Flipped Classroom in Online Speaking Class at Indonesian University Context

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Since the teaching-learning process must go online, it is assumed that conducting a flipped classroom could promote students' active learning. Thus, this classroom-based research attempts to investigate the implementation of the flipped model in an online speaking class. It examines students' learning outcomes on speaking skills after studying in flipped classroom model. Participants of this study were 1st-year students of the Railway Mechanical Technology study program (N = 24). The numerical data were collected from pre-test and post-test video speaking, marked based on IELTS speaking band descriptor. Those test results were analyzed using paired sample t-test, Pearson r correlation, Cohen d coefficient, and one-way ANOVA. The findings reveal that flipped classroom model offers learning opportunities and engagement since the teacher has delivered the video material before the class. Particularly, this model also promotes active learning for some students. Moreover, the statistical analysis showed significant differences in which the flipped classroom model effectively enhances students' learning outcomes in speaking skills.

Keywords: flipped classroom, learning outcomes, speaking class, online speaking, speaking class

INTRODUCTION

Recently, the classroom teaching and learning process utilizing technological tools and applications has become a need for teachers to adapt to global teaching challenges (Arifani et al., 2020). This phenomenon has increased significantly since there was a covid-19 pandemic in which all classes had to go online. Traditional teachers who used to teach face to face have to transform into face to screen in their classroom, which

requires electronic devices and media. Many teachers adopt several multiple e-learning technologies and teaching strategies in order to suit their students' needs due to the sudden changes during the last two years (Pratiwi et al., 2021). This is also followed by numerous studies conducted in the scope of online learning for the sake of improving education and pedagogy (Hindun et al., 2021).

In the past, the conventional classroom has the most significant strength on the traditional teaching setup that allows face-to-face interaction between teachers and students (Yoon & Kim, 2020). However, traditional teaching is almost teacher-centered, which may lead to some troubles, such as students may have difficulties taking in information rapidly or lack prior knowledge needed to understand the concepts presented in class. Furthermore, much of class time is spent with the teacher explaining concepts through lecture, while students only listen and take notes and take those notes home to refer to while working through homework assignments (Egbert et al., 2015). This system could create passive learners who may struggle when they are given tasks unassisted. In addition, most students are often not exposed to the language in the environment and have little chance to practice, leading to the weak achievement of English proficiency.

Compared with those of the past, the aims and objectives of current teaching practice have moved to real-world learning situations rather than remaining inactive listeners. New trends in teaching and learning seek to enhance student-centered instruction: in which students take responsibilities for their learning in environments that encourage participation, critical thinking, problem-solving, variety of activities, group work, and meaningful interactions instead of note memorization, which results in passive students who are incapable of growth and development (Alsowat, 2016). Consequently, to continue addressing students' needs of different learning styles, teachers should consider updating their teaching methodologies to enable a supportive and creative learning environment for their students (Qader & Arslan, 2018). Those methodologies should also be combined with the advancement of technology and the internet to engage learners in learning anytime and anywhere with various high-tech learning tools available for their choosing.

Teaching online against the covid-19 pandemic depends much on the advancement of technologies because we cannot meet in person. Technology integration to push the learning process to the next level involved introducing a digital learning method on which many studies were conducted to assess its implementation in education (Sulaiman, 2018). Among the technological medium, video is an effective teaching tool that has been using by many teachers all over the world (Basal, 2015). This tool has been implemented in a pilot project of British University in Egypt to enhance students' learning by introducing the content outside the classroom and engaging in content at a deeper level inside the classroom (Soliman, 2016). The result showed that the flipped mode engaged students in active learning using higher-order thinking tasks and clearing misconceptions by discussing major issues with teachers and peers.

Yang et al. (2019) explained that a flipped classroom is a type of blended learning that reverses traditional pedagogical practice by requiring students to preview instructional

content (often online) at home and moving experiential or hands-on activities that are usually done outside of the classroom into the classroom. Time and space constraints in class do not limit this learning model because content delivery is mainly done outside of the classroom. More time can be spent in class on higher-order thinking guided by the teacher through various collaborative activities. Thus, this teaching model is usually applied at a tertiary level of education. Furthermore, flipped teaching also allows more classroom time for group discussion and clarifications that can enhance the application of previously learned knowledge (Teng, 2017).

