

PEER INSTRUCTION IN A FLIPPED LEARNING ENVIRONMENT: EXAMINING ESL STUDENTS' PARTICIPATION IN WRITING ARGUMENTATIVE ESSAYS

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Abstract: Over the years, peer instruction and flipped learning approach has indicated its usefulness in teaching and learning. However, studies on how peer instruction in a flipped learning environment encourage active student participation in writing remain limited in Malaysia. Therefore, this study examines ESL students' participation during peer instruction in the flipped learning environment when composing argumentative essays. A total of 120 upper intermediate students undergoing an English proficiency course at a teacher education institution in Malaysia participated in this study. Qualitative data were gathered from student assessment forms (pair work and group work), lesson study logs, EdPuzzle video quizzes, and samples of student worksheets. Descriptive interpretations and thematic analysis were used to analyse textual data. The findings revealed that ESL students participated in this study by engaging themselves in interactions during in-class writing activities, contributing knowledge to others, getting prepared with the essential concepts and content before class, focusing on the task, and assessing the quality of argumentative writing. The findings implicate that teachers should consider the use of peer instruction in a flipped learning environment for students to engage actively in the teaching and learning of argumentative essay writing.

Keywords: Peer instruction; flipped learning; ESL students; student participation; argumentative essay writing

INTRODUCTION

Argumentative writing is a common genre of academic writing and yet considered by researchers as the most challenging model of writing that second language (L2) learners experience in higher education

institutions (Botley, 2014; Ismail et al., 2012a; Ismail et al., 2012b; Vyncke, 2012). This writing genre is essential for university students to express, communicate, share and negotiate their views with appropriate structure and language features. Unfortunately, both ESL and EFL learners at the tertiary level often encounter problems in composing argumentative writing (Ariyanti & Fitriana, 2017; Bipichandra et al., 2014; Ka-kan-dee & Kaur, 2014; Ka-kan-dee & Kaur, 2015; Peloghitis, 2017). Besides, they also seem to be apprehensive, unmotivated, or reluctant to write and feel less compelled to put much effort into completing an argumentative writing task. Due to these problems, students' participation in writing argumentative essays has yet to achieve a desirable level of satisfaction (Lam et al., 2018; Peloghitis, 2017).

Consequently, a number of research studies have highlighted some drawbacks of the past language teaching methods in teaching argumentative writing skill. Ansarimoghaddam et al. (2017), Fan et al., (2019) and Jin et al. (2020) have sought to investigate how educators can improve the teaching and learning of argumentative writing by using effective methods and strategies to gauge the weaknesses of ESL students' writing ability. To address the issue, a structured teaching practice assisted by peers was considered suitable as students spend more time in the company of peers and share similar discourses that allow for greater understanding. Specifically, peer instruction was chosen as the instructional approach in this study. Peer instruction (PI) is defined as a form of active learning that enhances deeper understanding by encouraging students to interact with their peers instead of staying passive (Crouch & Mazur, 2001; Mazur, 1997). In other words, PI can boost student participation and comprehension. As for the learning environment, flipped learning approach was employed to reverse the regular classroom routine. Instead of using class time for lecturing, teachers share lecture materials (a mix of reading and video-recorded lectures) to give first exposure to the course content before class (Luo et al., 2020). Students get to apply what they have learned before class and engage in collaborative and higher-level learning during class time.

Despite the importance of peer instruction and flipped learning approach in the Science, Technology, Engineering and Mathematics

Singh, A. K. J., & Harun, R. N. S. R. (2021). Peer instruction in a flipped learning environment: Examining ESL students' participation in writing argumentative essays.

(STEM) fields, the combination of pedagogical approaches has not received much attention in the areas of humanities, arts and social sciences (Hung, 2015; Schell & Butler, 2018; Zainuddin et al., 2019; Zou & Xie, 2019). This is reflected by the lack of research on the impacts of peer instruction and flipped learning on ESL/EFL writing and student participation level (Hung, 2015). It is for this reason that this current study was therefore mooted. This study examines the ESL students' participation during peer instruction in a flipped learning environment in writing argumentative essays.

LITERATURE REVIEW

In general, the reviews are divided into three subsections: peer instruction in English language classrooms, flipped learning and students' participation level in the flipped classroom.

Peer instruction in English language classrooms

Crouch and Mazur (2001) have introduced a constructivist teaching method known as the peer instruction (PI) technique that focuses on interactive engagement. PI technique was invented by Harvard Physics Professor Eric Mazur in the early 1990s as a student-centred approach to enhance collaborative learning that can help students avoid misconceptions and misunderstandings during class (Mazur, 1997). PI is an active learning technique that allows students to articulate knowledge in their own terms and check their understanding by discussing it with other peers (Mazur, 2013; Schell & Butler, 2018; Zhang et al., 2017). In addition, PI allows students to evaluate their thinking as well as exchange feedback from student-to-student, teacher-to-student, and student-to-teacher (Goodwin & Miller, 2013; Schell & Butler, 2018).

