

ONLINE FLIPPED CLASSROOM OF INSTRUCTION ON EFL STUDENTS' READING COMPREHENSION DURING COVID-19

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Abstract: The online flipped classroom is growing in popularity as the COVID-19 pandemic continues to spread throughout the world. This type of learning is necessary in many places where traditional classrooms are not possible or safe to attend. To examine the effects of the OFC model, this study used a quasi-experimental design. Moreover, this study aimed to identify English language students' attitudes toward the OFC model of instruction. There were sixty-five students of classes XIC and XID at MAN 3 Palembang that were split into experimental and control groups randomly. The control group was treated with Blended Learning, while experimental group was treated with Online Flipped classroom. Mixed-method design was carried out in this research. To ensure homogeneity and normality, both groups took a reading comprehension pre-test at the beginning of the study. After the experiment, the post-test was given to the experimental and control groups. The statistical analyses of independent samples t-test showed that the experimental group had better reading comprehension scores than the control group. The results of frequency analyses showed that EFL students in the experimental group had more positive attitude towards OFC model of instruction and agreed that it was helpful to them in many ways. It is suggested that OFC can be used as an effective methodology for teaching reading comprehension to EFL students.

Keywords: *Flipped classroom model; reading comprehension; covid 19*

INTRODUCTION

The coronavirus disease (COVID-19) has caused a lot of problems all over the world, and had a significant impact on all aspects of society,

including education. Schools and universities have been particularly hard hit, with many students unable to attend classes or receive adequate support. Schools have stopped teaching

face-to-face classes because it is feared that the virus will be spread more easily this way. More than 1.2 billion students are not taking classes in person anymore. This is done in order to try and prevent the virus from spreading. Countries that have been affected by the virus have put into effect laws that restrict the movements of many people.

To reduce the spread of the COVID-19 pandemic, many governments all over the world including Indonesian government decided to close all schools and keep educational programs running as usual via online learning. This decision was made in order to help keep people safe and prevent the virus from spreading. Online learning during the Covid-19 pandemic has had a big impact on teaching. It has allowed teachers to continue teaching even when they are not in the same room as their students, and it has made it easier for students to receive educational materials (Chen Hsieh et al., 2017). It is in line with what Campillo-Ferrer & Miralles-Martínez (2021) say that in order to keep the learning process going during this time when classes are being held in person less often because of the coronavirus, most schools have to use online learning. The Minister of Education and Culture has also issued a letter saying that education policy during the emergency period will be based on what is best for students, not just what is easiest (Marina & Ridlo, 2021). A shift in educational approach is taking place from traditional to online learning. This shift is likely to become more prevalent in the coming years as online learning becomes more accessible and affordable (Basilaia & Kvavadze, 2020; Camargo et al., 2020).

As a result, schools, teachers, and students had to adapt rapidly and abruptly to what can only be described as an unprecedented educational emergency response. The way that schools typically teach is by having a physical lecture and explanation between teachers and students or in other words, a face-to-face interaction between these two subjects. However, this practice is no longer the most common, as many teachers and students are still accustomed to physical classes. Consequently, it has become increasingly difficult for schools to

conduct their teaching and learning process (Khodaei et al., 2022; Yen, 2020).

Many teachers and students, according to Helan & Anbazhagan (2021), are used to the traditional classroom way of learning, where all theoretical classes are taught online. However, there are still many problems with online teaching, such as teachers having a technical ability deficiency, difficulty finding teaching materials, difficulty transferring lessons learned, and unstable signals causing students to struggle with learning. According to (Singh et al., 2021), students who are struggling with technology and lack adequate learning materials, online teaching can be a major challenge.

The replacement from traditional educational methods to online learning is to keep epidemics from spreading by using methods that ensure students are spaced far apart, even if that means learning in different ways (Lizcano et al., 2020). Online learning during the COVID-19 pandemic, requires not only access to technology such as electronic devices and the internet, but also the right learning model. This is especially important because many people may not have access to traditional education institutions during this time (Latorre-Coscolluela et al., 2021).