The discussion in flipped classroom proposes in several ways, whether open class discussion or group discussion, which provides opportunities for collaborative learning and problem solving (Egbert et al., 2015). This will lead to an opportunity to promote language mastery, as online flipped learning provides an instructional design that addresses the goal of developing English language proficiency in any given learning context (Al-Zoubi & Suleiman, 2021; Marshall & Kostka, 2020). The shift from teacher-centered to student-centered instruction emphasizing active learning and feedback should be highlighted on flipped learning implementation (Lencastre et al., 2020; Teng, 2017). Another essential role in realizing a successful online flipped classroom is the implementation of technology; thus, both teachers and students have to learn to use basic technological tools (Ubaedillah et al., 2021).

Literature Review

Flipped Classroom

Theoretically, the flip model develops from F-L-I-P, which describes a flexible environment, learning culture, intentional content, and professional educators (Marshall & Kostka, 2020). The first term refers to how and where students engage in learning in which the teacher is no longer the center of the physical classroom. The second one highlights the shift from teacher-centered to student-centered instruction, emphasizing the importance of active learning. The last two terms focus on the teacher's role in facilitating learning and creating relevant content to support learning outside of class. In addition, Egbert et al. (2015) gave a detailed explanation of flipped classroom content, those are (1) meaningful activities instead of busy work; (2) teacher as a tutor rather than a director; (3) increased interaction around the content; (4) a focus on learning, not just behaving in a school way; (5) immediate feedback for students on process and progress; (6) making technology integral to learning; and (7) just-in-time instruction. In further explanation, the basic form of flipped classroom consists of pre-recorded direct-instruction lecture content made available online for students to access at home so that the student can watch the video before class and learn the content lecture on their own.

Kostka and Lockwood (2015) emphasized three meaningful insight of flipped classroom in teaching and learning process, those are: (1) flipped approach may foster independent language learning; (2) it boosts higher-order skills upside down (creating, evaluating and analyzing); and (3) it allows English language learners to learn the material at their own pace. This explanation was supported by Husnawadi (2021), who surveyed students' perceptions of the flipped classroom. The survey showed that flipped classrooms gave

students more opportunities to learn and use English in and outside the classroom, which meant students were more independent in learning and could learn anytime and anywhere. Another empirical research described that students' performance of the experimental group who learned using flipped classroom indicated statistically significant difference than those in the control group (Qader & Arslan, 2018). This also revealed that flipped classroom model could promote and boost students' higher-order thinking skills.

A comparative study on graduate students in Korea showed that online learning implementing traditional and flipped models resulted in significantly higher scores in groups who joined in the flipped classroom (Baldwin et al., 2019). Students' learning performance was measured through six online quizzes related to the course video lectures and six related individual assignments. In the Indonesian university context, flipped classrooms also stimulated students' higher-order thinking skills (creating, evaluating, and analyzing) while engaging in activities conducted in class (Riza & Setyarini, 2020). The study implemented a case study that gathered data from classroom observations, interviews with the teacher, and analysis from the teacher's lesson plan, assessment, and video lectures.

A survey study at the university of Taiwanese learners, flipped classroom perceived useful after they had experience with the instructional model, both for high and low achievers (Chen & Liu, 2019). In that study, students were given a questionnaire to explore the relative effects of students' accepted workload, preferred form of work (group or individual), and perceived usefulness of flipped classroom based on students' perceptions and acceptance of flipped classroom. Based on those studies' results, it could be concluded that flipped classrooms benefited students in the teaching and learning process both on traditional setup and online class in terms of students' learning outcomes, critical thinking, and satisfaction.

