FLIPPED CLASSROOM METHOD AND COLLABORATIVE WRITING VIA GOOGLE DOCUMENTS TO IMPROVE STUDENTS' PARTICIPATION AND WRITING PERFORMANCE IN HIGHER EDUCATION

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**Abstract:** Flipped classrooms have been commonly used in educational settings after the pandemic. Schools provide a learning management system (LMS) to enhance the effectiveness of the learning process. Also, online platforms become popular among students, including online collaboration platforms like the Google document. The teaching method now could be more varied and flexible. This research focused on finding the impact of the flipped classroom method and collaborative writing through Google documents on students' active classroom participation and writing quality. The quasi-experimental study was designed to discover the significance of the impact in this case. Fifteen participants were given an IELTS writing pre-test and post-test at the beginning and the last meeting, and through the implementation of the method, the students were divided into five groups to write an essay collaboratively. The discussion and group work were applied during the classroom to observe active learning. The finding shows a significant impact on students' writing quality, especially the writing structure and coherence, and a positive impact on students' active learning concerning the students' initiative to contribute to the group work.

**Keywords:** Flipped Classroom, Google Doc, Collaborative Classroom

**Abstrak:** Setelah pandemi, metode flipped classrooms telah umum digunakan pada institusi pendidikan. Sekolah telah menyadari pentingnya menyediakan pembelajaran berbasis online (LMS) untuk meningkatkan keefektifan belajar mengajar. Selain itu, platform online juga dikenal dengan baik dikalangan siswa, termasuk melakukan kolaborasi menggunakan website Google document, sehingga metode pembelajaran dikenal dapat dilakukan dengan lebih bervariasi dan fleksibel. Untuk itu, penelitian ini bertujuan untuk melihat dampak metode flipped classroom berbasis collaborative writing melalui Google document terhadap keaktifan dan kualitas menulis siswa di kelas EFL. Untuk melihat pengaruh metode tersebut, kuasi-eksperimen akan disusun secara sistematis dengan memberikan pra-ujian dan pasca-ujian pada pertemuan pertama dan terakhir. Pada kegiatan eksperimen, Materi pembelajaran diberikan sebelum kelas dimulai dan diskusi pembelajaran serta pekerjaan kelompok menjadi fokus utama pada kegiatan kelas. Menulis kolaboratif dilakukan dengan membagi siswa menjadi lima grup melalui Google document. Setelah melakukan analisis pada hasil tes serta observasi didalam kelas, penelitian ini menunjukkan bahwa adanya peningkatan kualitas menulis siswa, khususnya pada struktur dan isi tulisan, juga pengaruh positif terhadap keaktifan siswa, dalam menunubukan inisiatif siswa untuk terlibat secara aktif saat melakukan kegiatan grup diskusi.

**Kata Kunci:** Flipped Classroom, Menulis Kolaborasi, Keaktifan, Kemampuan Menulis

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**INTRODUCTION**

Writing is one of the essential skills in higher education, especially in elaborating
ideas systematically and academically. The ability to express arguments should be attained, not only in the grammatical aspects but also in the quality of the writing, such as the content and the word choice. The level of students' critical thinking also can be shown through the work. However, this productive skill is assumed to be the most challenging and complex among English as a foreign language (EFL) students. It can be seen from the poor writing skills among students. Verily, writing is not only structuring ideas but also requires social, cognitive, and emotional skills (Berdanier & Lenart, 2021). In fact, in teaching writing, teachers have difficulties conducting a sportive environment where students can support each other through the learning process. In addition, motivation to write, develop ideas, construct arguments, and choose the appropriate reasons are the factors that could influence students' performance in completing the writing.

Huang (2022) revealed that EFL students who consider writing to be more accessible and more beneficial have better skills than others. Therefore, innovative, practical, and comfortable teaching is essential to improve writing skills in foreign languages. Teachers must employ diverse instructional approaches and be innovative within education (Octaviani & Ginting, 2023). In order to have good writing skills, practice is fundamental (Megawati & Rahmawati, 2019). Bryman (2016) also stated that the writing activities should be consistently varied and applied in the classroom to enhance written ability.

