

# Evaluating Writing Proficiency: The Influence of Flipped Classroom Approach on Efl Students' Complexity and Accuracy

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## A B S T R A C T

This study aims to evaluate the influence of the Flipped Classroom approach on the writing proficiency of EFL students, particularly focusing on the aspects of complexity and accuracy. The research employed a One-Group Pretest-Posttest Design and was conducted at Darul Muhmin School, Satun, Thailand. A total of 20 students participated in the study. They were given a pretest to measure their initial writing proficiency, followed by a series of lessons using the Flipped Classroom approach, and finally a posttest to assess improvements. The instructional method involved students learning theoretical content independently through videos and digital modules outside the classroom, while class time was used for writing practice, discussion, and feedback. The data were analyzed using SPSS version 29.00, with a Paired Sample T-test employed to determine the significance of the treatment. The results showed a significant improvement in students' writing scores after the treatment. The mean score increased from 74.50 (pretest) to 90.25 (posttest), and the significance value (2-tailed) was 0.001, which is less than 0.05. These findings indicate that the Flipped Classroom approach had a meaningful effect on enhancing the complexity and accuracy of students' writing. Therefore, the Flipped Classroom can be considered an effective pedagogical strategy in EFL writing instruction.

**Keywords:** *Flipped Classroom, Writing Proficiency*

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## INTRODUCTION

Accurate writing skills are an important ability for a student to have, especially in writing scientific writing. Scientific writing creates writing that can be accounted for its accuracy in examining a problem in accordance with certain writing rules or ethics (Florina & Atmazaki, 2023). The information conveyed in it must be correct information. So the ability to write accurately is important to produce systematic, critical, and innovative writing.

Accurate writing is also important for social life, for example in promoting the activities of local organizations or promoting certain formal activities (Bariroh & Setiawan, 2021). In addition, the ability to write for students can also fulfill learning demands and hone their writing skills, character building and skills.

But in reality, there are still many students who do not have this writing skill (Florina & Atmazaki, 2023). Most of the students still do not fully understand the purpose and benefits of the writing they do. Students have difficulty in understanding the concept of scientific writing. Then students are also not fully able to master good and correct Indonesian. As a result, students are required to practice writing to the extent of their knowledge, without giving importance to good and correct writing rules.

For this reason, the use of inappropriate learning models will affect students' learning abilities, especially in accurate writing skills. Students are unable to organize words into sentences, make scientific plans, and think critically and logically (Shooli, et al., 202).

Vocabulary mastery and low learning motivation also hinder students' mastery of proposal writing. In fact, proposal writing is one of the scientific writing skills that serves as a vehicle for building a culture of rational thinking. This means that teachers must be technology literate in presenting learning. This aims to make learning creative and interesting, and to follow 21st century learning. Therefore, it is necessary to update the application of learning models in the classroom.

The flipped classroom is now an innovative approach in education, attracting the attention of many researchers and academics (Li & Li, 2022). By utilising technology, the flipped classroom provides easy access to learning materials anytime and anywhere, making it an efficient solution for students. This method brings more flexibility for teachers and students, while encouraging students to take an active and responsible role in their learning process (Li & Li, 2022). The flipped classroom is designed to meet the needs of modern student-centred learning, allowing them to learn at their own pace and convenience. By integrating learning activities at home and at school, teachers create a more purposeful learning experience, making it easier for students to optimally understand their roles and responsibilities.

Tsai et al. (2020) explained that the characteristics of learning with the flipped classroom model are as follows. First, there is a change in activities outside the classroom, namely doing homework makes students learn independently. Second, classroom learning is more focused on discussion activities led by the teacher. Third, learning with the flipped classroom model can increase interaction between teachers and students as well as interaction between peers. Fourth, it uses technology, such as learning videos.

Based on face-to-face interviews with fifth and sixth grade teachers at Darul Muhmin School in Satun, Thailand, it was found that students still experience significant difficulties in writing, particularly in writing accurately and with complexity in English as a foreign language (EFL). One teacher stated, "Many of our students still struggle to write sentences correctly. They often make grammatical errors, and their vocabulary is quite limited. It is difficult for them to express their ideas clearly in writing." Another teacher added, "Their sentence structures are often incorrect, and they tend to repeat the same simple patterns. Developing complex ideas in writing remains a major challenge for them.