Many studies have revealed the positive effects of peer instruction in language learning in that it can lead to more profound learning and improved performance through discussions and negotiations on the development of various language skills (Lee, 2017; Newton, 2013; Swain, 2005). For instance, Al-Hebaishi (2017) found that class discussion through the peer instruction method was effective in enhancing conceptual comprehension. García-Sánchez (2016) found that collaborative

interactions with video role-plays promote students' development of fluency, vocabulary, content, grammar, pronunciation, and intonation. Similarly, Zheng et al. (2009) also found that collaborative interactions can promote students' language learning in terms of pragmatics, syntax, semantics, and discourse practices. Ahmed and Abdel-Jaleel (2016) also observed students' writing abilities upon discussions via an online forum. Moreover, Carter and McCarthy (2014) argued that discussions and negotiations can foster vocabulary acquisition.

In addition, the use of peer instruction in a flipped classroom focusing on students' language skills development have revealed positive outcomes. Findings from previous studies have proven that the effects of flipped learning with peer instruction can enhance ESL/EFL students' engagement and reading comprehension skills (Alhasani et al., 2017; Lasni, 2017), encourage interaction during in-class activities (Hung, 2017) and promote the development of students' writing skills, motivation, and tendency of critical thinking (Zou & Xie, 2019).

Flipped learning

Flipped learning is an innovative pedagogical approach in which the typical lecture and homework elements of a course are reversed (Birgili et al., 2021; Luo et al., 2020). Various disciplines have utilised this pedagogy as one of their instructional techniques (Berrett, 2012; Öztürk & Çakıroğlu, 2021; Zainuddin & Halili, 2016). Flipped learning approach enables students to view short pre-recorded video lectures or other multimedia content asynchronously before class. The class time is then devoted to answering questions raised by the students, engaging them in group discussions and addressing any misconceptions and misunderstandings. The key point here is that low-level learning, such as remembering and understanding, happens out of the class, while the higher level of learning occurs in the class (Alsowat, 2016). According to Flipped Learning Network (2014), this approach consists of four central pillars: a flexible environment, a learning culture, intentional content, and the presence of a professional educator. These four pillars complement each other, and thus teachers need to consider these four pillars when employing flipped learning approach in their classrooms.

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Students' participation level in the flipped classroom

Learning is an active process of making sense of what has been taught. Active students' participation is learner-centred and requires more than just listening. It occurs when students read, write, discuss, create, or are engaged in problem-solving activities. In recent years, many instructors have tried to increase active student participation in their lectures by incorporating strategies such as student response system (SRS), peer feedback, and collaborative learning. Hung (2015) has investigated the impact of flip teaching on EFL learners' participation levels. The results which were based on the average study time and the number of times students watched related videos revealed that participation level was higher for the students from the structured flipped classroom than for those from the semi-structured flipped classroom. These results have also suggested that there are advantages with regard to flip teaching in language classrooms that use a structured design.

In extension to the above, the interview data have supported the statistical analysis by providing additional insights into the students' learning approaches. In the interviews, 80% of the participants in the flipped classes spent more time and effort on the communicative English course compared to traditionally structured courses. This is because the instructional design prompted the students to preview the course materials for better in-class participation and made it easier for them to review the lessons if they wanted to. So far, only one empirical study addressing the impact of flip teaching on student participation levels has been carried out, and further studies and contributions are required in the ESL context and especially involving other language skills besides speaking.

METHOD

A case study was employed to examine the ESL students' participation during the intervention period of using peer instruction in a flipped learning environment in writing argumentative essays. According to Yin (2018), a case study approach can help to investigate a contemporary phenomenon in a real-life context (Yin, 2018) and facilitates in-depth understanding of new research fields (Miles et al., 2020).

Participants

The participants of this study were 120 ESL undergraduates who had attained at least Band 4, competent level, in the Malaysian University English Test (MUET) or its equivalent. They enrolled for an English proficiency course in a teacher education university in Malaysia. In this study, two groups were assigned as Experimental group 1 (pair work) (N=40) and Experimental group 2 (group work) (N=40). The third group was assigned as the Control group (N=40), in which the conventional teaching method was used and no treatment was provided to the students. The selection of the sample for this study was made using convenience sampling by selecting intact groups.

Data collection

The qualitative data were collected by using the lesson study logs on the students' out-of-class study time and effort, student assessment forms, EdPuzzle video quizzes as well as samples of student worksheets. The rationale for having students complete the assessment forms in pairs or groups after each intervention session is that the assessment practice of their own participation can elicit their insights. Moreover, it also allows them to reflect on their participation in terms of interaction, contribution of knowledge to others, and completion of tasks during in-class activities.

The assessment forms (pair work and group work) were used as a tool to facilitate students to assess their own participation based on five criteria: peer interaction/pair work/group work, the contribution of knowledge, preparation, focus on the task, and quality of the essay. The five criteria were adapted by the researcher from other related studies on student participation (Choo & Stella, 2015; Czekanski & Wolf, 2013; Tiew & Goi, 2011; Wright, 2014). Four levels of descriptors were prepared by the researcher to determine how well students performed tasks in the class: Excellent (4), Good (3), Average (2), and Below Average (1). The total points for the assessment form were 20.