One popular learning model that could be used in online learning is the "flipped classroom" model. In this model, students are more actively involved in learning, which leads to better comprehension and self-confidence (Khodaei et al., 2022; Yen, 2020). Flipped classrooms are a popular educational method during COVID-19, and they could be a great replacement for teaching theoretical classes during this epidemic (Guraya, 2020; Yen, 2020). In addition, Kozikoğlu (2019) says that the online flipped classroom (OFC) model is gaining increasing recognition as an active educational model in higher education across different countries. This model has proven to be effective and innovative, and is significant in terms of its impact on student learning.

A number of studies have looked at the effectiveness of the OFC when it comes to improving reading skills. Previous studies have focused on how the use of online flipped classroom can improve English language skills. Some studies have found that using the OFC to

teach reading can be successful. Other studies have found that the flipped classroom is a more effective way to teach English language skills. It is still unclear which method is better, but the evidence suggests that both methods have their benefits, such as Hung (2015) who investigated the impact of the OFC on a student's academic performance, learning styles, and engagement with English learners can be significant. A new study conducted by Hashemifardnia et al. (2018) found that students who received OFC instructions were able to self-pace their learning and study outside of the classroom. This is an important discovery, as it may help students to better focus on their studies and achieve their goals. Safiyeh & Farrah (2020) investigated the flipped classroom has had a positive impact on students' reading comprehension skills at all levels of reading comprehension skills. This is especially true for students who are struggling with the task. Then Pakpahan (2020), and Sarwa et al.(2021) affirmed that OFC improved student engagement and reading comprehension skills.

Many studies suggest that using OFC instructions benefits students in terms of their English language proficiency. According to Vaezi et al.(2019), and Vakilifard et al. (2020), the flipped instructional model has been shown to be effective in helping students achieve better academic results in general. However, there is currently little evidence to suggest that this approach is effective in all cases (Cabı, 2018) especially language learning involves developing skills in writing, listening, reading, and speaking. The purpose of this study is to explore how online flipping learning affects reading comprehension. We also looked at the perceptions of English students toward two different instructional models used in experimental and control groups.

In a flipped classroom, the student learns the material by watching it at home and discussing it with other students in the online class. The teacher provides an explanation of the material, according to Hung (2022). The flipped classroom is a unique learning process that

focuses on using a computer-based outdoor learning environment as well as interactive online group learning (Litvinova et al., 2022).

This study looked at how OFC might help students improve their reading comprehension skills. It was especially interested in how it affects MAN 3 students in Palembang.

This study looked at how the use of an OFC model, which provides students with initial exposure to reading activities and better preparation, affects students' reading comprehension achievement. Additionally, the study looked at how students feel about the use of OFC models in teaching reading comprehension.

METHOD

The mixed-method design was used in this study which combined both quantitative and qualitative approaches to reach the broader purposes of a single study. The study randomly assigned participants into two groups. The first group received OFC learning model, while the second group received BL treatment. After the treatment period, both groups were tested on the dependent variable.

The focus of this study is on impact analysis of the OFC, therefore, class division to the experimental and control group was considered necessary. The quantitative data collected from pre- and post-testing of the Online Flipped Classroom and Blended Learning showed a statistically significant improvement in both learning. Additionally, using a separate questionnaire, the students in the experimental group were asked their opinions about the use of the Online Flipped Classroom. Their responses indicated that they were very pleased with the results. The data analyses were carried out with SPSS Version 26. The study was conducted from August 2022 to December 2022.

There were 65 students involved in the study. A total of 32 students (19 females and 13 males) at Class XID were set in the BL classroom (control group) and 33 students (21 females and 11 males) at Class XIC in OFC (experimental group).

Table 1. *Demographic information of the participants*

Class	N	Male	Female	Instructional Sequence
C	33	21	11	Flipped learning

D	32	19	13	Blended learning
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There were 14 sessions during 16 weeks, including one session for the pre-test and one for the post-test. The table 2 below shows how the teaching methods used in the experimental and control groups differed.

