

EFFECT OF FLIPPED CLASSROOM MODEL ON INDONESIAN EFL STUDENTS' WRITING ABILITY ACROSS AND INDIVIDUAL DIFFERENCES IN LEARNING

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ABSTRACT: *There have been a lot of problems in EFL writing classes. The problems include limited teaching time, absence of assistance for students' learning at home, and individual differences in learning. To cope with these problems, the present study investigates the effect in the use of flipped classroom model on the writing ability of EFL students across their individual differences in learning. It involved 62 students at an Indonesian secondary school level who were distributed into two intact groups: experimental and control. Pre-test and posttest were administered to collect quantitative data, and the students' writing was observed to verify the results of the quantitative data. The results showed that there is a significant difference on the students' post-test score ($t\text{-count} = 10.893$, $p\text{-value} = 0.000$) between the experimental and control groups. The flipped classroom method also appeared to result in significantly different among the interaction groups on the students' post-test score.*

KEYWORDS: Flipped Classroom Model, Writing Ability, Individual Difference in Learning

INTRODUCTION

This article focuses on the writing ability due to some problems commonly raised in EFL writing classes. The problems are not only faced by beginning students but also by more advanced students. The beginning students mostly find difficulties in finding the words to develop their ideas and in remembering grammatical conventions. The advanced students commonly find problems in the writing process, especially dealing with linguistic factors such as word choice or vocabulary, articles/determiners, use of the plural/singular forms of nouns, spelling, prepositions, punctuation marks, agreement between the subject and the verb, and verb tense. In addition, difficulties to link their ideas coherently and to produce appropriate target language discourse are faced by more advanced students (Afrilyasanti, 2015).

Besides, as teachers have to use most of the class time to explain the material before coming to the writing task, there is limited time for the writing practice itself. Therefore, the students have to finish their writing task at home. While at home, they do not have any assistance to deal with the problems that may raise during the writing process. In the attempt to solve the problems, teachers have tried to vary the activities based on the students' interest and ability; however, they still find difficulties meeting their individual way of learning (Muldrow, 2013).

Dealing with problems faced in EFL writing classes as well as individual differences in learning, this article explores the effectiveness of flipped classroom model in EFL writing class as compared with the traditional teaching model. There have been actually a number of studies about flipped classroom; however, research regarding the implementation of flipped classroom in an English as a Foreign Language (EFL) context is only beginning to be published (e.g., Sung, 2015; Webb, Doman & Pusey, 2014; Yujing, 2015). Additionally, those previous studies are only filled with reports of the testaments of students' and teachers' satisfaction with the

flipped model. They have not presented the students' result of their learning using flipped model. Therefore, there is still a room to examine more about the effectiveness of flipped classroom model in EFL classes, more particularly involving Indonesian EFL students from secondary school level.

LITERATURE REVIEW

Most EFL students are least proficient in writing compared to other language skills due to their identification of writing as a skill which is more difficult than listening and reading (Berman & Cheng, 2010; Nesamalar, Saratha & Teh, 2001). This identification somehow is accurate as in writing thought and knowledge are incorporated to create a unique meaning (Jones, Retzel, & Fargo, 2010). Hence, it is not surprising to know that beginning and more advanced students face difficulties in finishing their writing tasks.

A study conducted by Burns and Joyce (1999) reveal three factors affecting EFL students' unwillingness to practice their English. Those factors are cultural, linguistic, and social factors. Typically, students tend to keep their learning problems and confusion instead of asking for the teacher's assistance and more explanation. In turn, both students and teachers are commonly frustrated over the number of errors and the lack of improvement in students' writing (Barnett, 1992).

Further, within EFL writing classes, there must be individual differences in students' learning. Students have different needs of learning assistance for different ways of learning that need to be considered. This issue is important because individual differences in second and foreign language learning are one of the most generated predictors of the language learning success (Ahmed, 2012; Dornyei & Sekhan, 2003; Saville-Troike, 2006).

How Flipped Classroom Differs from Traditional Classroom

In regard to the students' writing problems, the students' different needs as the result of their different learning styles and an attempt to find out an alternative learning model, in accommodating students' individual needs, flipped classroom is widely applied in non-EFL teachings to facilitate students with different phases of learning and to encourage more student engagement (Bishop & Verleger, 2013; Fulton, 2012; Huba & Freed, 2000; Ling, 2015; Snowden, 2012).

