offers students opportunities through which they can receive multi-layered feedback through peer review and corrective input from their teachers, a topic to be further investigated below.



3. Methodology

3.1 Design

After gathering a comprehensive literature review, this research involves three stages. In Stage One, the researchers implemented group work in L2 writing classes to observe students' development. Students used a checklist, peer review, and the teacher's feedback to correct their work. In Stage Two, each teacher conducted a group meeting to reflect on the students' experiment, allowing the students to produce a self-assessment and engage critically with the experience. Students were asked to keep their notes on written paper, an individual checklist design, to remember how to conduct self-assessment. In Stage Three, students were required to correct an assignment independently, using a checklist and based on their notes in Stage Two. The feedback from the students is then categorised into three themes that focus on the effectiveness of implementing collaborative writing in L2 classrooms: communication skills, interpersonal skills, and critical thinking skills.

3.2 Data Collection

Using a mixed methodology blending quantitative and qualitative approaches, the data gathering involved triangulation: group meetings, checklists, and the use of an assignment to assure the credibility, quality, and validity of findings. Triangulation of methodology also allows for exploring hidden issues and concerns, and therefore, this research adopted group discussions, checklists, and self-assessment through a personally designed list [25], [26]. The gathered data is analysed in comparison with the comprehensive literature review to develop the themes that cover factors affecting the incorporation of collaborative work in L2 writing classrooms.

3.3 Participants

The research involves the participation of three L2 classrooms in higher education, with 30 students in each classroom. The classrooms were for first- and second-year students with L2 writing courses focusing on paragraph structure. Each class was divided into six groups after students signed the consent form. Participation in the study was optional, and all students received the same treatment, handling, guidance, and time. The issue of gender was not considered a variable, although the writing groups were homogeneous, either males or females, due to sociocultural norms. In addition, names of institutions, students, and courses are kept confidential to protect participants' privacy.

4. Findings

This subsection presents the research findings in three stages as follows.

4.1 Stage One: Observations on Planning and Decision-Making

In this stage, the students were given a writing task, producing a formal Letter of Request for an IT solution company according to a set of guidelines that explained the rubrics. Each class was divided into six groups, where students had to manage their time to draft a letter within one session (1.15 hours), to be checked by a checklist supported by the researcher in the following class. The observations were summarised as bullets and shared by the three researchers; the most common are as follows:

- Groups that could not accomplish the task in one session:
Ten groups were unable to complete the task. Six groups, each comprising multiple students with leadership skills, accomplished 50% of the task. Introverts and passive students participated in these groups, albeit without a constructive or planned role. However, the remaining groups lacked a student with leadership skills, and as a result, they only partially accomplished the task, which was not satisfactory. In these groups, introverts and passive students participated minimally in task accomplishment.
- Groups that accomplished the task in one session:
Eight groups completed the entire task in a single session. In these groups, passive students and introverts were not substantially affected because they were asked by the team leader(s) to write down ideas and participate in brainstorming.
- General observations:
 1. Planning and making decisions consume the majority of the time.
 2. Spelling mistakes and grammar are the most active areas witnessing peer review in most groups.



3. Abiding by the guidelines and rubrics and following the instructor's feedback in most groups reflected strong communication and peer review within each group.
4. Some students tried to use AI assistance to accomplish the task; these groups were mostly the ones with two student leaders.
5. Students had to communicate and reflect while producing their task, which creates space for deep learning.

Classes (Thirty students)	Groups (Five students)	Students participating in peer review	Students following the rubric	Introverts and Passive Students	Students with leadership skills
Class One	1	4	3	1	1
	2	4	4	1	2
	3	3	4	0	1
	4	3	3	2	1
	5	4	3	1	0
	6	3	2	2	1
Class Two	1	4	4	1	2
	2	5	4	0	2
	3	5	3	0	1
	4	4	2	1	2
	5	4	3	1	0
	6	3	2	2	1
Class Three	1	4	3	1	2
	2	5	5	0	2
	3	3	3	2	1
	4	3	4	1	0
	5	4	3	1	1
	6	2	3	2	0
Total 90	18	67	58	19	20

Table 1. Stage One Statistics

In the following session, the students were given a checklist, serving as a rubric to correct their work, and produce three sentences that reflect on this experiment. All groups accomplished the task, achieving grades that ranged from 7 out of 10 to 9.5 out of 10. Mark allocation includes 20% layout and design, 30% grammar and structure, and 50% for the content. By the end of Stage One, all students experienced teamwork, peer review, self-assessment, and the teacher's feedback.

4.2 Stage two: Observations and Reflections towards Critical Thinking

In Stage Two, each teacher conducted a group meeting to reflect on the students' experiment, allowing the students to produce a self-assessment and engage critically with the experience. Each had the chance to elaborate on the three sentences they noted as reflections on Stage One. They also had to respond to the following questions in the group discussions:

- How did they improve their writing skills?
- What did they learn from the experience?
- How can they improve their performance in a similar project?
- How do they plan to correct their own work before submitting their tasks after this project?

The feedback of the students could be summarised in the following points (all are written in the student's voice):

- I learned to ask my friends to read my assignment and provide feedback.
- I learned to learn from my peers' corrections and notes.
- I learned to align my writing with the rubrics.
- I learned to understand the question and how the teacher corrects it.
- I learned to ask questions when I do not understand something.
- I will learn to improve my spelling because I rely too heavily on autocorrect on my smart devices.
- Teamwork saves time, but we need to agree first.