In addition, the teachers stated that the teaching methods used so far have not had a significant impact on improving students' writing skills. The learning process tends to be one-directional, lacks active student participation, and does not fully utilize technology. Therefore, innovation in instructional models is needed to enhance student motivation and engagement in the learning process one of which is the flipped classroom approach. This approach is considered to have the potential to provide a more flexible learning environment and encourage students to become more active, which is expected to improve their writing proficiency, particularly in the aspects of complexity and accuracy in English writing.

## **Theoretical Framework**

### *Flipped Classroom*

The flipped classroom is a learning model that reverses traditional instruction by allowing students to access learning materials such as videos or podcasts before class, while class time is used for active learning through discussions, projects, and teacher guidance (Bergmann & Sams, 2012). This approach not only emphasizes student autonomy and collaboration but also maximizes classroom time for deeper, personalized instruction (Bergmann & Sams, 2013). Rooted in Piaget's cognitive theory, it enables students to assimilate new knowledge with prior experiences, making them better prepared for in-class tasks. As a result, the flipped classroom supports the development of writing proficiency in EFL learners, particularly in improving complexity and accuracy through structured exposure, active engagement, and meaningful feedback.

### *Writing Skills That Influence The Flipped Classroom Approach To EFL Students' Complexity And Accuracy*

Writing is a complex skill involving critical thinking, grammar mastery, and cognitive processing (Ramadhanti & Yanda, 2022). Despite various instructional methods, few studies

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examine how teaching effectiveness is influenced by learning material and student characteristics, such as gender (Roohani & Rad, 2022). The flipped classroom model, which combines independent learning through videos with active in-class engagement, supports student autonomy and deeper understanding (Bergmann & Sams, 2012). Rooted in cognitive constructivism, it enables students to build knowledge actively and independently, making it a suitable approach for enhancing writing proficiency in EFL contexts (Piaget, 1973).

### *Complexity*

In EFL learning, complexity refers to the sophistication of language use, including varied sentence structures and rich vocabulary (Mauludin, 2020). It is one of the key dimensions of language performance alongside accuracy and fluency. According to Skehan, complexity is divided into syntactic (range of sentence types) and lexical (vocabulary variety), both of which reflect writing maturity (Nguyen & Boers, 2020). Developing complexity is crucial in academic writing, as it shows critical thinking and the ability to organize ideas coherently (Sutiah & Isnaniah, 2020). For example, moving from simple to complex sentences demonstrates growth in language use. Methods like the flipped classroom can help students enhance writing complexity by encouraging exploration of structure and vocabulary, supported by consistent practice and targeted feedback (Khushik & Huhta, 2020).

### *Benefits of the Flipped Classroom Approach on EFL Students' Complexity and Accuracy*

The flipped classroom offers numerous benefits that align with modern educational needs (Lestari, 2021). It enhances students' concentration and fosters a more engaging classroom environment (Chilingaryan & Zvereva, 2017), while promoting learner independence and creativity (Santikarn & Wichadee, 2018). This model also boosts academic performance and nurtures language skills by increasing student interest and participation (Elian & Hamaidi, 2018). Additionally, it supports collaborative learning, encourages autonomy, and strengthens teamwork and communication (Aznar-Díaz et al., 2020). Beyond cognitive gains, the flipped classroom prepares students for 21st-century skills and creates a more personalized, effective, and lasting learning experience (He, 2018).

## METHOD

This study used a quantitative experimental method with a Posttest-Only Control Group Design to examine the effect of the flipped classroom approach on EFL students' writing proficiency, focusing on complexity and accuracy. The research was conducted in the even semester of the 2024/2025 academic year at Darul Muhmin School, Satun, Thailand. The population included all 5th and 6th-grade students, with two classes selected through random sampling one as the experimental group and one as the control group. The experimental group received flipped classroom instruction, involving pre-class video materials and in-class writing activities. The control group was taught using conventional methods. Students' writing proficiency was assessed through a structured writing test evaluated on complexity and accuracy. Data analysis included descriptive statistics (mean, SD) and paired t-tests using SPSS 29.0. A significance level of 0.05 was used to determine whether the flipped classroom approach had a statistically significant impact.