Writing tasks given in a flipped classroom are different from those in a traditional writing class. The traditional classes tend to be silent with all students are focusing on listening to their teacher's explanation on the writing materials, then are continued by a silent period of writing process. This one-way discourse and manner class has been considered ineffective, inefficient and irrelevant to 21st century students (Souza & Rodrigues, 2015). In the flipped classroom model, before joining the class, students watch video lectures and learn other materials at home, and then they participate in an active-based learning in class (Arnold-Garza, 2014; Herreid & Schiller, 2013; Snowden, 2012). Therefore, there is a shift in face-to-face class time, from a teacher-centered interaction to a student-centered interaction (Bergmann & Sams, 2012).

The Benefits and Challenges of Implementing Flipped Classroom Model

Due to its characteristics, flipped classroom is believed to be able to address problems raised within writing classes as well as the needs of considering students' different learning styles. Numerous previous studies reveal many advantages of flipped classroom model, namely: the effective use of class time (Cole & Kritzer 2009; Slezak, 2014), more active learning opportunities (Demski, 2013; Gannod, Burge, & Helmick, 2008), effective (one-on-one) interactions between students and teacher, and among students (Danker, 2015; Kunz., 2013; Lage, Platt, & Treglia, 2000), students' responsibility for learning (Hill, 2013; Restad, 2013; Overmyer, 2012), addressing multiple learning styles (Gallagher, 2009; Gannod Gannod, G. C., Burge, J. E., & Helmick, M. T, 2008), and reflective learning (Du, Fu, & Wang, 2014). Similarly, Khan (2011) undoubtedly adds that flipped classroom provides opportunity to students to be able to view, listen to, or read preparatory materials outside the classroom, hence, within classroom period they already know what they need to discuss.

On the other hand, for the teachers, flipped classroom allows teachers' greater insight into students' understanding of information and learning (Roehl, Reddy, & Shannon, 2013). Therefore, there will be an increase in students-teacher interaction. They can really focus on each individual to give different needed assistance. In turn, differentiated instruction can be provided in order to help students meet their learning goals in a variety ways (Crouch & Mazur, 2001). In addition, by having more chances to interact and work with individual, a teacher can easily seek the students' points of view and correct misconceptions as well as validate students' learning (Johnson & Renner, 2012). The results of this identification can further help the teacher to decide what assistance that needs to be done to help their students to improve their better understanding on the materials. Therefore, the teacher is able to meet each student at his/her level and gradually bring all students to a shared level of understanding (Stebbins, 2012).

Along with its many benefits, however, based on some previous research on the implementation of flipped classroom model, some challenges have been found. Du et al. (2014) indisputably come up with a finding that in flipped classroom model, there is a big possibility that those less motivated students get less done. This ensues as in flipped classroom students learn knowledge and skills at their different learning paces, and this relies heavily on the students' self-motivation. Besides, those who rarely complete homework in a traditional model of instruction do not complete their video homework in the flipped classroom model (Hanover Research, 2013).

For that reason, before implementing this new model, the teacher should prepare it well (Crouch & Mazur, 2001; Cavender, Cordell, Croxall et.al., 2010; Roshan, 2013; Seaboyer, 2013). Short quizzes, reading questions, or online forum discussion (Crouch & Mazur, 2001) and comment on forums regarding the video content (Cavender et.al., 2010; Roshan, 2013; Seaboyer, 2013) can be given along with the implementation. Hence, the teacher could always monitor how far the students go with their video lecturer and/or reading materials.

Reflecting upon the research gaps identified in the introduction and literature review, the study aims to answer the following research questions:

1. Do EFL students learning by using flipped classroom model achieve better writing ability than those learning in a traditional classroom?

2. How is the writing ability of students with diverging, assimilating, converging, and accommodating learning style?
3. Do students with diverging, assimilating, converging, and accommodating learning style taught using flipped classroom model achieve better ability in writing than those learning in a traditional classroom?