Table 2. *Procedures to teaching blended learning and flipped classroom*

Flipped Classroom	Blended Learning
Students were given the pre-test	Students were given the pre-test
Students were introduced to the flipped classroom model during Covid-19 for 100 minutes for an online weekly scheduled meeting.	Students were given materials, provided with notes on the teaching material, and had online learning. The majority of content and references were provided in the presentation slides.
Prior to the class, the students joined online learning through Google Meet and watched instructional videos, read online materials, finished quizzes related to the information provided from the video lectures, and did targeted exercises. All content-based information was delivered through Moodle or LMS.	Students worked on and submitted their homework through Moodle and LMS application. They also were engaged in online discussion via Google Meet and WA chats.
Entire limited class periods were devoted to a small amount of fast evaluation. The students discussed their understanding of the materials learned at home and had peer checking and teacher's assistance on their learning process. They tried to solve the problem and did knowledge internalization.	Students received a further explanation for the teaching material and exercises and had problem- or case-based small group discussions. The instructor validated correct responses and clarified any misconceptions.
Prior to the class, the students joined online learning, watched guiding videos, read online materials, and finished quizzes related to information from the video learning and reading materials	The students worked on and submitted their homework through Moodle and LMS and studied from provided online learning sources.
Students were given post-test and Questionnaire	Students were given post-test and Questionnaire

Before and after the intervention, a pre-test and post-test will be administered to see if the flipped model of teaching reading comprehension has an effect on students. A 40-question reading comprehension test will be given to see if it is reliable. The Cronbach's alpha is .75, which means it is reliable.

The researchers looked at the numbers to see if there were any differences between the scores of the two groups (those who did well on the pre-test and those who did well on the post-test). The researchers used the Shapiro-Wilk normality test to determine whether the data had a normal distribution, and the test of Homogeneity of Variances with SPSS 26 by the value of significance (α) = 0.050 to determine whether the data had a homogeneous variance or not. Afterwards independent samples t-tests were used to examine the difference between the means of two groups that are unrelated to one another.

The questionnaire was distributed to quantify students' attitude towards OFC and to know whether OFC can improve reading comprehension skills or not. In this study, a Five-Point-Likert format such as Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD) was applied. 22 items of questionnaire were addressed to students who were in the experimental group. Google Docs has made a questionnaire available for students to complete for two days. After that, it is no longer possible to use the link provided. The responses from the students in the experimental group were collected online. The data was collected from an Excel sheet and then analyzed using the latest version of 26 SPSS. The questionnaire was intended to collect information from students and add to the existing study with their perceptions of the OFC. The reliability of this instrument was estimated to be 0.79.

RESULTS AND DISCUSSION

Findings from Tests of Normality

The verification of whether data from an experimental and control group are normally distributed is an important step in validating a hypothesis. Without this assurance, it is difficult to make any deductions about the results.

There were 32 students in the experimental group who participated in the study, while in the control group, there were 33

students. This research needed to use a Shapiro-Wilk test, which is a statistical test used to determine whether two samples are from the same population. This study required the Shapiro-Wilk test due to a number of samples that were not exactly 50. The Shapiro-Wilk test showed that the data from before and after the experiment in the experimental group was significantly different from the data in the control group, which means that the data is likely distributed normally.

Table 3. *Tests of normality*

Class		Shapiro-Wilk		
		Statistic	df	Sig.
Students' Score	Pre-test of Control Class	.945	32	.104
	Pre-test of Experiment Class	.942	33	.076
	Post-test of Experiment Class	.947	32	.118
	Post-test of Control Class	.968	33	.200*

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Findings from Tests of Homogeneity

To ensure the data was exactly homogeneous, tests were also conducted to see if it was. Then, to ensure that the variances were equal, it can be seen from the Levene Statistics that the significant level is 0.022. The

data does not have the same variance for students in the experimental and control groups. This means that an independent sample t-test can be carried out to see if the two groups have different reading comprehension achievement. The results show that the two groups don't have the same achievement.