## FINDINGS & DISCUSSION

### Description of Research Results

The description of this research uses a One-Group Pretest-Posttest Design, which aims to compare the writing proficiency of EFL students before and after the implementation of the Flipped Classroom approach. The research was conducted at Darul Muhmin School, located in Khuan Kalong District, Thung Nui Sub-district, Khuan Bortong Sub-district, 49 Village 1, Satun Province, Thailand, postal code 91130. The experimental class consisted of a number of students who took both a pretest and a posttest to measure changes in the complexity and accuracy aspects of their writing after receiving instruction through the Flipped Classroom approach.

Before the implementation of the treatment, the researcher first administered a pretest to measure the EFL students' writing proficiency, specifically in terms of the complexity and

accuracy of their writing. This test aimed to obtain an initial overview of the students' writing abilities prior to the application of the Flipped Classroom approach. After the pretest, the researcher began implementing the Flipped Classroom approach in the writing instruction process. The learning activities started with students independently studying materials through videos, modules, or other digital resources outside the classroom. During the face-to-face sessions, the teacher guided the students through writing practice, discussions, and provided active feedback to deepen understanding and improve the quality of their writing.

By comparing the pretest and post-test results, the researcher was able to evaluate the effectiveness of the Flipped Classroom approach in improving EFL students' writing proficiency at Darul Muhmin School.

Table 1. Pretest and Posttest

No	Name	Pretest	Posttest
1	Armin Arsan	40	70
2	Chakir Dara Kia	50	80
3	Shalabee Hemman	70	85
4	Asharoh Binsa-ard	70	90
5	Peerapat Manit	70	95
6	Muhammad Saynuddin	80	100
7	Yahya Puisamli	50	85
8	Jihan Mahmud	80	90
9	Arif	80	80
10	Kholik	70	100
11	Hassan Samayui	70	100
12	Panuwat	70	95
13	Aebidin	70	95
14	Hanif	60	90
15	Shakir Naow	100	90
16	Fasil Langa	100	90
17	Apirak Sibenjapong	100	100
18	Farid Saisalam	100	85
19	Arifin	80	95
20	Nasran	80	90

### Description Of Students' Writing Proficiency Before the Implementation of the Flipped Classroom Approach

In this study, the researcher obtained pretest data to evaluate students' writing proficiency, particularly in terms of complexity and accuracy, before the implementation of the Flipped Classroom approach. The pretest was administered prior to the treatment, while the posttest was conducted afterward to measure any improvements resulting from the intervention.

Table 1. Mean, Median, Minimum, Maximum, and Standard Deviation Scores

Statistics		
PRETEST		
N	Valid	20
	Missing	0
Mean		74.50
Median		70.00
Std. Deviation		17.006
Minimum		40
Maximum		100

Source: SPSS 29.00

Based on Table 1, it can be seen that the total number of students is 20, with a minimum score of 40, a maximum score of 100, a mean score of 74.50, and a standard deviation of 17.006.

Table 2. Score Categories and Percentages

No.	Score Range	Frequency	Percentage	Description
1.	80-100	9	45%	Very Good
2.	66-79	7	35%	Good
3.	56-65	1	5%	Fair
4.	40-55	3	15%	Poor
5.	<39	-	-	Very Poor

### Description of Students' Writing Proficiency After the Implementation of the Flipped Classroom Approach

In this study, the researcher obtained posttest data to evaluate students' writing proficiency, particularly in terms of complexity and accuracy, after the implementation of the Flipped Classroom approach. The posttest was conducted following the treatment to measure any improvements resulting from the intervention

Table 3. Mean, Median, Minimum, Maximum, and Standard Deviation Scores

Statistics		
POSTEST		
N	Valid	20
	Missing	0
Mean		90.25
Median		90.00
Std. Deviation		7.860
Minimum		70
Maximum		100

Source: SPSS 29.00

Based on Table 3, it can be seen that the total number of students is 20, with a minimum score of 70, a maximum score of 100, a mean score of 90.25, and a standard deviation of 7.860

