

## **The Effectiveness of Flipped Learning in Teaching Writing**

**Gusti Nyoman Ayu Sukerti<sup>1✉</sup>, Elina Rudiastari<sup>2</sup> and Kadek Yogi Susana<sup>3</sup>**

<sup>12</sup> Electrical Engineering, State Polytechnic of Bali

<sup>3</sup> Informatics Engineering, STMIK STIKOM Indonesia

✉Uluwatu St No.45, Jimbaran, South Kuta, Badung Regency, Bali 80361

✉ayusukerti@pnb.ac.id

---

### **Article Info**

#### *Article History*

Received:

Jan 2020

Accepted:

Feb 2020

Published:

March 2020

---

#### *Keywords:*

*Flipped Learning, Writing Competence, English for Specific Purposes*

---

---

### **ABSTRACT**

Flipped learning provides an opportunity for students to use most of the time in class to focus on the discussion process and group work so that students gain experience deep and autonomous learning. This study was conducted to determine the effectiveness and impact of implementing flipped learning on the improvement of students' writing competence. There were twenty-five fourth-semester students of higher vocational education majoring in Electrical Engineering who took part as the object of this study. This study was done within the framework of classroom action research including the phases of plan, action, observation, and reflection which was conducted in two cycles. This study adopted a three-stage model proposed by Estes et al. (2014) to flip the classroom: the pre-class, in-class and post-class stages. Quantitative data were obtained from the results of essays written by students before and after the implementation of flipped learning. The quantitative data, i.e., three sets of data including (pre-test and post-test1), (pre-test and post-test2) and (post-test1 and post-test2) were analyzed using SPSS statistic 21. The finding showed that the correlation coefficient ( $r$ ) of the first data set was 0,856, the second data set was 0,778 and the third data set was 0,889. Based on the interpretation scale of the correlation coefficient by Guilford (1965), the range of all the correlation coefficients implies that there is a strong relationship between before and after the treatment of flipped learning. Based on the result of analysis using SPSS statistics 21 with a 95% level of confidence, it was revealed that H1 was accepted and H0 was rejected meaning that there was a significant effect of flipped learning implementation in improving students' writing achievement.

## INTRODUCTION

Teaching writing in English for Specific Purposes class is of prevalent concern to students, as writing enhances not only students' language content including vocabulary and grammar through exposure to related literature but also sharpen students' analytical thinking on specific issues based on students' background of the study. Writing requires students to have a series of phases that give room for them to experience deep learning before completing the final product. However, as English is not the core course, there is a time constraint due to the limited session in every classroom meeting. This inevitable circumstance usually results in having students working at home and struggling with essays without any access to feedback from the teacher or peer review. One of the solutions to that issue, in particular, could be found in the employment of the flipping learning (hereafter abbreviated as FL). Many studies have reported statistically significant results in the application of FL compared to conventional classroom methods (Ferreri & O'Connor, 2013; McLaughlin et al., 2014; Pierce & Fox, 2012; Tune et al., 2013; Wilson, 2013).

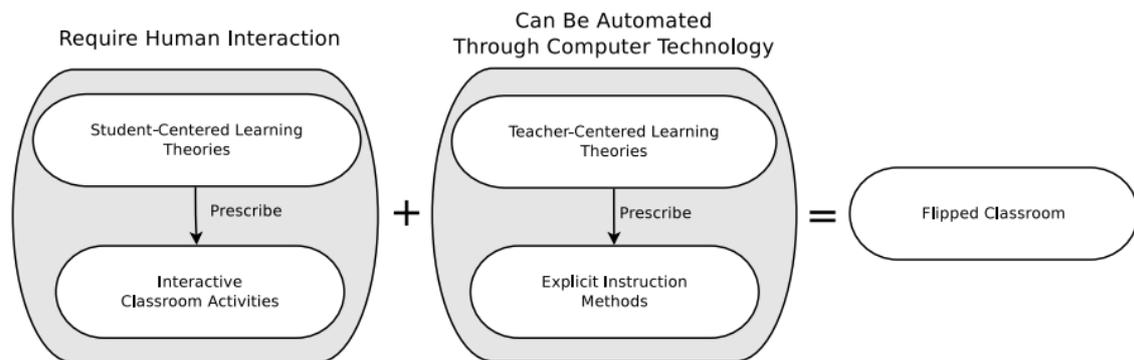
Compared to traditional teaching pedagogy, FL provides room for students to discuss learning obstacles during an online discussion and improve the engagement of those who hesitate to speak during the classroom meeting. Despite the fact that a lecture format with the traditional approach allows teachers to actively deliver material and convey information to students in a bounded period of time, the teacher-centeredness approach restricts dialogue between teachers and students. Consequently, students passively accept exposure to material based on the instruction given in class and mirror the instructor's thoughts while completing an assignment. In other words, the learning process of students cannot develop due to monotonous learning styles and the inability to practice skills that have been learned during the lecture process (Bass, 2012; Wallace, Walker, Braseby, & Sweet, 2014). On the contrary, FL provides learning opportunities for students to experience the learning process that suits their needs by reversing the strategy of delivering lecture material. Outside the classroom setting, students are occupied with lower levels of cognitive work (gaining knowledge and comprehension) and while being inside of the class, they are engaged in the phase of higher cognitive activities (application, analysis, synthesis, and/or evaluation) as they are supported by their peers and teacher.

Within the scope of teaching writing, instructors still provide assignments for students, but in the context of FL, students are required to read the material or watch videos relating to theories supporting writing competencies or watch lecture videos that have been previously recorded and posted online by teachers. Thus, limited sessions in class can be used to discuss the difficulties faced by students, to equate perceptions and to conduct activities that are centered on collaborative activities in groups. According to Sankoff (2014) traditional lectures often lead a waste of precious resources and fail to make use of instructors' experience, knowledge, and abilities by making him deliver the same information to the different groups. In such traditional environments, students often shy away from speaking up and asking for clarification while teachers are expected to fill students with knowledge (Harris et al., 2016).