As for the lesson study logs, one reflection question 'what useful concepts and information/knowledge did you learn from this lesson?' was designed to guide the students for self-directed learning, while also providing the researcher with a window to understand their out-of-class

preparation. The students' participation was mainly measured by the lesson study logs, which were self-reported to reveal students' understanding of the useful concepts and knowledge that they had learned from watching video lectures and reading materials prior to classroom. The data obtained from lesson study logs were then triangulated with the findings of the student assessment forms, especially the 'preparation' construct.

Besides, the EdPuzzle video quizzes were based on five video lectures prepared by researchers for this study. One video lecture was assigned to the students each week. The first video lecture explained the introduction to argumentative writing. The second video presented counterarguments and rebuttals. The third video lecture covered the quality of reasoning. The fourth video lecture demonstrated the steps in reviewing an argumentative essay and the last video lecture focused on writing an argumentative thesis. While watching the video lectures, the students had to answer two or three multiple-choice questions every week. The students were not allowed to skip questions and videos. The purpose of inserting questions into the timeline was to ensure that students pay attention to what they were watching. The questions were created based on the content in the video lectures. So, the weekly scores of correct answers were recorded in the EdPuzzle.com platform.

Furthermore, worksheets were prepared for students to apply knowledge they had gained from the pre-class resources and materials. Worksheet 1 and Worksheet 2 focused on brainstorming ideas about two topics. Students were required to list possible arguments by writing the claims, reasons, and evidence. Worksheet 3 and Worksheet 4 focused on writing prompts. Students were required to respond to the writing prompts by stating claims, counterarguments, and rebuttals and support them with reasons and evidence. Worksheet 5 required students to search for an online newspaper article, convert the topic or current issue to an argumentative topic, and then complete the argumentative writing graphic organiser. Worksheet 6 served as a structured guide for students to complete the argumentative essay.

Data analysis

Descriptive interpretations and thematic analysis were used to analyse the qualitative data. Five themes were identified based on the criteria listed in the student assessment form (pair work) and student assessment form (group work). The analytical findings from the student assessment forms (pair work and group work) were triangulated with data from lesson study logs, EdPuzzle video quizzes and samples of student worksheets. They then were verified with a member-checking technique to assure the validity and reliability of this research.

Procedure

This study was carried out in a period of seven weeks. Overall, there were three major phases, including (1) a preparation phase for a workshop, an orientation and a pre-test, (2) an intervention phase for the implementation of peer instruction, and (3) an evaluation phase for the overall assessment of teaching and learning. The duration of seven weeks was considered sufficient as the students were required to learn two types of essays (argumentative and compare and contrast) within a semester (14 weeks). More importantly, additional time was spent on the argumentative essay writing as this type of essay was assessed as one of the four main assignments with a 20% weightage from the final mark.

During the intervention phase (Week 2-6), students were exposed to the course content through pre-class materials. Pre-class materials were comprised of video lectures via Edpuzzle.com and reading materials via a learning management system (LMS). Students watched EdPuzzle video lectures and answered quizzes prior to the class. After watching the EdPuzzle video lectures every week, the students were asked to write their lesson study logs about useful concepts, information, or knowledge they had gained from the lessons. In class, the students were required to apply the knowledge they had acquired before class to complete pair work and group work tasks. Altogether six worksheets were completed by the students in pairs and groups at the end of the sixth week. Student assessment forms were completed by the students at the end of the lessons.

FINDINGS

The primary findings from the student assessment form (pair work) and student assessment form (group work) have illustrated that students participated in this study by engaging themselves in interactions during in-class writing activities, contributing knowledge to others, getting prepared with the essential concepts and content before class, focusing on the task and assessing the quality of argumentative writing. Besides, the findings from the student assessment form (pair work) and student assessment form (group work) were triangulated with the findings obtained from the lesson study logs, EdPuzzle video quizzes, and samples of students' worksheets.

Engaging in interactions during in-class writing activities

Based on the evidence and explanations provided by the pairs in the student assessment form (pair work) (see Figure 1), it was revealed that 13 out of 20 pairs showed their active participation by having pair work discussions during in-class argumentative writing activities throughout the 5-week intervention phase. The data of the rest seven (7) pairs were considered invalid, for there was no submission and some pairs submitted incomplete forms. The incomplete forms included submission from those pair who did not write the name, week and date, evidence or explanations, and ratings of the criteria.

There were several positive remarks given by the pairs every week, including pair work discussions as a reflection of good teamwork, effective communication, constantly supporting each other in pairs, knowledge sharing, solving problems and creating critical minds by asking questions. Nevertheless, there were also negative remarks such as students completing the tasks last minute, students dividing tasks equally in which it results in limited interactions between peers and students facing difficulties in brainstorming ideas due to different perspectives. To be specific, Pair 2 (W1PI2), Pair 5 (W5PI5) and Pair 8 (W1PI8) (W2PI8) stated that they benefitted from the pair work discussions while Pair 6 (W3PI6), Pair 9 (W4PI9) and Pair 11 (W3PI11) stated that they faced some difficulties to adapt themselves during the pair work discussions.