METHOD

An experimental design was chosen for this research because experiments provide answers for cause-effect relations (Abbott & McKinney, 2013; Latief, 2014; Mitchell & Jolley, 2010; Srinagesh, 2006). However, due to the nature of educational environments, the students who participated in this study cannot be randomly assigned to classes (Black, 2002; Jackson, 2009). Students from two intact classes of science program in a senior high school were used as the research subjects. Therefore, a quasi-experimental research design was employed (Black, 2002). The two classes of students from an Indonesian secondary school level were chosen for the study due to their similar characteristics, namely: heterogeneity of the students, active participation and interaction within class, and their ability in English as shown by their scores. The participants in the experimental class were 30 (13 male and 17 female students). In the control class there were 32 students (14 male and 18 female students). The demographics of the participants are presented in Table 1.

Table 1. The Demographics of Students in the Present Study

Group	Age	Gender		Learning Styles			
		Male	Female	Accommodating	Assimilating	Converging	Diverging
E	15-16 yo	13	17	12	5	6	7
C	15-16 yo	14	18	7	7	6	12

The independent variable in this study was the type of teaching model used for the writing class. There were two levels of the variable used. The first level was the flipped classroom model and the second level was the traditional teaching model. Besides, there were two general constructs being evaluated in this study. The first was students' writing ability and the second was students' learning styles.

Two instruments (writing scores and observation checklist on student writing) were employed in an effort to measure students' writing ability which also indirectly included the measurement of their conceptual understanding on the materials learned. Students' writing scores were an indicator of the extent to which the subjects had the characteristics being measured (Ary, Jacobs, Razavieh, & Sorensen, 2010). The scores were measured along four dimensions: content, organization, language use, and dictions.

The two groups were given different treatment. The treatment for the experimental and control groups can be seen in Table 2.

Table 2. The Experimental and Control Group Treatment

Meeting	Experimental Group (Using Flipped Classroom Model)	Control Group (Using Traditional Classroom Teaching)
1	The students are given a Pre-test	The students are given a Pre-test
2	<p><u>At School</u></p> <ul style="list-style-type: none"> The students are introduced to the ideas of flipped classroom model and assisted to join online class created by the teacher. <p><u>At Home</u></p> <ul style="list-style-type: none"> The students watch video lectures, read online materials, finish a quiz related to the information gotten from the video lectures and reading materials learned, and complete their "Student Learning Checklist." 	<p><u>At School</u></p> <p>The students are given an explanation on the teaching material and homework to write a narrative text.</p> <p><u>At Home</u></p> <p>The students work on their homework.</p>
3	<p><u>At School</u></p> <ul style="list-style-type: none"> The students discuss their understanding on the materials learned at home. The students start working on their writing and have peer checking and teacher's assistance on their writing process. <p><u>At Home</u></p> <ul style="list-style-type: none"> The students watch video lectures, read online materials, finish a quiz related to the information gotten from the video lectures and reading materials learned, and complete their "Student Learning Checklist." 	<p><u>At School</u></p> <p>The students submit their homework and are given an explanation on the continuation of the teaching material given as well as writing exercises.</p> <p><u>At Home</u></p> <p>The students work on their homework.</p>
4	<p><u>At School</u></p> <ul style="list-style-type: none"> The students discuss their understanding on the materials learned at home. The students start working on their writing. (Post-test) 	<p><u>At School</u></p> <p>Students are given a writing task. (Post-test)</p>

RESULTS**The Writing Ability of the Students who Learned by/without by Using Flipped Classroom Model**

Independent-sample t-test was conducted in order to answer the first research question. The test revealed that throughout the treatment, students showed an increase in content knowledge. Table 3 presents the results for the test.

Table 3. The Result of the t-Test (Independent Sample) between Experimental and Control Groups

Score	Group	Mean	SD	t _{count}	p-value	Analysis
Pretest	Experiment	53.96	9.39	1.366	0.178	Not significant
	Control	51.04	7.22			
Posttest	Experiment	79.03	6.72	10.893	0.000	Significant
	Control	62.56	5.12			

The scores of the students from the experimental group were higher than the scores of the students from the control group. The quantitative data contained within Table 3 clearly indicates that there was a significant difference on the students' post-test score (t-count = 10.893; p-value= 0.000) between the experimental and control groups. It implies that there was an effect on the treatment given (the implementation of flipped classroom model) on the experimental group. This is due to the fact that students in flipped class were exposed to the teaching materials prior to the class, stimulated by longer study time (they were required to join in class and online class), and required to finish more tasks as well as quizzes.

Additionally, the results of the observation checklist on student writing revealed the following.