In this study, Edmodo was applied to be used as the digital learning platform for students due to several considerations. First of all, it has been widely used by classes all over the world; it is free of charge and user-friendly. Secondly, many previous studies reported that students had positive

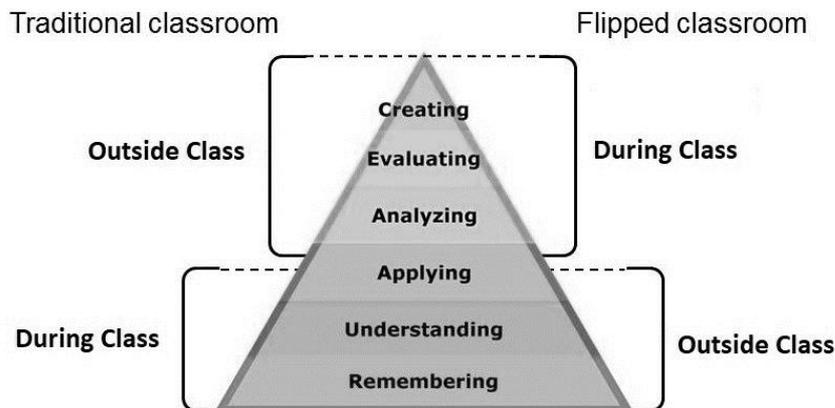
attitudes toward the use of Edmodo including research conducted by Al-Kathiri, F. (2015), Arroyo, G. (2011), and Kandappan, Jaykumar & Fukey (2014). In order to make the students understand the course objectives and get familiar with Edmodo, students had been trained before the intervention started. A virtual class can be set up for students to work together on group assignments. Apart from watching video clips or PowerPoint slides, both teachers and students can share content, discuss topics, receive their teacher feedback and have access to grades very easily. Edmodo strongly fosters innovation, creativity, active participation and collaboration Wichadee, S. (2017). Considering the fact that writing involved a series of stages that could not be covered in a formal meeting with time constraints, Edmodo was applied to provide students with extra preparation and discussion outside the classroom setting. Hence, the use of flipped learning via Edmodo in this study is hope to provide extra hours to help students learn the material more comprehensively and to focus on learning the language content which cannot be fully covered during the face to face meeting.

The comparative illustration of the traditional classroom and the FL could be presented in the following Figure 1:



Picture 1: Flipped classroom activities  
 Bishop & Verleger (2013) [source]

In flipped classrooms, the highest level (creating) is practiced following the lower levels. In implementing the flipped model, the lower forms of cognitive domains which are remembering, and understanding are presented outside the classroom through videos, readings and other materials. Thus, applying, analyzing evaluating and creating as the higher levels of cognitive work can be practiced in the classroom (Krathwohl & Anderson, 2010). Bergman (2016) stated on his blog that the flipped classroom focuses on the time spent with the guidance of the facilitator on the top layers of the triangle. The following Figure 2 demonstrates the level of students' learning in the flipped model according to Bloom's revised taxonomy.



Picture 2: Bloom's revised taxonomy in the flipped classroom  
Güvenç (2018) [source]

Many types of research have reported the relationship between the application and effectiveness of classes with the FL pedagogical approach (Szparagowski, 2014; Soliman, 2016). Research by Evseeva and Solozhenko (2015) covered the effectiveness of FL methodologies in the English teaching and learning process. As FL provides flexibility for learners to learn according to their speed of listening to the material and use time more effectively, this technology serves as an instrument to increase students' motivation and facilitate their learning autonomy. Moreover, McLaughlin et al. (2014) reported that the FL approach encompasses student-centered teaching practices so as to enable an increase in higher-order thinking skills such as analytical skills, problem-solving skills, critical thinking skills, and creative thinking. Therefore, applying the teaching method of FL in the context of English for Specific Purposes (ESP) is a response to the continuous development stage that is adapted to English learning (Emaliana, 2017). Other researchers including Sun (2016) and Güvenç (2018) also conducted a study on FL using the same methodological approach with this present study, i.e., classroom action research.

Those studies point out that FL not only helps students learn course content out of the class but also allocates class time for interactive activities, by inverting the conventional teaching model and engaging learners in hands-on practices via group work. Hence, it ensures clearing misconceptions with the teacher and classmates via in-class discussion. The concept and material that have been studied during the pre-class duration are reviewed and discussed in a deeper context. This FL method is a model for other colleagues and/or schools to expose learners to alternative teaching techniques which may help them "think outside the box". In light of all the above studies, the implementation of flipped learning using Edmodo in this present study aims to analyze the effectiveness of FL in improving students' writing competence and is also expected to give a deeper and interactive learning experience for students with limited face to face meeting.