We have consistently supported and interacted with each other. (W1PI2)
 This helps us to solve and complete the task. In addition, we get to brainstorm and exchange ideas with each other. Good teamwork. Shared ideas. (W1PI8)
 Pair work helps a lot and improves our communication. (W2PI8)
 We did it last minute. We divided the task, S1 prepared the argumentative writing graphic organizer based on a newspaper article and S2 completed the essay framework. (W3PI6)
 We hardly meet each other so it was difficult for us to discuss. (W3PI11)
 I think it is quite hard to brainstorm ideas for argumentative essays due to having different perspectives. (W4PI9)
 Always ask questions to avoid misunderstandings. (W5PI5)

Figure 1 Evidence and Explanations for the Criteria 'Peer Interaction or Pair Work' taken from the Student Assessment Form (Pair Work)

Similarly, evidence and explanations provided by the nine (9) out of 10 groups in the student assessment form (group work) (see Figure 2) showed that students were engaged and showed their full commitment during group work or discussion in the flipped learning environment throughout the 5-week intervention phase. They did not only actively shared ideas during the brainstorming sessions but also paid attention, always asked for others' opinions, actively listened to peers' opinions, respected others' views, considered those opinions (accepted/rejected the ideas), provided comments, made efforts to understand what had been discussed, encouraged and supported each other to complete the given tasks, clarified information and searched for newspaper articles together.

We always listen to each other's opinions such as when S5 gives an idea about doing part-time job while studying can gain experience, we all think about and accept the idea then write it on paper. When we all think the idea is not suitable to write, we find another idea such as doing part-time job can give side income to students that has been given by S6. (W1GW2)
 First, we decided a suitable time to do group discussion for completing the four essays. During the discussion, we listen, respect and encourage the views of others; if there is any objection, we will say it nicely and properly to other members. (W2GW7)
 Members give cooperation and focus during the explanation. S29 and S30 give ideas about the topic that we get. We searching for the article based on the newspaper. We discuss about each part by doing the argumentative writing. (W3GW8)
 S22 asked what the topic we want to choose. We search the info of the topic list and decide to choose topic 4 for the first essay. (W4GW6)

Figure 2 Evidence and Explanations for the Criteria 'Group Interaction' taken from the Student Assessment Form (Group Work)

Contributing knowledge to others during in-class writing activities

Data from student assessment form (pair work) (see Figure 3) and lesson study logs confirmed that the ESL students participated during peer instruction in the flipped learning environment by contributing knowledge to others in pairs during in-class writing activities. It began with the students gaining knowledge by watching the video lectures via Edpuzzle.com and writing lesson study logs before the class. The lesson study logs as illustrated in Figure 4 revealed the knowledge gained by the students prior to class, then contributed and shared with their peers during the pair interaction or pair work discussion in class. For instance, student 5 from Pair 3 explained what is argumentative writing, elements of argumentation, types of data, how to support claims with data, how to write a rebuttal or refutation, and the structure of argumentative essay writing. This shows that the student paid attention to what had been taught via video lectures and comprehended the content by making own notes in the study logs. By doing this, the student will be prepared to participate in the class activities.

Using our previous knowledge, we both contribute during discussion by actively giving opinions. (W1PCK11)
The more we ask the more knowledge we gain and helpful to us in order to study and complete the task. (W2PCK8)
We exchanged and improved each other's ideas and language. (W2PCK9)
Both of us are giving so much ideas through these tasks and it does not make us ignore each other's opinions. (W3PCK7)
Contribute in pair work discussion. Give own opinion. (W4PCK1)

Figure 3 Evidence and Explanations for the Criteria 'Contribution of Knowledge' taken from the Student Assessment Form (Pair Work)

In class, students in pairs contributed knowledge to others during in-class writing activities by having a meaningful discussion, communicating with each other, sharing information, opinions and ideas, using prior knowledge to complete the tasks, brainstorming ideas together in pairs, actively asking questions to the teacher and peers and gaining knowledge by finding content from various sources. These contributions

of knowledge were listed by the students in the student assessment form (pair work).

Student 5 (Pair 3)

Week 1: Introduction to Argumentative Writing

Based on the video that I watched... argumentative writing is a genre of writing ...investigate a topic, collect, generate and evaluate evidence and establish a position on the topic in a concise manner... elements of argumentation which consists of claim, reasons, evidence, counterclaim, and rebuttal... three types of data: first-order data, second-order data, and third-order data. Besides that, in the video included on how to support claims with data...support the writer's contention that a general statement is true and expert opinions which interpretations of facts...rebuttal or refutation which simply disproving an opposing argument. Turn back to your original position. ..that video thought me so many useful things that I need to know about argumentative writing.