- I should learn how to communicate without conflicting with my peers.
- I should read my writing before submitting it to my teacher to check for mistakes and missing parts.

To wrap up this stage, the researchers note down their observations on each group to explore the themes that characterise collaborative writing as a means to improve critical thinking skills. They also asked the students to create their own personal checklist design to assist them with L2 writing tasks on official business letters.

4.3 Stage Three: Testing the Effectiveness of Collaborative Writing

In this stage, the researchers assessed the effectiveness of group work in L2 writing classes by creating an in-class assignment that required students to individually draft a Letter of Apology, following their personal checklist and the assignment's guidelines. In the three classes, the majority of students accomplished the task, scoring 8 to 9.5 out of 10; five students from each class partially completed the task, scoring 6.5 to 8 out of 10; and only three students from all classes could not accomplish the task at all, scoring 4 to 5 out of 10.

Observing the students' responses and checklists, the researchers noticed the following behaviour:

- Some students asked their peers to read the task before submission.
- Some students asked their peers and/or educators to explain certain parts of the guidelines to ensure they respond correctly.
- Most students followed the guidelines and rubrics point by point.
- Most students used their checklists.
- Most introverts and passive students engaged with the questions and provided satisfactory task accomplishment.

After the three stages were over, the researchers collected the students' checklists and their written notes, and they were analysed with the data collected in Stages One and Two to explore whether the process was effective in improving students' critical thinking skills, mainly their ability to look at their work critically, correct their work, and conduct self-assessment.

5. Discussion

The gathered data can be categorised into three themes that the research believes characterise collaborative writing in L2 classrooms. It can be argued that this approach is emblematic of enhancing communication, interpersonal, and critical thinking skills, which is congruent with the previous literature advocating collaborative writing [1], [3], [10].

5.1 Theme One: L2 Collaborative Writing Enhances Communication Skills

Collaborative writing allows students to interact and communicate on three levels: with their educator, with their team, and with the question itself. This multi-level interaction enhances the depth of learning, particularly when students disagree on a specific point, as supported by previous studies [3], [4]. In addition, it creates a comfortable space for passive students and introverts who are rather reluctant when responding in class, and hence, their fluency and competency in communication have witnessed significant improvement. On the other hand, student leaders noted that they perceive communication differently when working as a team, as it involves not only conveying a message but also ensuring all team members are aligned. They also reflected that it is always wise to involve all team members to avoid mistakes and ensure that everyone understands the rubrics and guidelines. In this sense, students have improved their communication skills to levels beyond language as a means of speaking.

5.2 Theme Two: L2 Collaborative Writing Develops Interpersonal Skills

Group work in L2 helps develop students' interpersonal skills, including time management, delegation, leadership, and negotiation. Since students articulate communication as how to behave, interact, and be on the same page with the team, it is obvious that they have become aware that negotiating is a crucial matter in teamwork. Previous studies have also argued that collaborative writing develops students' ability to handle multitasking, as they must experience time management and delegation [19], a concept also observed in the participants of this study. However, leadership skills can have both negative and positive effects: groups with multiple student leaders often struggle to accomplish their tasks on time due to indecision on how to begin. Additionally, introverts in the same group may feel lost and uncomfortable communicating, which opens a gap in the previous literature promoting the successful implementation of group work in L2 writing classes.



However, groups with only one student leader proved more successful, creating a rather comfortable environment for introverts and passive students, which is in congruence with previous literature [8], [12].

5.3 Theme Three: L2 Collaborative Writing Improves Critical Skills

Previous literature states that collaborative writing allows students to experience deep learning, which develops their critical thinking skills [1], [5]. Most responding students learned the significance of peer review and sticking to rubrics and guidelines, which indicates that they developed an understanding of their mistakes, initiating the early stages of self-assessment. This awareness has the potential to transfer students to learning autonomy, as reflected in their output in Stage Three: most students managed to submit their work with satisfactory scores. Students also learn how to judge their team members, delegating each to a suitable role. For instance, introverts and passive students, who typically prefer not to speak openly, were assigned the task of completing the checklist and peer review. Meanwhile, student leaders explored their leadership skills as part of understanding their behaviour, a process that helps them improve for future teamwork. Hence, students have improved their critical thinking skills, specifically their ability to evaluate individuals and assess their work.

6. Conclusions/Implications

This research has explored the effectiveness of L2 collaborative writing among first- and second-year university students. It has involved ninety participants, whose data were gathered in three stages. The findings and discussion suggest that collaborative writing is an effective tool in L2 writing classrooms as it enhances students' interpersonal, communicative, and critical thinking skills, which agrees with the findings of previous studies and literature [1], [8], [12]. It further creates space for students to experience deep learning, enabling them to articulate communication as a set of codes of behaviour rather than mere conversations, since it involves negotiation skills and decision-making within a team. While this method is highly effective within teams that have student leaders, more research could explore the failure in group work that lacks leaders, especially when the majority of the team are introverts or passive students who do not prefer to express their opinion and actively communicate overtly. Besides, the students consume substantial time in the process of decision-making, which jeopardises the success of this approach. However, if the educator allocates fixed time for each step in drafting, this drawback could be overcome. The limitations of this study include the mode of communication and writing, as the entire study relies on in-class writing without digital aid. The results of a similar approach could lead to further interesting findings and results when incorporating ICT tools and digital platforms, as the challenges and outputs may significantly vary.

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