## METHODS

### Design, Participants, and Setting

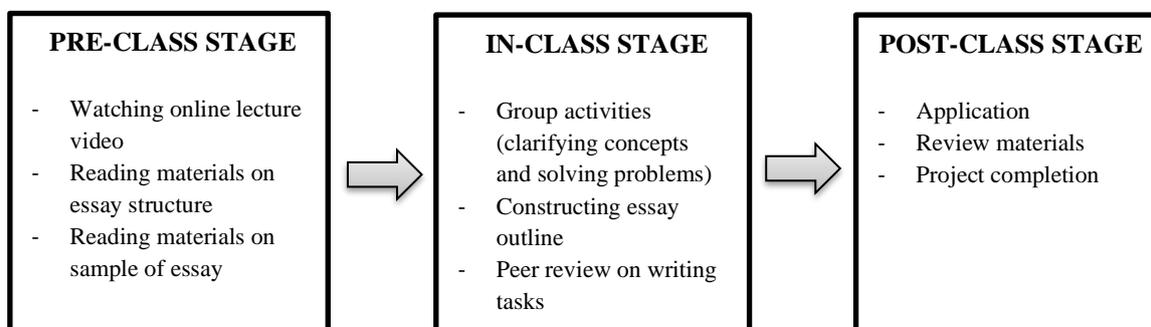
This quantitative research used the framework of classroom action research. Classroom action research is considered to be one of the activities for the professional development of teachers. Classroom action research (CAR) is a systematic inquiry with the goal of informing practice in a

particular situation (Angelo & Cross, 1993, p. 1). A project within the framework of classroom action research includes the following steps: plan (being more conscious of the existing problem and acting deliberately about the inquiry), action (systematic and rigorous efforts for the intervention of the issue), observation (collecting data comprehensively about the action), reflection (developing deeper understanding and self-consciously criticizing what exists through the awareness of the situation) (Burns, 2010; Mackay, Birello & Xerri, 2018). The last but not the least, it is of utmost importance to look back at the research after it is completed. Based on the core concept of CAR, this research follows a series of repeated steps. Finishing the first cycle, then the cycle begins once more, with the revision incorporated in a new action. This process allows teachers who wish to investigate events in their own classroom to take constructive steps toward solving the immediate problem, systematically reflecting on the outcomes. Thus, the goals of classroom action research are achieving local understanding and developing viable solutions to problems.

This project aims to evaluate students' writing achievement through FL. This research involves the delivery of material in the learning process for one semester divided into two types of instruction, namely the traditional face-to-face lecture format and two cycles of FL through classroom action research. Each of the cycles was conducted in 4 meetings. Thus, the two cycles in this study lasted for 8 weeks. Participants in this study include twenty-five fourth-semester students enrolled in a three-year undergraduate majoring in Electrical Engineering in the higher vocational institution. The study was conducted in the English III course as the last English course the students take in their study.

### Description of Stages in Flipped Classroom

The flipped classroom approach provides teaching and learning activities where students watch a video lesson and read materials outside the class through distance learning and have hands-on activities in the class during the formal meeting. Online lessons allow teachers and students to work together during valuable class time that would otherwise be spent on lectures. Therefore, the creation of a learning model in the flipped classroom is meaningful since it has a lot to do with learner's learning environment (Mehring, 2016). This study adopted a three-stage model proposed by Estes et al. (2014) to flip the classroom: the pre-class (modeling, pre-assessment), in-class (clarifying concepts, solving problems) and post-class (assessment, application, transfer) stages. In this particular study, some adjustments were done to suit the objective and classroom situation as shown in Figure 3.



Picture 3: Course Design of Flipping a Class  
Estes et al. (2014) [source]

There were 16 meetings in the course. Students and the teacher met in a classroom once a week for two learning sessions that last for 100 minutes. Thus, students got advantages from the extra hours during the pre-class and post-class stages in which the online forum was open for discussion for a whole week. The descriptions of each stage in FL used in this study are as follows.

***Pre-class Stage: a self-study on Edmodo***

Pre-class sessions aim to help students explore knowledge through educational technology. Constructing knowledge or learning the new content was done at home before the in-class session. Students were required to watch an instructional video on writing essays and answer questions or discussing the task of analyzing sample essays based on the content on Edmodo which was employed as an online platform for learning. In this course, students learned how to compose opinion and argumentative essays on Green Energy.

***In-class stage: group activities and peer-review***

Class time was spent more on activities. Group activities increased peer interaction, focusing more intensely on higher cognitive and group-based learning including small group discussion, problem-solving (worksheet on analyzing essay structure) and peer review on writing tasks. In the second cycle, students worked in groups to develop an essay outline and posted them on Edmodo in order to get feedback from the lecturer and other friends. Once the outline has been reviewed, each student developed the outline into individual essays. Thus, an active learning experience would occur in the classroom. The advantages of this stage are to promote the development of critical thinking and problem-solving skills, as well as to improve interpersonal skills.

***Post-class stage: application, review and project completion***

The post-class stage aimed to provide students with opportunities to apply what they had learned including completing exercises and writing tasks. An essay that students finished on the second cycle was taken as students' final project. Additionally, they were required to evaluate their learning performance on tasks, assignments, and activities.

**Data Collection and Analysis**

The data in this study consisted of quantitative data obtained from the results of pre-test and post-test essays written by students before and after the implementation of the action in the form of applying the teaching method of FL. Pre-test scores were taken from the writing that students submitted when being taught using the traditional approach. Meanwhile, the post-test scores were taken from the two essays that students completed on the first and second cycles of the FL process respectively. Thus, the quantitative data consist of three sets of data including (pre-test and post-test1), (pre-test and post-test2) and (post-test1 and post-test2). Both cycles were done through the framework as described in figure 1 with the emphasis on a new action in a form of collaborative work in building an essay outline on the second cycle. This action was implemented based on the reflection once the first cycle was completed. Based on the reflection, students faced a challenge in constructing an outline with good structure. Thus, it interfered with the process of developing ideas into a complete essay as they found it hard to provide supporting details with a good flow of ideas. On the second cycle, students worked together to build an outline, have the outline reviewed and were encouraged to work on the research process collaboratively. The results of the pre-test and post-test assessments were analyzed using the SPSS statistical program 21 to analyze