Figure 4 Student 5's Lesson Study Log Entry for Week 1

Furthermore, the students' participation in the group discussions during the peer instruction activities in a flipped learning environment can be reflected through four (4) practices. First, students in group work regularly contributed, elaborated, and exchanged their ideas, opinions and thoughts, which were related to weekly tasks during the group discussions. Second, students in groups did not feel nervous or ashamed of sharing their opinions during the group discussions. Third, students in groups searched for content from various sources together before writing the argumentative essay. Last, group members always responded to each other, prepared drafts and applied whatever knowledge they have learned throughout the five weeks, especially the six key elements of argumentation into the final product of the argumentative essay.

Getting prepared with the essential concepts and content before class

Based on the evidence and explanations from the student assessment forms (see Figure 6), students in both pairs and groups were always prepared with essential concepts and content before entering the class. They watched the video lectures every week at their own pace and wrote notes in their logbooks. While watching the video lectures, students had to pay attention to the content and then answer multiple-choice

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questions. The 'Prevent Skipping' feature of Edpuzzle.com was used to make sure that the students watch the whole video lectures that they were assigned to till the end. Some of them also read the additional materials uploaded by the teacher to the learning management system. The rest of the pairs and groups illustrated their active participation during the in-class activities by brainstorming ideas, discussing and developing ideas, and applying knowledge gained prior to class. This reflects the benefits of a flipped learning environment. The flipped learning environment allows students to gain first-exposure learning by watching the pre-recorded video lectures and mastering the basic knowledge and content before class. In class, students have more active learning time to practise whatever knowledge they have gained in pair work and group work activities.

We both always prepared for our pair work with notes because revision can help us finish the essay. (W2PPR2)
Learning materials and notes are always in-hand. (W5PPR9)
As the teacher provides the students with video every week, we always ready with the notes based on the video given. (W1GPR5)
A few days before the class, we have watched edpuzzle videos. The edpuzzle videos are about what we are going to learn that week. (W1GPR7)
Our group usually prepared with dictionary, notes and required materials for the group tasks. Plus, with the note given on Edpuzzle also help our group to understand more. (W2GPR5)
Each member of the group searches for information related to the selected title. Based on the argumentation essays, members of the group will refer to notes previously taught by a teacher as a reference. (W4GPR1)

Figure 6 Evidence and Explanations for the Criteria 'Preparation' taken from the Student Assessment Forms (Pair Work and Group Work)

To support the findings, data from the student assessment forms (pair work and group work) were triangulated with the lesson study logs and EdPuzzle video quizzes. Students in the experimental groups were required to write a lesson study log every week right after watching the video lecture and answering questions that follow. Students were guided with one question, which was "What are the information and knowledge

that you have gained from watching the video?" The content analysis of the lesson study logs revealed that students were well-prepared for their classes as they understood the concepts and content of what they were going to learn in the coming lessons by watching the video lectures, summarising the main points, and preparing notes for themselves prior to their classes. Besides, it was found that the students in the experimental groups wrote the lesson study logs in four (4) different forms: linear notes, summary, mind maps, and reflection. Figures 7a-d illustrate the examples of lesson study logs written by students in pairs and groups.

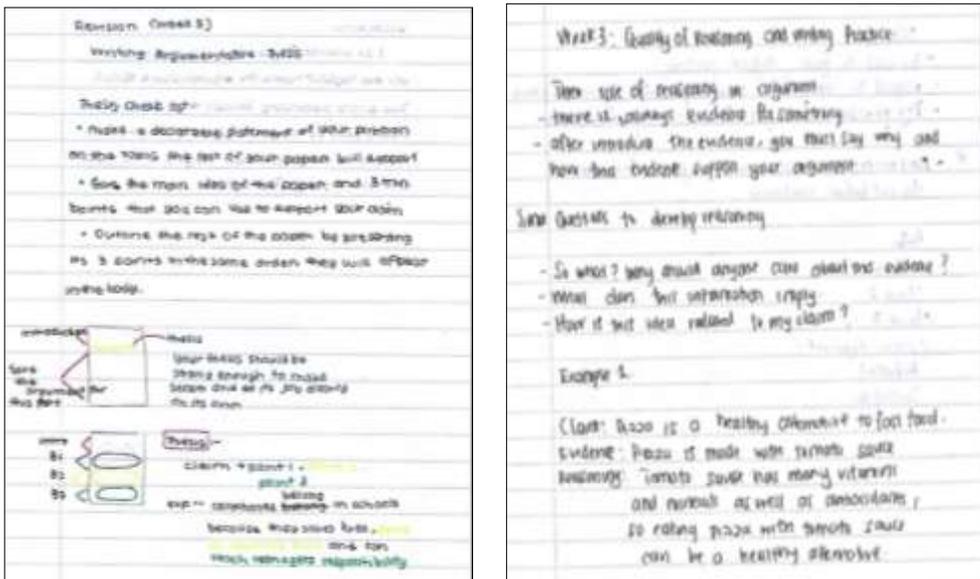


Figure 7a Linear Notes Written by Students from Pair 6 and Pair 11

Student 24 (Pair 12)

Week 3: Quality of Reasoning and Writing Practise

Based on the video, I can conclude the role of reasoning in arguments is to say why and how to support the argument. The fact is the connection it has with a larger claim or argument. Evidence for or against something and must have that link clear with reasoning.