Nonetheless, flipped classrooms reported some challenges in class implementation (Egbert et al., 2015). (1) Limited knowledge of technologies on both teachers and students, which affected teaching and learning process could not run well due to inaccessible content lectures. (2) Time limitation made the students not spend more time understanding content lectures outside the class while class time could not be lesser. (3) Monotonous video lectures led to students' boredom as some students wanted to see faces and others liked narrated PowerPoint. Yoon & Kim (2020) stated that although flipped learning was effective, the same went for blended learning and conventional learning. So, it could not be said that one model was better or worse than another. Language teachers had to make an informed decision based on the needs of their students.

Speaking Class

Mastering speaking skills are essential because people can start conversing with others, delivering ideas, exchanging information to express feelings, conveying meaning, and giving opinions (Lumbangaol & Mazali, 2018). Many learners get difficulties when they have to perform directly to express their ideas or respond to other people's opinions both

in formal situations during the teaching and learning process in the classroom or in informal situations during conversation within students outside the class, especially for non-English department students (Ubaedillah, 2019). This may be caused by students' little chance to practice speaking English in their environment, whether inside or outside the classroom (Riza & Setyarini, 2020). The teaching and learning process focuses more on conceptual understanding rather than implementing language use.

According to Albino (2017), the term mastering speaking skills refers to speaking fluency linked to the meaning of communication. Furthermore, he defined speaking fluency as the learners' ability to produce a speech that is rapid and comprehensible. IELTS, which is generally reliable and valid as a testing system measuring English language proficiency, gave four bands of the speaking descriptor to measure speaking skills ability, those are (1) fluency and coherence, (2) lexical resources, (3) grammatical range and accuracy, and (4) pronunciation (Li, 2019). Each descriptor criterion has nine bands based on speaking utterances produced by the test takers or students. These standardized speaking evaluation criteria are generally used to measure students' speaking ability in some Indonesian universities.

An exploratory study in the Indonesian university context of English and non-English department students revealed that implementing appropriate methodology and strategy to teach speaking made the students more active and innovative in joining the class (Mafruudloh & Fitriati, 2020). In this case, the teacher had to decide the method based on his/her students' needs and characteristics. When we speak, we have to know vocabulary and grammar and produce and adapt them to the circumstances. However, gaining knowledge and using them in a speaking context, especially in spontaneous situations, is not always easy for EFL and ESL students. Therefore, the teacher suggested using various activities in class to stimulate the students to speak and motivate them to eliminate their speaking anxiety to speak more confidently (Safitri et al., 2020).

Another study conducted at a Korean university described that flipped learning was an effective method for teaching and learning EFL speaking skills (Yoon & Kim, 2020). That research examined students' learning outcomes of the first-year university students through an experimental study in which the control group was taught using the conventional learning method. In contrast, the experimental group was taught using the flipped learning method. The result showed a statistically significant increase between pre-test and post-test regarding fluency and coherence, lexical resources, grammatical range, accuracy, and pronunciation. The same result was also found in a study of Indonesian EFL university students in which students got improvement in their speaking skills when the teacher used flipped classroom model (Riza & Setyarini, 2020). Furthermore, the flipped model for classroom activities could prepare students well in speaking class which led to autonomous learning (Zainuddin et al., 2019)

Research Questions

Many empirical studies about students' speaking fluency have broadly been investigated (Albino, 2017; Mafruudloh & Fitriati, 2020; Riza & Setyarini, 2020; Safitri et al., 2020; Yoon & Kim, 2020). However, investigations are still rare on pedagogical

implementation and learning outcomes in terms of the flipped classroom in speaking class, especially during online class in the Indonesian university context. This study, therefore, aims to investigate the implementation of the flipped classroom in an online speaking class. Particularly, this study has the following research questions:

1. How does the teacher implement flipped model in an online speaking class?
2. What is the impact of using flip teaching on students' speaking performance?