Table 4. The results of the observation checklist on the students' writing process

Prewriting stage	During writing stage	Postwriting stage
<ul style="list-style-type: none"> • All of the students did the process of making and choosing topic everytime they write. • There were few students who did not encounter the process of clustering their ideas and organizing the ideas in a good order. 	<ul style="list-style-type: none"> • All of the students did the process of putting down the ideas into sentences and arranging them in a rough draft everytime they write. • In the 1st & 2nd meetings, there were a few students did not have peer feedback, edit and revise the content and organization of their draft. Yet, in the 3rd meeting they finally did the processes. 	<ul style="list-style-type: none"> • All of the students experienced two steps (write their final writing and display their work) in the post-writing stage.

However, an additional data from the observation on the students' participation in their online class, it was found out that there was still few of them who were not participating. In the first week of the implementation, more than half students did not complete their online quizzes. Remarkably, more and more students participated in the following weeks.

The Writing Ability of Students with Diverging, Assimilating, Converging, and Accommodating Learning Styles

In addressing the second research question about the interaction between flipped classroom model and the students' learning style, one-way ANOVA and a post hoc test using Turkey HSD test were done. Table 5 displays the result of the ANOVA test.

Table 5. The Result of the One-Way ANOVA Interaction between the Treatment and the Results of Pretest and Posttest

Score	F _{count}	p-value	Analysis
Pretest	1.017	0.430	Not significant
Posttest	20.779	0.000	Significant

It verifies that there was a significant difference among the interaction groups on the students' post-test score (F-count = 20.779; p-value= 0.000). Meanwhile, the result of the post hoc test is presented in Table 6.

Table 6. Comparison of Mean of the Final Score with Students' Learning Styles

Group	Categories	N	M (Subset for alpha = 0.05)	SD	Sig
E	Accommodating	12	80.90	3.96	0.338
	Converging	6	80.56	5.69	
	Diverging	7	77.98	2.65	
	Assimilating	5	74.17	13.71	
C	Assimilating	7	67.26	8.04	0.318
	Converging	6	63.19	2.85	
	Accommodating	7	61.01	4.12	
	Diverging	12	60.42	2.18	

The result of Turkey HSD also displays that experimental and control group are significantly different. In other words, students responded differently to the flipped classroom, based on their learning styles.

The Ability of the Students with Diverging, Assimilating, Converging, and Accommodating Learning Styles Taught Using Flipped Classroom Model and those Learning without Using Flipped Classroom Model

After observing significant changes occurred among the interaction groups on the students' post-test score, the next step was to determine which one was stronger. In pursuance of this objective, the independent t-test was run to compare the students' scores from the experimental

and control group with the same learning style. The result of the test for the first group, accommodating learning style, was illustrated in Table 7.

Table 7. The Result of the t-Test (Independent Sample) between Experimental and Control Groups with Accommodating Learning Style

Score	Group	Mean	SD	t _{count}	p-value	Analysis
Pretest	Experiment	52.08	9.15	0.218	0.830	Not significant
	Control	51.19	7.59			
Posttest	Experiment	80.90	3.96	10.417	0.000	Significant
	Control	61.01	4.12			

Table 7 showed that the treatment given to the experimental group affected the results of the students' learning. Students with accommodating learning styles learnt better using the treatment (the implementation of flipped classroom model) than traditional class.

In the same vein, students with assimilating learning style were tested. The results revealed the following.

Table 8. The Result of the t-Test (Independent Sample) between Experimental and Control Groups with Assimilating Learning Style

Score	Group	Mean	SD	t _{count}	p-value	Analysis
Pretest	Experiment	53.33	13.23	-0.229	0.798	Not significant
	Control	54.76	5.21			
Posttest	Experiment	74.17	13.71	1,104	0.295	Not significant
	Control	67.26	8.04			

From the table, it is seen that the average scores on the students' posttest from the experimental group was actually higher than those from the control group. This, however, did not influence to the result of the analysis on the effect of the treatment given to the two different groups, experimental and control group.

Another learning style identified is converging learning style. Table 9 presents a data that confirmed a significant difference on the students' post-test scores between the experimental and control group.