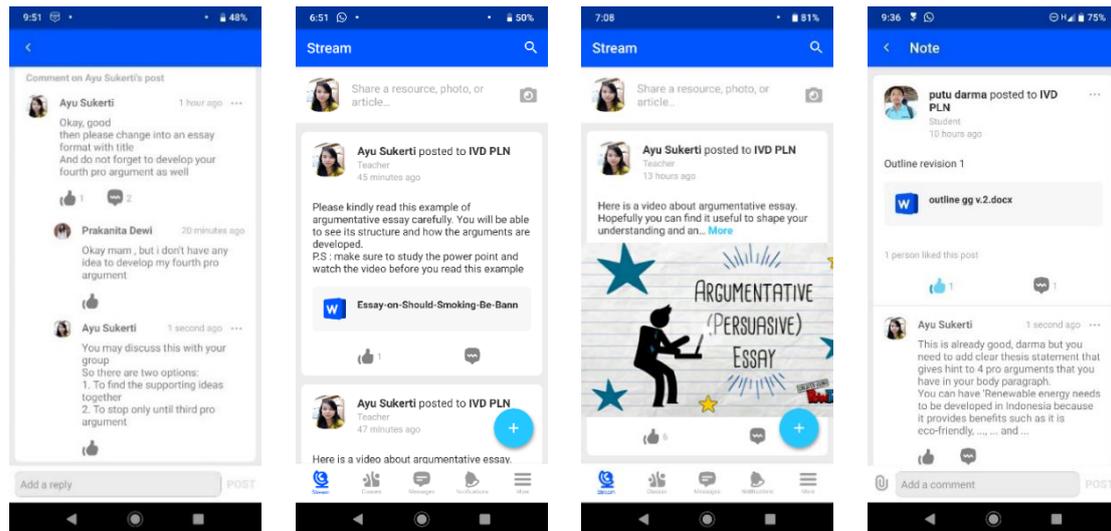
the effect of FL on improving students' learning achievement. Paired samples statistics were used to find out the mean scores in the pre-test and post-tests to see the difference. Meanwhile, paired-samples correlations were used to obtain the correlation coefficient (R). This analysis was used to determine the strength of the relationship between before and after FL was implemented in the learning process. Next, a Paired-sample t-test was used to analyze whether there were significant differences in students' English writing achievement before and after students were taught using FL through two cycles covering 8 meetings.

## **RESULTS AND DISCUSSION**

FL teaching methods involve innovative processes in the delivery of learning materials, the teaching process involves the process of transferring the material that is usually delivered in the classroom through traditional lecture methods to outside the classroom through material that can be accessed online. FL also involves the process of reversing the context of place, time and manner of delivery of material. Therefore, assignments that are usually given to students to be completed outside the classroom are done in the classroom. Instructional material from the writing competence taught has been given outside the classroom. This is different from the traditional model which depends on lecturing in class as the main form of teaching. Pre-class activities, in addition to assigning tasks in class, help teachers to give more time in the process of interaction individually with students so that students can be actively involved (Roehl et al., 2013; White et al., 2017), and especially, the learning process of FL consolidates student autonomy.

FL in this study was carried out after students experienced the learning process with a conventional type approach. Pre-tests and post-tests were conducted to analyze the effect of FL on students' writing competence. This test was in the form of instructions where students were asked to develop an opinion type essay based on a given topic. Pre-tests were given to obtain student grade data before intervention in the form of FL implementation was carried out in the learning process. Then, post-tests were given to investigate the effect of FL on students' writing competencies in the form of grades that were analyzed quantitatively. Prior to FL implementation, students got exposure to material on opinion essays then students were asked to complete writing assignments and produced individual essays with the topic 'The Best Green Energy'. After they completed and collected the pre-test essay, the FL cycle began to be implemented through a learning management system, Edmodo. Students were divided into groups of five so they could work collaboratively. Students worked together as a team especially in the stages of compiling outlines and peer-review processes then transferring their roles to be responsible for the process of working on individual essay projects with the topic 'The Green Energy Policy'. This method is similar to Han (2015) who reversed the learning process of intensive ESL courses by applying a digital platform for input that focused on meaning and language and providing cooperative activities for meeting sessions in the classroom. The findings in his study revealed a significant development of student autonomy or independence.

Before going further to the elaboration of the finding in this present study, some screenshots of interactive learning activities in Edmodo using a mobile device are displayed in Figure 4 below.



Picture 4: Screenshots of Edmodo on Mobile Device

The first and the second images show the online material posted to Edmodo for students to study during the pre-class activity. The material included a video on how to write an argumentative or persuasive essay. This is the example of an interface of Edmodo showing materials from Youtube. The other type of material was a sample of an essay that should be read at home to be further analyzed during the in-class activity. Meanwhile, the third and fourth images displayed the online interaction in a post-class activity where students and the lecturer discussed the review or feedback on students' outlines.

	Pre-test	Post-test I (first cycle)	Post-test II (second cycle)
The Highest Score	86	88	90
The Lowest Score	70	75	77
Minimum Mastery Criteria (MMC)	80	80	80
Learning Mastery Standard	56%	76%	88%
Number of students with score below MMC	11	6	3

Table 1: The Description of Students' Scores Data Analysis [source]

The above table describes that during the pre-test with the traditional teaching approach or before the implementation of FL, the percentage of learning mastery standard was only 56% while the minimum standard aimed to be achieved was  $\geq 80$  and the passing grade or minimum mastery criteria was 80. The highest score was 86 and the lowest score was 70. Of all 25 students, there were 11 students who did not succeed to achieve the required passing grade. Based on this situation, the first cycle of CAR was conducted with a series of phases and framework as mentioned in the previous section. Compared to the pre-test, the post-test result showed an improvement as students were exposed to pre-class activities including reading and watching the online material (as shown in Figure 4). In addition, students had a peer-review process after completing their draft during the classroom meeting and extra hours in the post-class stage to participate in an online discussion when they faced problems with their writing tasks (as shown in Figure 4). Post-test I highlighted that students performed better with the highest score was 88 and

the lowest score was 75. The percentage of learning mastery standard was improved into 76% with 6 students having scores below the passing grade.