Similarly, Wyatt-Smith and Castleton (2004) described that several teachers believe that the success of their students' work is influenced by their attitude towards learning, motivation, background and culture, readiness to learn, speaking ability, and respect between peers in the classroom. In this case, collaborative writing can be one of the practical solutions to support students to be actively engaged in the learning process and participate in the continuous writing process. Kurihara (2017) also highlighted that collaboration is beneficial for students to comprehend the learning materials.

On the other hand, the proliferation of technology has enabled people to access the latest and most engaging materials. Students can obtain the information from the internet freely. The varied topics, readings, journals, and interactive videos can be easily found. This phenomenon empowers the students to seek knowledge from different sources. Hence, the teachers can use this by empowering the students to learn the materials outside the classroom. Ekayati and Rahayu (2019) also highlighted that fun English learning strategies could enhance students' motivation to learn English. The flipped classroom (FC) can be one of the methods to facilitate this learning style, to combine both online and offline. This method is the traditional way of learning, known as homework. Unlike homework, the students are given instructions to understand the materials from reading, videos, or quizzes before the class. Then, the time in the classroom can be used to discuss materials, elaborate on students' interpretations, and ask questions.

In this research, the aim of raising the topic is to enhance the student's writing skills and participation throughout classroom learning by using FC through collaboration. The Google document is used as a tool to write and collaborate, and the
object of the research is the students in higher education. Universitas Muhammadiyah Sumatera Utara in 4th semester. Students’ participation influences the problems in expressing ideas in writing (Florence, 2020). Collaborative writing could be implemented to support students to participate in the learning process. This activity usually allows the students to have small groups and freely discuss their projects with their friends. Many factors influenced students' participation, such as confidence, internal motivation, and difficulty level. On the other hand, technology can also encourage students to be active and improve their understanding and ability (Chen et al., 2019). Based on this, Google documents can be used to facilitate online collaboration in order to be active in the writing process.

The teacher often runs out of time in the classroom to teach the students and allow them time to comprehend the materials. However, consistency is the key to systematically training students' writing ability through the materials. Therefore, the FC can be used as a method to maximize the activities in the classroom. Thus, the students can comprehend the materials outside the classroom and use the classroom time to discuss materials they have not understood yet.

The present study innovates in terms of investigating how the flipped classroom learning method is combined with writing collaboratively through the online platform. The following questions will lead to the research limitation. Research Questions: (a) Does the flipped classroom method in collaborative writing through Google documents boost students' engagement? (b) Does collaborative writing in a flipped classroom enhance students' writing quality? Null hypothesis: (a) The flipped classroom method in collaborative writing through Google Documents does not boost students' engagement. (b) Collaborative writing in the flipped classroom does not enhance students' writing quality.

LITERATURE REVIEW

Flipped Classroom Method using Collaborative Writing

After the pandemic, the flipped classroom method became popular in the educational system. By altering the traditional way to digital, the teacher could use the time in the classroom effectively. In this method, the students need to understand the materials previously given as homework before the classroom starts and discuss the materials through discussion and collaborative activities (Jensen, 2019). Additionally, King A. (1993) mentioned that educators must lead the students to watch or read the materials and interpret their understanding based on the given materials.

Jensen (2019) also mentioned that this method would allow the students to recall the materials and better understand the students' explanations. Similarly, previous findings conclude that FC positively affects the learning process, especially at the university level. Hence, the teacher could use the time in the classroom for a more beneficial activity that is more interesting and student-centered (Sargent & Casey, 2020). Chuang et al. (2018) also stated that the quality given through discussion using FC differs from the classroom without this method. The discussion is structured, and the time could be more effective and efficient.
In writing, EFL learners need time to brainstorm ideas and translate the words into another language. Hence, collaborative writing using Google can be an alternative to allow the students to share their ideas and practice the theory they have learned in the classroom. Online collaboration has many benefits. Chuang et al. (2018) highlighted that this collaboration can positively impact the steps and efficiency of expressing ideas and improve the writing's complexity.

In addition, Chen (2021) also mentioned the importance of monitoring students in group activities for negative feedback during the writing process to reduce conflicts between members. For this reason, motivation and guidance for mutual support and ethical principles in expressing opinions are also required before carrying out joint activities. Therefore, people with different abilities can benefit from collaborative writing activities.