Table 9. The Result of the t-Test (Independent Sample) between Experimental and Control Groups with Converging Learning Style

Score	Group	Mean	SD	t _{count}	p-value	Analysis
Pretest	Experiment	52.43	6.51	0.783	0.452	Not significant
	Control	49.31	7.30			
Posttest	Experiment	80.56	5.69	6.682	0.000	Significant
	Control	63.19	2.85			

It can be interpreted that the result of the students' scores from both groups was different as the result of the treatment (the implementation of flipped classroom model). The students' scores from the experimental group were higher than the scores of the students from the control group. In short, students with converging learning styles learnt better using the treatment.

Meanwhile, the impact of flipped classroom model on the students' with diverging learning style is confirmed by the data presented in Table 10.

Table 10. The result of the t-test (independent sample) between experimental and control group with diverging learning style

Score	Group	Mean	SD	t _{count}	p-value	Analysis
Pretest	Experiment	58,93	9,06	2,327	0,033	Significant
	Control	49,65	7,99			
Posttest	Experiment	77,98	2,65	15,676	0,000	Significant
	Control	60,42	2,18			

The data reveals that subsequent to the treatment given, the students with diverging learning style showed the different learning results in which those from the experimental group attained higher score than those from the control group.

DISCUSSION

The results of the post-test scores as well as observation on the students' writing strongly vindicated that the students achieve better writing ability as the results of the treatment. In order to scrutinize the results further, they are discussed based on three research questions: 1) Do EFL students learning by using flipped classroom model achieve better writing ability than those learning in a traditional classroom? 2) How is the writing ability of students with diverging, assimilating, converging, and accommodating learning style? and 3) Do students

with diverging, assimilating, converging, and accommodating learning style taught using flipped classroom model achieve better ability in writing than those learning in a traditional classroom?

The Writing Ability of the Students who Learned by/without by Using Flipped Classroom Model

Although flipped classroom model was still considered a new teaching model in Indonesian context, the students in the flipped class in this study seemed to become attuned to the flipped classroom model. It was indicated by a significant difference in the students' scores. Higher posttest scores were seen for the experimental group. These results are consistent with and lend support to the previous research in the implementation of flipped classroom model in EFL context which indicate positive results subsequent to the implementation (see: Sung, 2015; Webb, Doman & Pusey, 2014; Yujing, 2015).

Comparing the results of the students' scores with the observation on the students' writing, it is justified that flipped classroom model impacted positively toward the students' writing ability. In general, the students in flipped classroom participated actively within three stages of writing. The results of the students' writing scores and observations were favorably consistent with the results of the previous studies (Demski, 2013; Gannod et al., 2008) showing that flipped classroom can promote more learning opportunities and engagement than traditional classroom. Students not only participated actively in class but also attained a positive learning result.

In addition, there were further implications for the students' improvement in their writing due to the implementation of flipped classroom. The result of the observations revealed that the collaborative works (with both teacher and peers) applied in the flipped classroom model elevate the students' writing. Besides, the videos they watched as well as the feedback from the teacher and peers in their writing process helped them to improve their writing. The students were more engaged within in-class activities.

Further, in the flipped class format, students were able to encounter all the three writing stages within one class meeting. As a result, they did not need to take their work home with no adequate learning assistance. This finding unquestionably confirmed that active participation and group work took place. Moreover, it proved that flipped classroom model encouraged more students' engagements and active learning opportunities as evidenced in prior research (Bishop & Verleger, 2013; Fulton, 2012; Huba & Freed, 2000; Ling, 2015; Snowden, 2012; Demski, 2013; Gannod et al., 2008)

An adverse result, however, was gotten from the observation on the students' participation in their online class. There was apparently still few of the students who were not participating. Therefore, along with the in-class observations, in order to confirm its results in which few of the students still did not actively watch the video lectures as well as complete all the quizzes and tasks, an instant interview was employed. It was found out that they uttered that better facilities as well as Internet access are needed in order to have all of the students actively participate.

This is in supportive of the previous study conducted by Jakopovic (2010), which undoubtedly emphasizes that in teaching and learning process technical support is certainly needed. Besides, they also admitted that they did not see any urgency to watch the videos and finish the quizzes.

They thought that they were actually still able to catch up with the materials as they could still get the materials by listening to the teacher's explanation in first minutes of the class as well as joining the in-class discussion. This could be true, however, those students did not achieve as high as those who were prepared and had joined the online class actively.