Based on the reflection of processes conducted in the first cycle and the percentage of learning mastery standard that was still below 80%, another action was planned to be applied in the second cycle. The action was to have students work collaboratively on the process of building an essay outline in order to help students developing essays with better structure and flow of ideas. This collaborative work enabled students to have supervision from the earliest stage of their writing process either from their teammates and the lecturer. Students arranged a single outline in one group to be developed into an individual essay. The outline was uploaded to Edmodo so that other groups and the lecturer could give feedback (as shown in Figure 4). Once the outline had been approved by the lecturer, they continued the process of gathering data to support their arguments. Students were also encouraged to have a discussion during the development of the outline into the draft, proceeded with peer review until they finally submitted the final essay. This collaborative action proved to contribute to the improvement of students' scores in the second cycle. The importance of feedback during post-class activity is consolidated through the study conducted by Bouchefra (2017). Bouchefra reported that the extra time devoted to feedback provision and in-class revision affected other aspects positively, especially the quality of ideas, adequacy of the language, and mechanics (grammar, spelling, punctuation). In the second cycle, there were only 3 students who had scores below the passing grade with 88% of learning mastery standards being achieved. The highest score was 90 and the lowest score was 77. The percentage of learning mastery standards was improved until it reached 88% with only 3 students having scores below the passing grade. Due to the fact that the percentage had exceeded the  $\geq 80\%$  requirement, then the implementation of the cycle was stopped up to this point.

The following table 2 shows the results of the analysis of the pre-test scores with the post-tests in the first cycle, the pre-test scores with the second cycle post-tests, as well as the comparison between the results of the first cycle post-tests with the second cycle. The output of data processing using paired samples statistics shows that the average score of pre-test students was 78.68 while the average value of student writing after FL in the first cycle was 82.20. Meanwhile, the comparison of the average scores of pre-test students is 78.68 while the average value of student writing after the implementation of FL in the second cycle was 85.40. The comparison between the average post-test scores in the first and second cycles also shows an increase, from 82.20 to 85.40.

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_Test	78.68	25	3.682	.736
	Post_Test I	82.20	25	3.512	.702
Pair 2	Pre_Test	78.68	25	3.682	.736
	Post_Test II	85.40	25	3.391	.678
Pair 3	Post_Test I	82.20	25	3.512	.702
	Post_Test II	85.40	25	3.391	.678

Table 2: Paired Samples Statistics  
 Data Analysis [source]

Standard Deviation / Standard Deviation is a measure of spread that shows the standard deviation of the data against its average value. If the standard deviation is small, then this shows the sample value of the population gathered or clustered around the average value. Because the value is almost the same as the average, it can be concluded that each sample member or population has similarities. Large standard deviations indicate a wide difference between members of the population; therefore a high standard deviation is considered unfavorable.

Comparison 1 (pre-test and post-test first cycle):

In this case, the standard deviation value in post-test I (3,512) was smaller than the pre-test (3,682), which shows the post-test I data was better than the pre-test.

Comparison 2 (pre-test and post-test second cycle):

In this case, the standard deviation in post-test II (3,391) was smaller than the pre-test (3,682), which shows the post-test II data is better than the pre-test data.

Comparison 3 (first cycle post-test and second cycle post-test):

In this case, the standard deviation value in post-test II data (3,391) was smaller than the post-test I (3,512), which shows that the second cycle post-test data was better than the first post-test cycle.

	N	Correlation	Sig.
Pair 1 Pre_Test & Post_Test_I	25	.856	.000
Pair 2 Pre_Test & Post_Test_II	25	.778	.000
Pair 3 Post_Test_I & Post_Test_II	25	.889	.000

Table 3: Paired Samples Correlations  
 Data Analysis [source]

This analysis was used to determine the strength of the weak relationship between before and after the FL method was applied. Based on the analysis, the correlation coefficient (R) of the first data set (pre-test and post-test I) was 0.856, the second data set (pre-test and post-test II) shows the result of 0.778 while the last data set (post-test I and post-test II) was 0.889. All results are between the range of 0.701-0.900 meaning that the correlation is strong. The probability value also shows that it is still below 0.05 (Data shows the significance value of the output is 0.00). This means that there was a strong or positive relationship between before and after students were participating in FL.

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Pre_Test - Post_Test_I	-3.520	1.939	.388	-4.320	-2.720	-9.077	24	.000
Pair 2	Pre_Test - Post_Test_II	-6.720	2.372	.474	-7.699	-5.741	-14.165	24	.000
Pair 3	Post_Test_I - Post_Test_II	-3.200	1.633	.327	-3.874	-2.526	-9.798	24	.000

Table 4: Paired Samples Test  
 Data Analysis [source]

This test was used to determine the presence or absence of an average difference. This test was used to determine the presence or absence of an average difference between two groups of samples that are paired (related). The hypothesis formulated in this statistical test is  $H_0$  which means there is no significant effect between before participating in FL and after participating in FL and  $H_1$ , which means there is a significant influence between before and after experienced having taught with FL. Based on the comparison of  $t_{count}$  and  $t_{table}$ , if  $t_{count} < t_{table}$  or  $-t_{count} > -t_{table}$  then  $H_0$  is accepted, whereas if  $t_{count} > t_{table}$  or  $-t_{count} < -t_{table}$  then  $H_0$  is rejected. Level of Significance is determined using a degree of confidence of 95% or an error rate by 5% ( $\alpha = 0.05$ ). Where the 95% confidence level and sig. ( $\alpha$ ) = 0.05, then the value of  $df$  (degree of freedom) or degree of freedom =  $(nk) = 25 - 1 = 24$  is obtained. With a two-tailed test, each side is of  $\alpha / 2 = 0.05 / 2 = 0.025$  to determine the value of  $t_{table}$ . The value of  $t_{table}$  (0.025.24) is  $\pm 2.06390$ .