Table 4. Score Categories and Percentages

No.	Score Range	Frequency	Percentage	Description
1.	80-100	19	95%	Very Good
2.	66-79	1	5%	Good
3.	56-65	-	-	Failr
4.	40-55	-	-	Poor
5.	<39	-	-	Very Poor

### Hypothesis Testing

To examine the influence of the treatment, a Paired Sample T-test was conducted using SPSS version 29.00 for Windows. This test was used to analyze paired samples from the same subjects, where each variable was measured under different conditions before and after the treatment. The purpose of this analysis was to determine whether there was a significant improvement in the students' scores between the pretest and the posttest.

The decision-making criterion for significance is based on the value of Sig. (2-tailed). A result is considered statistically significant if the Sig. value is less than 0.05. This indicates a significant difference between the independent and dependent variables, and therefore, a meaningful effect resulting from the treatment given to the participants. The following is a presentation of the Paired Sample T-test results analyzed using SPSS version 29.00 for Windows.

Table 5. Results of the Paired Sample T-Test

Pair 1	Paired Samples Test						Significance		
	Paired Differences			95% Confidence Interval of the Difference		t	df	One-Sided p	Two-Sided p
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper				
PRETEST - POSTEST	-15.750	15.413	3.446	-22.964	-8.536	-4.570	19	<0.001	<0.001

Source: SPSS 29.00

Based on Table 5, it can be seen that the significance value (2-tailed) is 0.001. Since  $0.001 < 0.05$ , this indicates a statistically significant effect resulting from the different treatments applied to each variable

### Discussion

The findings of this study indicate a significant improvement in the writing proficiency of EFL students following the implementation of the Flipped Classroom approach. The comparison between pretest and posttest scores shows a substantial increase in students' writing performance, particularly in terms of complexity and accuracy. Before the treatment, only 45% of students were categorized as "Very Good," with a mean score of 74.50. After the application of the Flipped Classroom approach, this percentage rose to 95%, and the mean score increased to 90.25. This suggests that students were able to produce more complex sentence structures and demonstrate greater grammatical accuracy after being taught using the Flipped Classroom method.

The results of the Paired Sample T-test further support this improvement. The significance value (2-tailed) obtained was 0.001, which is lower than the standard significance level of 0.05. This indicates that the difference between the pretest and posttest scores is statistically significant and not due to chance. The Flipped Classroom approach, which emphasizes independent learning through digital materials outside the classroom and active learning during in-class sessions, seems to have had a strong positive impact. This blend of self-paced learning and guided classroom practice contributed to enhancing the students' understanding and writing skills.

These results are in line with previous studies that suggest the Flipped Classroom model is effective in language learning, especially in developing productive skills such as writing. By allowing students to learn instructional content independently before class and then apply their knowledge through practice, discussion, and feedback in class, this approach fosters deeper learning. At Darul Muhmin School, the implementation of the Flipped Classroom not only improved the students' writing performance but also encouraged their active participation and sense of responsibility in the learning process. Therefore, this study concludes that the Flipped Classroom approach is a beneficial instructional strategy for enhancing writing proficiency among EFL students.

## CONCLUSION

Based on the results of this study, it can be concluded that the Flipped Classroom approach has a significant and positive influence on the writing proficiency of EFL students, particularly in improving the complexity and accuracy of their writing. The data analysis showed a clear increase in students' performance from the pretest to the posttest, with the mean score rising from 74.50 to 90.25 and the number of students in the "Very Good" category increasing from 45% to 95%. The Paired Sample T-test further confirmed the effectiveness of this approach, with a significance value of 0.001 ( $< 0.05$ ), indicating that the improvement in students' writing skills was statistically significant. This demonstrates that the Flipped Classroom model is an effective instructional strategy for enhancing EFL students' ability to write more complex and accurate texts. Overall, the Flipped Classroom not only improved students' academic performance but also fostered greater engagement, autonomy, and active participation in the learning process. Therefore, this approach is recommended for EFL writing instruction as it provides meaningful learning experiences and supports the development of higher-order language skills.

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