Referring to recommendation given in the previous studies (Crouch & Mazur, 2001; Cavender et.al., 2010; Roshan, 2013; Seaboyer, 2013), some tasks and activities (i.e.: quizzes, comprehension questions on the online reading, students' learning checklist and online discussion) were engaged to monitor students' online learning. By comparison, it was surprising to observe that the students felt that the course workload was excessive. As the result, they chose to simply take a score of zero on one or more tasks as a way of cutting back. In some cases, for instance students from higher education level, giving them different activities before an in-class meeting can be acceptable. However, in this study, secondary school students with English as a foreign language, one or two activities are enough.

The results of the online class observation, moreover, showed that in the first week of the implementation, more than half students did not complete their online quizzes. Some efforts had been done to invite students' participation; such as plus points for active participation, praise, etc. Remarkably, more and more students participated in the following weeks. Nonetheless, still, not the whole class participated. Many previous studies (e.g., Crouch & Mazur, 2001; Cavender et.al., 2010; Roshan, 2013; Seaboyer, 2013) have actually warned that more preparations must be done to anticipate some problems may occur. However, it seems that preparations are not the only one needed, there still need reflections, revisions and more constant efforts to invite and maintain students' active engagement in their online class.

Although short quizzes, reading questions, and questions in online forum discussion as suggested by Crouch and Mazur (2001) were engaged, there were still some students being reluctant to participate in online class. All of the students did join the online class, yet few of them still did not watch the video or complete the online tasks. These findings were in contrast to Hill's (2013), Restad's (2013), and Overmyer's (2012) research findings about students' responsibility for learning. Perhaps "rules" signify an increased importance of students' active engagement not only in class activities but also online class activities.

Besides, as it was previously mentioned, the students' age somehow also influenced their readiness in attending flipped classes. Many previous studies (Arnold-Garza, 2014; Bishop & Verleger, 2013; Fulton, 2012; Huba & Freed, 2000; Ling, 2015; Snowden, 2012) which have revealed the active participation of the whole participants in their online classes were conducted in the university level. Hence, it is not so surprising that this study disclosed a slightly different result for the students' participation in their online class.

To sum up, study ascertained that the implementation of flipped classroom encourage students' engagement and active learning within in-class activities. More significantly, this study has found that EFL students learning by using flipped classroom model achieve better ability in writing than those learning in a traditional classroom. There is a significant difference post-test score (t-count = 10.893 , p-value= 0.000) between students taught using flipped classroom model and those taught in a traditional classroom.

The Writing Ability of Students with Diverging, Assimilating, Converging, and Accommodating Learning Styles

Different data findings were revealed as the results of the testing for the effects of the treatment when accounting for learning styles. Statistically significant differences among the interaction groups on the students' post-test score ascertained that students with different learning styles perform different writing ability. Arguably, there are a number of possible explanations for the students' different writing ability. The first is that the activities carried out teacher in the implementation of flipped classroom model may not totally suit to a certain group of students. Secondly, the proportion of online and in class activities must be accorded to different needs of the students. In line with learning style theory, based on which students' individual differences need to be address in order to maximize their learning. Insights from the characteristics of flipped classroom model in combination with Kolb's (1981, 1984, 2002, 2005) theory on learning styles lend theoretical support to the beneficial effect of flipped classroom model on the students' learning of writing.

Another justification is that the implementation of flipped classroom model contribute to different impacts toward students' different learning styles. Hence, in their studies, Ahmed (2012), Dornyei and Sekhan (2003) as well as Saville-Troike (2006) remind that individual differences in second and foreign language learning are one of the most generated predictors of the language learning success. Not all the learning styles (accommodating, assimilating, converging, and assimilating) is suitable learning using flipped classroom model.

Further implication was gained from their average score. The highest average score was attained by students from the experimental group with accommodating learning style. It can be said that flipped classroom model suits mostly to those with accommodating learning style. Meanwhile, the lowest average score was attained by the students from the control group with diverging learning style. Therefore, traditional classroom seemed not to suit the characteristics of the students with diverging learning style.

In addition, the average score of the students from the experimental group with accommodating learning style is not significantly different from the average score of the students from those in the same group with assimilating, diverging, and converging learning style. Similarly, the average score of the students from the control group with diverging learning style is not significantly different from those from those from the same group with accommodating, converging, and assimilating learning style.