Based on the analysis using the SPSS 21 statistical program at a 95% confidence level, the three data set shows that  $-t_{count} < -t_{table}$ . The result of the first data set was  $-9.007 < -2.06390$ , the second data set was  $-14,105 < -2,06390$  and the third data set was  $-9.789 < -2.06390$ . This comparison signifies that  $H_0$  was rejected, meaning there was a significant influence between before participating and after participating in FL. Based on the above analysis, it can be concluded that FL is an effective pedagogical approach to improve students' writing skills. Students showed better performance after being taught with FL via Edmodo. This result coincides with the results of studies conducted by (Salem, 2018; Lou and Li, 2018; Yang, Yin & Wang, 2018; Vitanofa and Anwar, 2017; Bouchefra, 2017; Hung, 2015; Baranovic, 2013; Stone, 2012). O'Flaherty and Philips (2015) also reported that the FL approach improves the academic performance of students, increases teacher's satisfaction, contributes to the development of independent learning or autonomous learning and 21st-century skills. Moreover, Li (2013) recommends the flipped classroom as a practical teaching approach after she observed that it helped individualize instruction, reduce note-taking and lecturing time, and promote engagement, creativity, and an active learning environment.

In addition, this study shows that FL gives students more time to do one-on-one interactions with teachers during working on assignments both in class and outside the class during the online discussion. This is due to the fact that the pre-class and post-class activities have assisted students to have better preparation. Hence, they have mastered the background knowledge and could identify the gap between the knowledge they had with the obstacle they faced while completing the writing task. It results in increasing interest and a positive perspective towards the process of teacher-student interaction. This is in line with the study conducted by Stone (2012) who stated the importance of giving free time in class through the opportunity to watch recorded material at home because the process helps explain difficult concepts and make connections between the material being studied with everyday life situations. Senske (2017) also suggested that intensive interactions provide opportunities for teachers to pay attention to students' attitudes and interests, ultimately, to help generate positive attitudes. Bergmann, Overmeyer, & Willie (2011) further underlined that several other advantages of FL methods including the development of lifelong learners increased involvement in the material being taught, and increased interaction between students and instructors. Other researchers also support this claim by declaring that FL teaching methods are centered on learners because they play a very active role especially in-class activities (Baepeler, Walker, & Driessen, 2014; Basal, 2015; Bishop & Verleger, 2013; Davies, Dean, & Ball,

2013; O'Flaherty & Phillips, 2015), while the role of the teacher changes the role of being a guide, facilitator, and organizer (Basal, 2015; Bishop & Verleger, 2013).

Findings of the present study are not an exception of the general trend as previously revealed by Herreid and Schiller (2013) and Couch (2014) mentioning that FL provides more flexibility for students' learning, improves students' academic achievement and allows creative and innovative teaching. The implementation of FL through three stages shows that FL impacted students' writing competence in a positive way as students composed better essays that conformed to the instructions given by the lecturer. The extra time devoted to feedback provision in and outside the classroom via Edmodo also contributed benefits to students as its positive effect was clear on their final grades in the second cycle. With this, Edmodo is not merely an additional digital resource on their mobile devices but is rather a more private and safer place to learn and practice foreign language at their own pace, counting on their teacher's online support and feedback. As a result, because it is a more inclusive environment, students may feel more motivated to learn the target language and more comfortable to reach out to the teacher when they need. McKim (2016) mentioned that the flipping and expansion of the foreign language classroom with Edmodo "can not only keep students engaged outside of class, but it can also be used as a bridge and preparation for in-class discussions and debates to follow the online postings so that the in-class time may be devoted to real-world discussions and communicative tasks. Another affordance of the flipping and expansion of foreign language classroom with Edmodo is that students who are busy, struggling, or have special needs can "move through the material at their own pace" (Bergmann & Sams, 2012, p. 33) and work either one-on-one with the teacher or in small groups in the brick-and-mortar classroom (Bergmann & Sams, 2012).

Furthermore, having the lesson delivered in the form of a video format enabled the students to grasp the content with better comprehension as they could replay and the lesson as many times as they needed to. FL practices assist learners to self-regulate their own learning as it enriches students' in-class performance due to the sufficient preparation prior to in-class tasks. Students barely play such roles in the classroom in traditional teaching pedagogy due to the dominant role of teachers who act not only as of the lesson planners but also as classroom managers and the main resource of knowledge. Nevertheless, it is worth noting that traditional teaching is not an inadequate teaching approach, rather it is a less effective teaching approach compared with the one incorporated with technology.

## **CONCLUSION**

The findings of this study emphasize the positive impact of FL teaching methods on students' writing achievement based on the two cycles of FL implementation. The results of quantitative analysis using SPSS 21 statistics reveal significant differences in student writing achievement. Thus, it can be concluded that FL has a positive influence compared to conventional methods and FL is recommended as an alternative strategy for teaching English in higher vocational institutions especially in the context of teaching productive skills. The effectiveness of the flipped learning approach plays an important role in enhancing self-regulated learning in the ESP classroom with limited meeting sessions. Three successive stages including pre-class, in-class and post-class stages constituting the flipped learning session help learners to succeed in planning and goal setting and activation of knowledge of the task. The in-class activity is teacher monitored and it

enhances the deeper learning on the concept as well as problem-solving. Self-study and elaboration during pre-class and post-class stages are closely related to the effort to control and regulate aspects of autonomous learning. Hence, it helps to provide students with unlimited space and time to deepen their knowledge on the subject. Initially, the process of applying this method was challenging because students faced the process of adapting to new methods that required them to understand content outside the classroom in depth. Thus, they can prepare themselves to complete assignments in class. This causes the FL method to require clear, concise and well-structured instructions. With access to clear guidelines and stages, an intact correlation can be established between activities inside and outside the classroom. In order to achieve a more elaborated insight into FL implementation in ESP, further research needs to be carried out by involving a larger number of population and more complex variables. In addition, other aspects of investigating the potential outcome of utilizing an updated variation of online formative assessment tools on students' learning process is also a promising area to study.