The reason is the audience cannot read our minds. They may or may not be familiar with many of the ideas we are discussing. Also, they don't know what we are trying to do with those ideas unless we indicate it through reasoning.

As the conclusion, we know that argument must have claim, evidence and reasons.

Figure 7b A Summary Written by Student 24 from Pair 12

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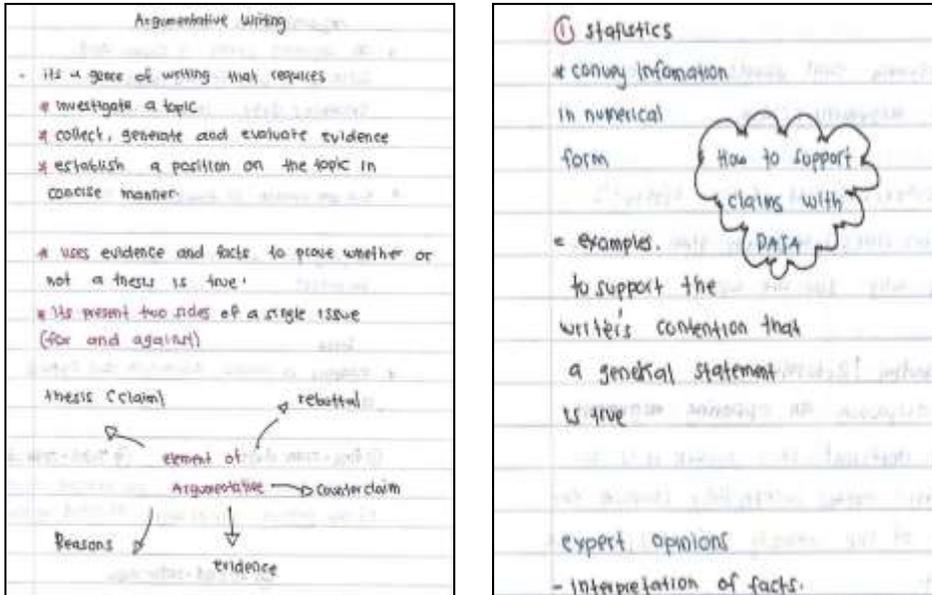


Figure 7c Mind Maps of Essential Elements of Argumentation and How to Support Claims with Data

Student 21 (Group 6)

Week 4: Reviewing an Argumentative Essay

In this video ...The information given were important. It shows the rubric of marks given on essay. This way I can plan my writing better... The rubric also gives a realise the part that needed more attention for marks. It also gives me a better view of the structure of argumentative essay...

Figure 7d A Reflection Written by Student 21 from Group 6

Apart from the lesson study logs, data from EdPuzzle.com is also equally important to support and prove that the ESL students participated during peer instruction in the flipped learning environment by getting prepared with the essential concepts and content before class. Based on the EdPuzzle video quizzes scores of the experimental groups, it can be concluded that all students attempted to watch the video lectures and answered the questions throughout the intervention period. The screenshots of the questions are shown in Figure 8.

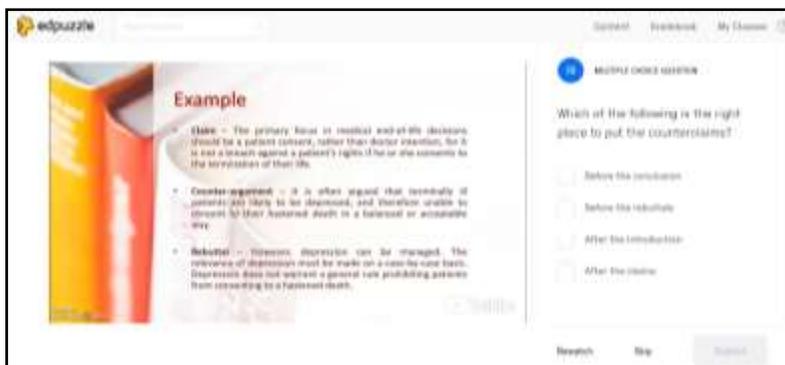


Figure 8 A Screenshot of the Third Question in the Second Video Lecture (Week 2: Counterarguments and Rebuttals)

Focusing on the task

Data from the student assessment forms (pair work and group work) (see Figure 9) and samples of student worksheets have confirmed that students in both pairs and groups focused on the tasks given during the in-class activities, especially when developing evidence and reasons for the writing prompts, searching online newspaper articles related to argumentative issues, and choosing interesting and suitable topics to write argumentative essays. Besides, the students were also self-directed and highly motivated for exchanging knowledge in completing the tasks on time. This somehow helped them to build their self-confidence in writing argumentative essays. All in all, the students knew about the benefits of completing the argumentative writing-related tasks throughout the five weeks, despite being distracted sometimes.