Fredrickson (2015) argues that online collaborative writing increases student interaction but has little impact on learning. Therefore, flipped classrooms are also used to prepare students to understand the learning material before writing in groups to increase the potential of collaborative methods. Fathi et al. (2022) also showed that teaching using the flipped classroom method was superior in quality, writing structure, grammar, and motivation.

Students' Engagement

Student activity can be identified through classroom discussions and online learning activities. For online activities, Weigle (2011) states that active students can be judged on three things: level of engagement with course materials, interaction with teachers and students, and activity in completing assignments. In this indicator, students' activity can be seen through their involvement in accessing materials and interacting with online activities before class. E-learning can be used to make observations that can be used to measure the level of student participation. Another indicator of student activity is participation in conducting class discussions and completing tasks in collaborative writing activities.

Nissa and Hidayah (2021) state that one strategy for increasing student engagement in the classroom is to use initiation, response, and follow-up techniques. The method, known as IRF (Initiate-Respond and Follow-up), allows students to give short answers to open-ended statements, train their creativity, and promote motivation through appreciation or feedback. This method can also be used when conducting discussions in class to motivate students to participate directly in discussions in the flipped classroom method.

Writing Ability

Writing is a social activity delivering emotions, ideas, intentions, and messages to readers utilizing letters, words, phrases, sentences, paragraphs, text, and punctuation (Flower & Hayes, 1981; Brown, 2001; Boardman, 2002; Nunan, 2003; Harmer, 2004 in Batubara et al. 2021 and Nasution et al.). In analyzing the students' writing performance, educators can look at different characteristics of writing, such as grammar, quality of writing (content), writing structure (coherence), and vocabulary used (vocabulary). In
addition, Weigle (2011) compared an automated assessment (e-rater) with an assessment team assessment. It makes the first model more consistent than direct assessment, although there are specific skills that a computer cannot assess. Therefore, the assessment performed in this study is a direct assessment performed by the team based on the band descriptions.

Previous researchers have elaborated on the benefits of the flipped classroom and collaborative writing methods, and this study combines the two methods to examine the impact on student activity and writing skills at the university level. In addition, with the increasing use of the internet and technology, Google Docs are used in daily activities to make it easier for students to write together. In this way, the time in class can be used to have discussions and to interpret the understanding of the provided teaching material.

RESEARCH METHODOLOGY

The method used to examine the method's effectiveness on students' activity and writing ability is quantitative research using a quasi-experimental classroom design. The study participants were English pedagogy majors at Muhammadiyah University with good knowledge.

The quasi-experimental research method has several characteristics of experimental class research in which the validity requirements are not fully met (Bryman, 2016). So that the data can be retrieved through a pre-test, a class action, and a post-test, this method also employs a single-group, punctuated time-series design, taking data from the experimental group without including the control group (Cresswell, 2009).

The experimental course was 7 weeks, with 90 minutes for each meeting. In the first and last week, a pre- and post-test is conducted in which the students are asked to write for 40 minutes on a specific topic. Then, materials such as readings, short videos, and quizzes must be retrieved at each meeting (Naing et al., 2019). After understanding the reading, the students explain and discuss the results of their thoughts in class. During the lesson, the teacher acts as a facilitator, facilitating the discussion by asking critical questions so that it goes well. Discussions involve discussing what has been learned, analyzing the writing, and providing comprehensive and transparent opinions (Cao & Swada, 2021).

The pre-test and post-test conducted are analyzed to determine the impact or outcomes of learning based on grammatical features such as grammar, writing structure, vocabulary, and quality arguments. In addition, the level of activity and participation is determined by observing access to e-learning and observing learning in the classroom.

The target participants to be studied were fourth-semester students majoring in an essay-writing course. The participants will study up to 15 people. In the initial phase, the participants receive a post-test in which they can write down their opinions for 40 minutes. The 2nd, 3rd, 4th, and 5th meetings will have class action lawsuits using the Flipped Classroom learning method based on collaborative writing with Google Documents (Doc). Participants will be divided into 5 groups of 3 members each to write articles in English on Google Docs. Participants participate in classroom sessions where materials are provided before class to facilitate this collaborative writing. The writing
plan is then discussed and debated, and collaborative writing can be done later during or after the extension course using Google Docs. Participants can continue the discussion online until the 5th meeting. At the last meeting, the students hand in assignments and are asked to write an essay of around 40 minutes as a follow-up exam. Then, the data analysis and data collection from observations takes place.