To sum up, it can be confirmed that there is interaction between flipped classroom model and students' learning styles. Students with different learning styles may attain different impact of the implementation of flipped classroom model from the others. Therefore, echoing Ahmed's (2012), Dornyei's & Sekhan's (2003) as well as Saville-Troike's (2006) ideas, in implementing flipped classroom model in foreign language learning, kinds of activities employed as well as the percentage of online and in-class activities must be suited to the students' individual differences.

Due to a significant difference among the interaction groups on the students' post-test score, it is necessary to know which one is stronger by comparing between experimental and control group with the same learning style. The comparison would be explored in the following sections.

The Ability of the Students with Diverging, Assimilating, Converging, and Accommodating Learning Styles Taught Using Flipped Classroom Model and those Learning without Using Flipped Classroom Model

The first group tested was those with accommodating learning style. Students with accommodating learning styles learnt better using the treatment (the implementation of flipped classroom model) than traditional class. Those learning characteristics are in accordance to the characteristics of flipped classroom model. One of them is effective (one-on-one) interactions between students and teacher, and among students (Danker, 2015; Kunz, 2013; Lage et al., 2000). In finishing the tasks in flipped classroom model, students can have discussion with both, their peers and teachers. Additionally, in the online classes, students can also use available tools to interact with their classmates and teachers. They can work actively and collaboratively with others. Hence, the needs of accommodating learning style students are accommodated through the implementation of flipped classroom model.

An intriguing finding was observed from the result of the t-Test (independent sample) between experimental and control groups with assimilating learning style. The test disclosed that there was no significant difference on the students' writing scores. This finding is actually not peculiar as it is confirmed by the characteristics of assimilating group in which the students prefer readings, lectures, exploring analytical models, and having time to think things through. Therefore, traditional class seems to be more suitable for students with assimilating learning style.

Meanwhile, for the group of students with converging learning style, the students' scores from the experimental group were higher than the scores of the students from the control group. As the test indicated, students with converging learning styles learnt better using the treatment. From the characteristics of those who have converging learning style, it is found out that they enjoy experiment with new ideas, simulations, laboratory assignments, and practical applications. In hand with converging students' characteristics, in flipped classroom model, students come to class for practicing, doing and discussing something (Khan, 2011). The class, moreover, is student-centered space (Bergmann & Sams, 2012) in which students have wide opportunities to practice. Students no longer only listen and memorize the materials, yet, in flipped classroom they can practically use the language. They use the class time to apply their understanding gotten prior to the class for finishing the tasks.

From the result of the test to the last learning group, it was verified that there was an effect of the implementation of flipped classroom model on the students with diverging learning style. The effect could be obviously seen from the improvement on the students' score as well as the significant difference of their scores from the control group scores. It is apparent that the characteristics of diverging students, who prefer to work in groups, listen and receive personalized feedback, suit the characteristics of flipped classroom model, which require group and peer works. Collaborative learning is really accommodated in flipped classroom. Students are no longer passive learners, yet, they are transformed to actively work with others to give and receive feedback for/from their friends' work.

CONCLUSIONS

This study has found out that there was a significant difference on the students' writing ability after the implementation of flipped classroom model. In addition, there is interaction between flipped classroom model and students' learning styles. In other words, it can be said that students responded differently to the flipped classroom, based on their learning styles. Students with different learning styles may attain different impact of the implementation of flipped classroom model from the others. Finally, in general, the students with diverging, assimilating, converging, and accommodating learning style taught using flipped classroom model achieved better ability in writing than those learning in a traditional classroom. Although students from the assimilating group did not attain as high impact as other groups, they still demonstrated good writing score. Hence, in implementing flipped classroom model for this group, some modifications (for instance the proportion of online and in class activities, or lecturing and practicing) are needed. It implies that, the main problem for the flipped classroom model is not necessarily the instructional or technical materials, but how to spend class time.

From the results explained, it can be suggested that in applying flipped classroom model in their teaching, teachers must have a good preparation. They firstly must understand what flipped classroom is, how it is applied, what problems commonly occur in flipped classroom and how to handle them. Besides, as it is implemented, teachers need to constantly reflect and revise the procedures and activities applied. Meanwhile, the schools are suggested to be ready with the facilities needed for the implementation of flipped classroom model. The facilities that should be prepared are computers and excellent access of Internet. Finally, future researchers should study more in analyzing the learning materials employed. Besides, the similar study with different groups of learners and contexts is needed in order to give wider perspective of the implementation of flipped classroom in EFL scopes.

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