Table 4. *Test of homogeneity of variances*

		Levene Statistic	df1	df2	Sig.
Students' Scores	Based on Mean	5.558	1	63	.022
	Based on Median	5.606	1	63	.021
	Based on Median and with adjusted df	5.606	1	56.434	.021
	Based on trimmed mean	5.730	1	63	.020

Findings from Independent Sample Test

Even if the data are not perfectly homogeneous, an independent samples t-test can still be used. In addition, researchers check whether the research objectives are achieved through hypothesis testing.

According to the table 5 below, it is known that the significant value is .000. The

experimental group outperforms the control group in terms of reading comprehension achievement by more than 0.05. This means that the experimental group's model, using the OFC, is more effective than the control group's model, using the BL.

Table 5. *Independent sample test*

	Independent Samples Test	
	Equal variances assumed	Equal variances not assumed
F	5.558	

Levene's Test for Equality of Variances	Sig.	.022	
t-test for Equality of Means	t	4.081	4.106
	df	63	55.329
	Sig. (2-tailed)	.000	.000
	Mean Difference	167.1875	167.1875
	Std. Error Difference	40.9706	40.7145
	95% Confidence Interval of the Difference	Lower	85.3144
		Upper	249.0606
			248.7703

Findings from Students' perceptions of the online flipped classroom model

The researchers wanted to know what students think of an online teaching model that flips classroom lessons around, so look at the data in Table 6. Based on this information, it seems that students feel that the online flipped classroom model is very helpful when it comes to improving their reading comprehension skills.

The means of the questionnaire's directional items ranged from 3.60 to 4.20, which means that most of the EFL students had a positive attitude towards OFC model of instruction and agreed that a flipped model of instruction would be helpful in improving their reading comprehension skills. With reference to item 9 *I appreciate that the teacher is able to explain things in an online format*), which was a non-directional item, the study found that about a third of students (35%) strongly agreed

with the statement, and about half of students (50%) agreed. Moreover, concerning another non-directional item of the questionnaire *A good way to learn how to read is to have my teacher lecture on the subject in class*, the study found that 40% of the students agreed with the model of instruction known as OFC, and 55% of them agreed. This suggests that the students have a positive attitude towards this model to teaching.

Students found that using the OFC model helped them understand the text more easily and their reading performance improved. They also felt more in control of their learning. The research found that the students perceived their communication skills as improving and that this was closely related to the opportunity to communicate they were given in the OFC classroom teaching model. The students said they would like to continue using the online videos and materials to help them learn English.

Table 6. Descriptive statistics for EFL students on the online flipped model of instruction

No.	Items	Mean Scores
1	The online flipping classroom provides me with the opportunity to plan my class ahead of time, which allows me to be more efficient and effective in learning.	4.00
2	Videos will help me learn how to make sentences.	4.05
3	Having watched the screencasts, I feel more comfortable asking questions. I now know what to do if I don't understand something, and I feel more prepared to ask for help if I need it.	4.20
4	I am confident that I will learn more effectively with the flipped instruction approach.	3.91
5	The online flipped classroom of instruction made it easier for me to understand reading passages. This was especially helpful because I could see the same passage being discussed and read by different people in different contexts, which made it easier for me to understand the material.	3.83
6	The more time I have to spend learning in class, the better I do on reading tests.	3.94
7	The online flipped classroom of instruction model helps me feel more in control of my learning. It gives me the ability to access my lessons at any time, and allows me to work at my own pace.	4.20
8	I do not think the flipped instruction has been helpful for me.	3.60
9	I appreciate that the teacher is able to explain things in an online format.	4.05
10	I have developed stronger reading skills in English.	3.90