### ACKNOWLEDGEMENTS

The authors would like to thank the Centre for Research and Community Services of Bali State Polytechnic for their support through the research grant.

### REFERENCES

- Al-Kathiri, F. (2015). Beyond the Classroom Walls: Edmodo in Saudi Secondary School EFL Instruction, Attitudes and Challenges. *English Language Teaching*, 8(1), 189-204.
- Angelo, T.A., & Cross, K.P. (1993). Classroom assessment techniques: A handbook for college teachers. San Francisco: Jossey-Bass.
- Arroyo, G. (2011). *On-Line Social Networks: Innovative Ways towards the Boost of Collaborative Language Learning*. ICT for Language Learning (4th ed.). Accessed from <http://conference.pixelonline.net/>
- Baepler, P., Walker, J. D., & Driessen, M. (2014). It's Not About Seat Time: Blending, Flipping, and Efficiency in Active Learning Classrooms. *Computers & Education*, 78, 227-236. <https://doi.org/10.1016/j.compedu.2014.06.006>
- Baranovic, K. (2013). *Flipping the First-year Composition Classroom: Slouching Toward the Pedagogically Hip*. [Master: Southeast Missouri State University, Missouri].
- Basal, A. (2015). The Implementation of a Flipped Classroom in Foreign Language Teaching. *Turkish Online Journal of Distance Education*, 16(4), 28-37. <https://doi.org/10.17718/tojde.72185>
- Bass, R. (2012). Disrupting Ourselves: The Problem of Learning in Approach: Evidence from Australia. *Business Education & Accreditation*, 6(1), 33-43. <https://er.educause.edu/-/media/files/article-downloads/erm1221.pdf>
- Bergmann, J., & Sams, A. (2012). *Flip Your Classroom: Reach Every Student in Every Class Every Day*. Washington, DC: International Society for Technology in Education
- Bergman, J. (2016). *Reframing the Flipped Learning Discussion*. Retrieved from <http://www.jonbergmann.com/reframing-the-flipped-learning-discussion/>
- Bishop, J.L., & Verleger, M. A. (2013). The Flipped Classroom: A Survey of the Research. *American Society for Engineering Association, 120th ASEE Annual Conference & Exposition*. Accessed from <https://www.asee.org/public/conferences/20/papers/6219/view>
- Bouchefra, M. (2017). *The Use of the Flipped Classroom in EFL Writing Classroom*. INTERNATIONAL SYMPOSIUM Languages, Employability and Higher Education Context (s) Benchmarking and Professional Practices.
- Burns, A. (2010). *Doing Action Research in English Language Teaching: A Guide for Practitioners*. New York: Routledge.
- Couch, A. C. (2014). *Comparison of Teaching Approaches and Strategies: How Do the Use of Traditional Teaching and Flipped Classroom Teaching Techniques Affect the Attitudes and Attainment of Science Students in an International School in Hong Kong?*. [Master, University of Hong Kong]. Retrieved from [http://dx.doi.org/10.5353/th\\_b5396412](http://dx.doi.org/10.5353/th_b5396412).