We focus on how to develop evidence and reasoning on the writing essay. (W2PFT6)

We focus on search online newspapers more to the argumentative issue. (W3PFT6)

We divided the parts and always discussed them together on what we get. From that, we can improve the suggestions and ideas. We only focus on one essay at a time. After done, we will proceed to other tasks. (W2GFT9)

Figure 9 Evidence and Explanations for the Criteria 'Focus on the Task' taken from the Student Assessment Forms (Pair Work and Group Work)

Assessing the quality of argumentative writing

Data from the student assessment forms (pair work and group work) (see Figure 10) confirm that students' participation in pair work and group work can be seen through three patterns of learning experiences. The first pattern of the learning experience was whereby the pairs and groups had a good command of English and faced less or no problem when checking the argumentative writing. The second pattern of learning experience involved pairs and groups that discovered a few minor errors while doing member checking, and they corrected those errors immediately to ensure meeting the quality of the argumentative writing. The third pattern of learning experience which challenged by the students in pairs and groups was that they were of average language users and they frequently had to check the argumentative writing for some grammatical errors, repeated ideas, minimal knowledge, and misspelt words. That is why peers need to take turns to check the argumentative writings properly before submitting them to the teacher. In other words, peers play a critical role in shaping the argumentative writing from the beginning of the writing task until the end of the writing process, where a complete essay is prepared as the final product.

We both have provided argumentative writing with hardly any errors that rarely need to be checked because we always ask the teacher. (W1PQE2)

There are several grammar errors in the sentence. (W2PQE13)

S21 and S22 checked whether the ideas are related to the topic. S21 and S22 also checked whether the reasons are suitable with the evidence provided. (W1GQE6)

After done with all the writing, we check the spelling error. We also make sure there are adequate points and ideas in each paragraph. (W2GQE9)

The members of another group reviewed the writing that has been written. They checked if full writing has misspellings, phrase errors or others. We also use optional in Microsoft word to check for minor errors found in the argumentative essay. Overall, we are very pleased with the cooperation given by each group member. (W4GQE5)

Figure 10 Evidence and Explanations for the Criteria 'Focus on the Task' taken from the Student Assessment Forms (Pair Work and Group Work)

DISCUSSION

First, students were found actively participating in peer-to-peer interactions and group discussions in a flipped learning environment to discuss matters and solve problems together during in-class writing activities. This finding is consistent with the results of some previous studies on peer instruction (Nami, Marandi & Sotoudehnama, 2018; Shooshtari & Mir, 2014; Sunggingwati, 2018). For instance, Sunggingwati (2018) conducted a case study to explore pre-service teachers' experiences during peer teaching in a cooperative learning style. The findings showed that peer teaching provided the students with ample opportunities to have more interactions with peers, develop confidence and learn from each other in preparing for their teaching lessons and materials. Nami, Marandi and Sotoudehnama (2018) explored the nature of EFL teachers' asynchronous exchanges in a discussion list. The findings showed that peer instruction allowed the participants to actively engage with the discussion list by giving suggestions and asking questions. Shooshtari and Mir (2014) investigated how peer scaffolding (a form of peer learning) can improve L2 learners' writing strategy application and hence their writing quality with the help of their peers and with total or random mediation from their instructors. The results of the study revealed that the participants with peers' and tutor's non-random scaffolding made remarkable progress in both writing quality and strategy application.

On the other hand, the finding also corroborates the previous relevant studies considering the effect of flipped learning on ESL/EFL students' interaction (Alsowat, 2016; Ekmekci, 2017; Sakulprasertsri, 2017; Turan & Akdag-Cimen, 2019). Alsowat (2016) stressed that the flipped classroom is not a synonym for online videos: it is the interaction and the meaningful learning activities that occur during the face-to-face time. Ekmekci (2017) explored the impact of flipped instruction on students' foreign language writing skill, which is often perceived as boring, complex and difficult by English as a Foreign Language (EFL) learners. In the study, he highlighted that the flipped learning environment transforms the classrooms into interactive and dynamic places where students are allowed to have synchronous interactions between themselves and the teacher. In another study, Sakulprasertsri (2017) also stated that the

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flipped learning approach emphasises the interaction between learners through completing tasks and projects including communicative and collaborative tasks. Turan and Akdag-Cimen (2019) confirmed that one advantage of the flipped learning environment is to enhance peer interactions. The flipped learning environment naturally allows extra time for application and interaction facilities in the classroom. The affordances of the flipped learning environment allow the active involvement of learners in the learning process. Such an environment helps to boost confidence in developing students' abilities in a course and makes them feel encouraged for further learning (Yujing, 2015). Findings from lesson study logs revealed that through interaction, students communicated and understood each other as they learned to do things together. Such participation and active learning were also seen in past studies like Hung (2015), Ekmekci (2017), Mehring and Leis (2018) and Santikarn and Wichadee (2018).