Table 1. Flipped classroom plan

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Week 2 Analyzing an Essay</th>
<th>Week 3 Writing Thesis Statement</th>
<th>Week 4 Writing the Outline</th>
<th>Week 5 Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Out-of-class activities</td>
<td>Essay Reading</td>
<td>Reading about how to write a Thesis Statement Quiz</td>
<td>Reading about Essay Outline Quiz</td>
<td>Reading about the concluding Essay Video Quiz</td>
</tr>
<tr>
<td>In-class activities</td>
<td>In a group of two, students investigate the topic Discussion</td>
<td>Discuss each other's thesis and topic sentence (peer group) Individual Practice</td>
<td>Writing the outline in groups Individual Practice</td>
<td>Writing a concluding paragraph Discussion</td>
</tr>
</tbody>
</table>

The table above shows the observation and materials given by giving materials through E-learning (LMS) before the class. The instructor reminded the students to check their e-learning and complete the tasks. The materials aim to teach the learners how to write an essay through some steps, namely analyzing the entire paper, writing the thesis statement, outlining, and writing concluding paragraphs. After practicing the materials individually, time will be given to assess their group work. The three steps of writing will be conducted: pre-writing, writing, and post-writing. The students were also required to complete the quiz, which consisted of three to four open-ended questions that presented the understanding of the reading materials by providing a summary or answers. The video was also given to elaborate fully on how to write an essay thoroughly in order to enhance student's interpretation of the writing process concept.

FINDINGS

Students' Writing Quality

To observe the students' writing performance, the researcher gave the IELTS task 2 questions in pre-test and post-test to find the significance. In analyzing students' writing, there are four criteria: task achievement, lexical resources, coherence and cohesion, and grammatical range and accuracy. The measurement was based on the IELTS band score writing task 2, starting from 0 to 9 as the highest level.
Table 2. Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test Experiment</td>
<td>15</td>
<td>1.5</td>
<td>4.0</td>
<td>2.867</td>
<td>.6673</td>
</tr>
<tr>
<td>Post-Test Experiment</td>
<td>15</td>
<td>2.5</td>
<td>5.5</td>
<td>4.033</td>
<td>.8958</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data shows that the student's average score improved almost doubled from 2.8 to 4.0 or reached a 1.2 difference. There is a positive effect on the quality of students' writing, especially the writing structure, coherence, and cohesion. Furthermore, the minimum and maximum scores among the students increased by 1 point on average. It can be concluded that flipped classroom's impact on enhancing students' quality is significant. The discussion in the classroom has built a favorable environment for students to comprehend the lesson thoroughly, impacting their writing performance.

Table 3. Student's pre-test and post-test results

<table>
<thead>
<tr>
<th>No</th>
<th>Student</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>3</td>
<td>4,5</td>
<td>1,5</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>3,5</td>
<td>3,5</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>4</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>2,5</td>
<td>2,5</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>3,5</td>
<td>3,5</td>
<td>0,5</td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>3,5</td>
<td>5,5</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>3,5</td>
<td>4,5</td>
<td>1,5</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>1,5</td>
<td>3</td>
<td>1,5</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>3,5</td>
<td>5,5</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>2,5</td>
<td>4</td>
<td>1,5</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>3,5</td>
<td>4,5</td>
<td>1,5</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>2,5</td>
<td>2,5</td>
<td>0</td>
</tr>
</tbody>
</table>

Out of 15 participants, more than half of the students (roughly 80%) performed better with 1.5 to 2-point improvement. The table also depicts that in the pre-test score, the lowest score was 1.5 and the highest was 4.0, while for the post-test were 4.0 and 5.5, respectively. Most students improved their scores, and only three participants (about 20%) had the same number for the pre-test and post-test scores.