- Davies, R. S., Dean, D. L., & Ball, N. (2013). Flipping the Classroom and Instructional Technology Integration in a College-Level Information Systems Spreadsheet Course. *Education Tech Research Dev*, 61(4), 563-580.
- Emaliana, I. (2017). Teacher-centered or Student-centered Learning Approach to Promote Learning? *Journal Social Humanities*, 10(2), 59-70. <https://doi.org/10.12962/j24433527.v10i2.2161>.
- Estes, M. D., Ingram, R., Liu, J. C. (2014). A Review of Flipped Classroom Research, Practice, and Technologies. *International HETL Review*, 49(7), Accessed from <https://www.hetl.org/feature-articles/a-review-of-flipped-classroomresearch-practice-and-technologies>.
- Ferreri, S., & O'Connor (2013). Instructional Design and Assessment. Redesign of A Large Lecture Course into A Small-Group Learning Course. *American Journal of Pharmaceutical Education*, 77(1), 1–9. DOI: 77. 13. 10.5688/ajpe77113.
- Guilford, J. P. (1965). *Fundamental Statistics in Psychology and Education*. New-York: McGraw-Hill.
- Güvenç, G. (2018). The Flipped Classroom Approach in Teaching Writing: An Action Research. *International Journal of Social Sciences and Education Research*, 4(3), 421-432. 10.24289/ijsser.434493.
- Harris, B., Harris, J., Reed, L., & Zelihic, M. (2016). Flipped Classroom: Another Tool for Your Pedagogy Toolbox. *Developments in Business Simulation and Experiential Learning*, 1(43), 325-333.
- Han, Y. J. (2015). Successfully Flipping the ESL Classroom for Learner Autonomy. *NYS TESOL JOURNAL*, 2(1), 98–109. [http://journal.nystesol.org/jan2015/Han\\_98-109\\_NYSTJ\\_Vol2Iss1\\_Jan2015.pdf](http://journal.nystesol.org/jan2015/Han_98-109_NYSTJ_Vol2Iss1_Jan2015.pdf)
- Hung, H. T. (2015). Flipping the Classroom for English Language Learners to Foster Active Learning. *Computer Assisted Language Learning*, 25(1), 81–96. DOI: 10.1080/09588221.2014.967701.
- Herreid, C., & Schiller, N. (2013). Case Studies and the Flipped Classroom. *Journal of College Science Teaching*, 42(5), 62-66.
- Kandappan, B., Jaykumar V., & Fukey, L. (2014). A Study on Student Preference towards the Use of Edmodo as a Learning Platform to Create Responsible Learning Environment. *Procedia-Social and Behavioral Sciences*, 144, 416-422. <https://doi.org/10.1016/j.sbspro.2014.07.311>
- Mackay, J., Birello, M., & Xerri, D. (2018). *ELT Research in Action: Bridging the Gap between Research and Classroom Practice*. IATEFL: United Kingdom.
- McLaughlin, J. E., Roth, M. T., Glatt, D. M., Gharkholonarehe, N., Davidson, C. A., Griffin, L. M., & Mumper, R. J. (2014). The Flipped Classroom: A Course Redesign to Foster Learning and Engagement in a Health Professions School. *Academic Medicine*, 89(2), 236-243. <https://doi.org/10.1097/ACM.0000000000000086>
- McKim, K. (2016). Edmodo and the Flipped Language Class: Bridging the Gap in Language Learning. *Proceeding of ICT for language learning*. 122.
- Mehring, J. (2016) Present Research on the Flipped Classroom and Potential Tools for the EFL Classroom. *Computers in the Schools*, 33(1), 1-10, DOI: 10.1080/07380569.2016.1139912
- Pierce, R., & Fox, J. (2012). Vodcasts and Active-Learning Exercises in a “Flipped Classroom” Model of a Renal Pharmacotherapy Module. *American Journal of Pharmaceutical Education*, 76(10), 196. DOI: 10.5688/ajpe7610196
- Roehl, A., Reddy, S. L., & Shannon, G. J. (2013). The Flipped Classroom: An Opportunity to Engage Millennial Students Through Active Learning Strategies. *Journal of Family and Consumer Sciences*, 105, 44-49. <https://doi.org/10.14307/JFCS105.2.12>
- Sankoff, P. (2014). Taking the Instructions of Law Outside of the Lecture Hall: How the Flipped Classroom Can Make Learning More Productive and Enjoyable (for Professors and Students). *Alberta Law Review*, 51(4), 891-906.
- Senske, Nick, "Five Years of Flipped Classrooms: lessons learned" (2017). *Architecture Conference Proceedings and Presentations*.109. Accessed from [https://lib.dr.iastate.edu/arch\\_conf/109](https://lib.dr.iastate.edu/arch_conf/109)
- Soliman, N. A. (2016). Teaching English for Academic Purposes via the Flipped Learning Approach. *Procedia- Social and Behavioral Sciences*, 232, 122–129. DOI: 10.1016/j.sbspro.2016.10.036.
- Szparagowski, R. (2014). The Effectiveness of the Flipped Classroom. *Honors Projects*. 127. Accessed from <https://scholarworks.bgsu.edu/honorsprojects/127>.
- Stone, B. B. (2012). Flip Your Classroom to Increase Active Learning and Student Engagement. In *Proceedings from 28th Annual Conference on Distance Teaching & Learning*, Madison.
- Sun, J. C. Y., & Wu, Y. T. (2016). Analysis of Learning Achievement and Teacher-Student Interactions in Flipped and Conventional Classrooms. *The International Review of Research in Open and Distributed Learning*, 17(1), 79–99. DOI: 10.19173/irrodl.v17i1.2116

- Tune, J.D., Sturek, M., & Basile, D.P. (2013). Flipped Classroom Model Improves Graduate Student Performance in Cardiovascular, Respiratory, And Renal Physiology. *Advances in Physiology Education*, 37, 316-20. DOI: 10.1152/advan.00091.2013.
- Vitanofa, A., & Anwar, K. (2017). The Effect of Flipped Learning through Graphic Organizers toward Writing Skill at SMAN 2 Gresik. *Journal of English Teaching, Literature, and Applied Linguistics*, 1(2), 37-49.
- Wallace, M. L., Walker, J. D., Braseby, A. M., & Sweet, M. S. (2014). "Now, What Happens during Class?" Using Team-based Learning to Optimize the Role of Expertise within the Flipped Classroom. *Journal on Excellence in College Teaching*, 25(3), 253-273.
- White, P. J., Naidu, S., Elizabeth, Y., Short, J. L., McLaughlin, J. E., & Larson, I. C. (2017). Student Engagement with a Flipped Classroom Teaching Design Affects Pharmacology Examination Performance in a Manner Dependent on Question Type. *American Journal of Pharmaceutical Education*, 81(9), 10-23. <https://doi.org/10.5688/ajpe5931>
- Wichadee, S. (2017). A Development of The Blended Learning Model Using Edmodo for Maximizing Students' Oral Proficiency and Motivation. *International Journal of Emerging Technologies in Learning*, 12(2), 137-154. <https://doi.org/10.3991/ijet.v12i02.6324>
- Wilson, H.B. (2013). The use of flipped learning in an engineering technician management course. In C. Lemckert, G. Jenkins and S. Lang-Lemckert (Eds.), *Proceedings of the 2013 AAEE Conference, Gold Coast, Queensland, Australia*, (Ed.). Accessed from <https://www.engineersaustralia.org.au/australasian-association-engineering-education/2013-conference>
- Yang, J., Yin, C. X., & Wang, W. (2018). Flipping the Classroom in Teaching Chinese as a Foreign Language. *Language Learning & Technology*, 22(1), 16–26. Accessed from <http://www.lltjournal.org/item/3027>.