11	I found this class more engaging than other classes I have taken.	3.90
12	The classroom session was well-utilized.	4.00
13	I appreciate the online flipped classroom model because it helps me improve my reading skills more effectively.	3.97
14	I feel more comfortable to speak English whenever the class uses the online flipped classroom model. This made me more confident in my ability to communicate with classmates and teachers, which in turn helped me learn more effectively.	3.90
15	I feel confident reading English texts.	3.60
16	There are many great resources available online to help me learn English.	4.20
17	There are many ways to learn how to read, including having my teacher lecture on the subject in class. This way of learning is especially helpful if I want to improve my reading skills.	1.65
18	I think it is more helpful for me to watch videos about the material than to attend live teacher instruction in class.	4.00
19	I think that the use of technology in this class is helping me learn more effectively.	3.94
20	In my English class so far, I have found the online videos and materials helpful for learning.	4.00
21	The English classroom is a great place for me to communicate with other students because I have more opportunities to do so than in any other class I have taken.	3.89
22	I love working with online tools like Moodle, WA, or an LMS to get teacher feedback and assignments done quickly and easily. This is a great way to get feedback and communicate with my teachers efficiently.	4.00

The study found that students who use the OFC model in their classrooms are more likely to benefit from class time than students who use other models. The OFC model provides students with more time for interaction, learning, assessment, and exploration. This allows them to achieve their goals more effectively (Divjak et al., 2022; Pakpahan, 2020; Sarwa et al., 2021). This is in line with the findings of Hung (2022a), who found OFC actually has a positive impact on students' achieve better academic results in English classes.

This study found that students who use the OFC in class are better able to understand and read texts than those who do not (Aidoo et al., 2022; Barrios et al., 2022; Köksal & Han, 2022).

The study found that students generally have positive attitudes towards the OFC model, in which teachers share responsibility for teaching and learning. They also believe that this model would be helpful in improving their reading comprehension skills. In general, OFC model was most positively received by students of the experiment group. The study also found that many students feel satisfied with the way this model uses communication to help them learn English. Most students say that their English skills have improved because they have been interacting more with other students. This class was more interesting than other classes, and the

opportunity to communicate in English helped the students feel more comfortable. Additionally, this class allowed the students to interact with others more than in the other class.

Students found that using OFC was very effective in improving their English reading comprehension skills, and they appreciated the availability of videos outside of the classroom as one of the factors that helped them learn more. The students found that they were more confident and independent after watching the videos, as they were able to brainstorm their thoughts and take notes at their own pace. Most of them agreed that the videos had helped them to better understand sentence structures. The OFC model helps students become more confident in their ability to learn and achieve results. This confidence can be felt by students in the experimental group, who reported feeling more able to learn and succeed. In addition, the majority of students felt more confident and capable after undergoing the OFC model.

CONCLUSION

As a result of this research, it is now possible to confirm that (1) EFL students' reading comprehension competence has been positively affected by the implementation of OFC. These results show that students who take an OFC class perform better than those who do not, even

though their academic performance is significantly different. There is a big gap between the two groups, indicating that OFC is definitely beneficial, (2) students highly valued this model, which is one of the most significant findings, and (3) the use of the flipped classroom helps students to understand the learning content in depth, as well as improve their achievement levels. This change in roles completely changes the relationship between the teacher and students, turning the educational process from a teacher-centered to a student-centered one. The results of this study have helped us to better understand how OFC impacts the reading comprehension of EFL high school students. A proper reading teaching strategy and method should be adopted by EFL teachers at Madrasah Aliyah Negeri 3 in Palembang. Teachers should use different resources to help students improve their academic performance. This includes using different materials, such as books, articles, and websites. In addition to diverse teaching resources, this can also help facilitate a variety of teaching activities.

As a limitation to this study, OFC may be successful with motivated students, there are a few potential drawbacks. First, it is not possible to guarantee that all students will participate, and those who do not may be unprepared. Additionally, there can be disparities in students' home lives, which can make them difficult to access the necessary technology. Because of the limited sample size in this study, it cannot be generalized to other groups of students.

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