Second, data from student assessment form (pair work), student assessment form (group work), lesson study logs and samples of student worksheets revealed that the ESL students participated during peer instruction in the flipped learning environment by contributing knowledge to others. Students developed their knowledge by finding the content from various sources and using their prior knowledge and experiences during in-class writing activities. (Ahmed, 2016; Al-Hebaishi, 2017; Soltanpour & Valizadeh, 2018). Al-Hebaishi (2017) claimed that the peer instruction method produces "a supportive learning environment wherein students assist each other throughout the learning process and collaborate in order to construct knowledge and reach an understanding concerning key concepts" (p. 77). On the other hand, Ahmed (2016) and Soltanpour and Valizadeh (2018) claimed that a flipped learning environment is all about encouraging students to participate in activities that foster interaction and co-construction of knowledge. The flipped learning environment allows class time to be used for more engaging and productive activities, lets students take on more active roles as well as permits teachers to become facilitators rather than lecturers.

Third, based on the data collected from student assessment form (pair work), student assessment form (group work), lesson study logs and

EdPuzzle video quizzes, two similarities were discovered on how ESL students in both experimental groups (pair work and group work) participated themselves during peer instruction in the flipped learning environment. Students participated in this study by getting themselves prepared with the essential concepts and content before class. The first similarity was that they watched the video lectures via EdPuzzle.com and made their linear notes, summary and reflection in the lesson study logs as a preparation prior to their class. This finding is in line with previous studies conducted by Ahmed (2016), Bergmann and Sams (2012), Gasmi (2016), Egbert, Herman and Lee (2015), Hung (2015) and Soliman (2016).

Fourth, data from the student assessment form (pair work), student assessment form (group work), and samples of student worksheets have confirmed that students in pairs and groups focused on the tasks given during the in-class activities. They were also found to be self-directed and highly motivated to improve themselves in completing the given tasks. In other words, these findings are in line with the research studies that suggest that this enjoyable, conducive and productive classroom environment can help to promote great interest, motivation and autonomy among the students (Agbatogun, 2014; Gok, 2012; Knight & Brame, 2018; Makoe & McKinney, 2009; Mohamad, 2012; Nguyen, 2013; Rahmasari, 2017; Tan, 2016; Watkins & Mazur, 2010; Yang & Lin, 2015). Overall, peer instruction in a flipped learning environment encourages students to take on more active roles and to have a feeling of team spirit and dedication to doing their best in completing the argumentative writing tasks every week.

Fifth, the finding of this study has disclosed that students were not so confident in assessing the quality of the argumentative essays. Using peer instruction in a flipped learning environment was useful to exchange feedback about the argumentative essays with peers in pairs and groups and the teacher. However, what was certain was that the students made sure that every paragraph had enough points, including claims, reasons, and evidence, and every essay comprised the key elements of argumentation. Some students in pairs and groups learned to discover errors and corrected them immediately during the last two weeks of the intervention period. This was done within the process of reviewing, as

stated in Flower and Hayes' writing model (Flower & Hayes, 1981). In this process, students evaluated and revised their writing for themselves and others. In this study, it is found that peers focused on different aspects when reviewing argumentative essays written by students in pairs and groups. One thing commendable about this finding is that the critical role of peers played from the beginning of the brainstorming session until the completion of the writing process (Sakulprasertsri, 2017; Zou & Xie, 2019). Indeed, peer instruction has contributed to the students' learning process, especially in learning how to write effective argumentative essays. Together with the peer instruction, the flipped learning environment has also fostered peer and group-editing, aided noticing and enhanced ownership of the writing process.

In short, the findings of the present study offers an implication for writing instruction or writing lessons in ESL contexts. The positive effects of peer instruction in a flipped learning environment imply that it would be beneficial for students as a way to encourage them to use the L2 more frequently. English language instructors can utilise peer instruction and flipped learning in pairs or groups as an activity to not only learn the key elements of writing but also to provide them with extensive opportunity to practice their speaking and listening skills in the target language in an authentic task of brainstorming and discussing points related to argumentative topics. This is because the students viewed the instructional strategy as allowing them to improve their L2 speaking skills, although they might still switch to their L1 occasionally. Moreover, this instructional strategy should also be used more often as it promotes students learning in a comfortable and non-threatening environment as well as increases student autonomy and enjoyment of learning in the classroom. Therefore, instructors could utilise this technique as an activity that integrates the various language skills.

CONCLUSION

Based on the findings and discussion of the study, it can be concluded that having to combine peer instruction as the instructional strategy in a flipped learning environment maximised not only the learning opportunities for students in pair work and group work modes

but also enhanced deeper learning experience in writing argumentative essays. The positive outcomes of this study have proven that the use of peer instruction in a flipped learning environment enhances the ESL students' participation in writing argumentative essays. Furthermore, these positive outcomes imply that English language instructors have a potentially useful instructional strategy in guiding ESL students to improve their argumentative writing. In other words, language instructors should consider this instructional strategy as an additional option for enhancing writing instruction and also add to their repertoire of current teaching strategies that cater to argumentative writing.

With respect to future work, it is recommended to include semi-structured interview sessions at the end of the data collection period. This is because, through the interview sessions with the students, the researchers can get more details on how they participated in the study, how they felt during the intervention phase and what went right or wrong during the in-class activities. Besides that, it is recommended for the researchers to prepare several follow-up questions based on the data collected from the student assessment forms, lesson study logs and EdPuzzle video quizzes. By doing this, the findings of the research study will have rich data with evidence and explanations.

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