The structured ideas in their writing significantly improved students' writing. In the first test, most students did not reconstruct their ideas in the introduction paragraph with supportive statements in the body paragraph. The post-tests showed the learner's understanding of writing the thesis statement and using the body paragraph to highlight arguments in the writing. In addition, students' work is more coherent and shows a link between one paragraph and the others that impacts their writing quality.
Students' Engagement

Applying the method, the teacher shared the materials before the classroom and started discussing students' comprehension by asking questions or quizzes. After the discussion, the students were given activities to apply their skills and understanding through writing tasks or group work. Some explicit instruction and activities related to the subject were undergone individually, in peer groups, or in group work, designed based on the difficulty level and duration to complete the work.

After giving the instruction, the teacher checked the student's progress. In this activity, most students checked their progress and confirmed their understanding. Another strategy that could improve students' attention was when the teacher gave feedback by presenting their work and allowing the other group to compare their progress.

In observing the participation, note-taking is used to observe the students' active engagement. The measure of students' participation was based on three items: level of engagement with course materials, interaction with teachers and students, and activity in completing the assignments (Weigle, 2011). The summary of the note-taking is presented in the table above.

| Week 2 | • The students did not ask Qs  
• The teacher asked Qs to trigger the students in the conversation |
| Week 3 | • The teacher-reviewed the quiz by the students  
• The students were willing to ask further questions  
• In the group discussion, some students explained the materials to their friends who did not understand the materials |
| Week 4 | • In the Google doc, the students asked questions about the instructions for writing the outline.  
• Some students asked the questions in the big forum and personally when the teacher walked throughout the room to check the student's progress. |
| Week 5 | • The teacher triggered the students with questions before the lesson  
• The teacher facilitated the students to solve issues with another student who found difficulties |

It was found that not all of the students would like to initiate asking questions, but they participated in the discussion when the teacher was asking the questions. Interestingly, they were very interactive when the teacher walked throughout the class to check their progress and work. Also, they were motivated to complete the assignment and support the other peers who were struggling in the process. It can be concluded that collaborative writing and flipped classroom has increased students' collaboration despite no teacher instruction. The students were aware of their responsibility to understand the materials independently, which led to helping other students who did not understand the topic.
Discussion

The study's results prove that collaborative writing through Google Documents and the FC strategy could enhance students' writing and participation in EFL classrooms. It enables the teachers to maximize the time and conduct meaningful activities such as discussion and practice. While completing the assignments, the students can identify their weaknesses and engage students to take the initiative to understand the materials and work with their peers.

It can be concluded that the teacher's role as facilitator in the classroom contributes significantly to engaging the students' participation in applying the FC method. Aligning with the previous researchers and collaboration positively impacts students' comprehension (Kurihara, 2017). The observation also revealed that students showed each other respect and assisted the poor students in completing the assignment in the classroom (Wyatt-Smith & Castleton, 2004). However, Google document seems to have little impact on students' collaboration engagement, as Chen et al. (2019) mentioned. Most students completed the group work offline and uploaded their writing in a Google document. It was expected that the students would collaborate online using Google Docs, while they preferred to complete their tasks in face-to-face meetings. In other words, technology facilitated the FC, whereas the impact of Google Docs on online collaboration was not very impactful.

On the other hand, the activities in the classroom were more varied and meaningful. The teacher could also provide a forum and trigger the students with questions to reflect on the theories and compare them with the articles or writing they have read. It allows them to learn from the other members, and the poor students get help from their classmates. Through group work, the teacher may walk through the room to check the students' progress and ask about their difficulties. The instruction and activity that require the students to engage with the materials is beneficial to help the students understand the lesson, and they can identify their lack of understanding when doing the practice.

The correlation between the materials, discussion, and activity should be intertwined to help the students understand the materials and improve their writing. It could be seen that the activity is more effective since the students can relate their previous materials based on the reading with the activity.

CONCLUSION

The study was designed to discover a flipped classroom method using a Google document to enhance students' participation and writing quality in the classroom. Through the experimental approach and observation, the result shows a considerable impact of applying this method, especially in improving students' writing structure and coherence. Also, even though it is not significant, there is a positive impact on students' active learning concerning students' initiative to contribute and support one another in group work. The flipped classroom seems to provide practical classroom activities, and the collaboration between students fosters their understanding and builds a positive environment among students.
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