METHOD

Participants

This study involved the first-year students of Railway Mechanical Technology in Indonesian Railway Polytechnic. There were 48 students enrolled in a general English course in the first semester of the academic year of 2020/2021. They were divided into two classes, A-class and B-class. The population was chosen because the second-year and third-year students did not get any English courses anymore. A-class belonged to a government program class in which the students would be directly recruited as government officials after they graduated. In that program, the students were required to master TOEFL ITP, which included listening comprehension, structure and written expression, and reading comprehension. B-class was a regular class like the standard class in other universities. A purposive sampling technique was used to determine the sample of the study. Only B-class was chosen as the study sample (N=24) because the students in that class were required to master speaking skills, especially during a job interview with the stakeholders after they graduated, instead of TOEFL ITP like A-class. They were at age 18 – 20 years old (male=21; female=3).

Research Design

This study employed a mixed-method research design - qualitative and quantitative. It implemented classroom-based research in an online speaking class of the Railway Mechanical Technology Program. The class was observed for the implementation of the flipped learning the students' learning outcome. The reseach procedure was started by giving a speaking pre-test to the students before beginning the class. A post-test was arranged after the program ended. The class lasted for four meetings using flipped learning model, which were done online through zoom meeting. Each meeting lasted for 2 hours. All of the teaching and learning processes were recorded and then analyzed to answer the first research question, while the second research question was the result of pre-test and post-test analysis.

Table 1
Research procedure

Pre-test	Class	Posttest
O	X (4 times)	O

Data Collection and Analysis

The first data was collected through classroom observation, in which the researcher took notes of scaffolding steps in the teaching and learning process of the flipped model. This was done for four meetings. Since the class was conducted online through zoom

meeting, it could be recorded, which could help get a deeper understanding of describing the teaching and learning process by repeating to play the video recording to complete the observation note. This note then would be analyzed and described into qualitative data. The analysis was presented in descriptive qualitative to answer the first research question about implementing the flipped classroom in an online speaking class.

The second data was collected from pre-test and post-test scores. The test was in the form of video recording in which the students described his/herself in a formal situation. Due to the stakeholders' requirement during a job interview, this topic was chosen, that the students were asked to create a video introducing themselves. The pre-test video was created before the students joined the classes, so it would be used for knowing the students' speaking performance before joining an online speaking class with flipped learning model. The post-test video was made after the students finished the class. Those pre-test and post-test videos of each student would be evaluated based on IELTS speaking band descriptor (see appendix 1). The teacher, as the class instructor, did the evaluation process. Both scores would be analyzed using paired sample t-test, Pearson r correlation, and Cohen d coefficient.

Paired sample t-test was calculated to look at the flipped classroom in online speaking class impact on students' learning outcomes from pre-test to post-test. This analysis could be counted by comparing the sum of differences (pre-test and post-test) and the total number of the sample in specific formula (Cohen et al., 2017). In this study, this calculation was done in SPSS 18.

Pearson r correlation was used to know the relationship between the pre-test and post-test of implementing a flipped classroom in an online speaking class. It could be calculated by comparing pre-test and post-test scores and the mean of each test score with the standard deviation of pre-test and post-test. This calculation was done in SPSS 18.

Pearson r coefficients vary between -1 and +1, with +1 indicating a perfect positive relationship and -1 a perfect negative relationship, and 0 = no relationship (Muijs, 2010). The coefficient results could be interpreted as follow:

Table 2
Effect size of pearson correlation coefficient

Pearson Coefficient	Pearson Correlation Interpretation
$1.0 \leq r \geq 0.8$	Very strong
$0.8 > r \geq 0.5$	Strong
$0.5 > r \geq 0.3$	Moderate
$0.3 > r \geq 0.1$	Modest
$0.1 > r \geq 0.0$	Weak

Cohen d coefficient was calculated to see the size effect of a flipped classroom in an online speaking class impacts the students' learning outcomes. It could be counted by comparing the mean of pre-test and post-test with the standard deviation using the formula below (York, 2017). In this study, the calculation was done in Microsoft Excel 2019.

$$d = \frac{\overline{x_1} - \overline{x_2}}{s}$$

$\overline{x_1}$ = mean of the post-test result

$\overline{x_2}$ = mean of the pre-test result
s = standard deviation

Moreover, the results of the Cohen d coefficient could be interpreted as follow:

Table 3
Effect size of cohen correlation coefficient

Cohen Coefficient	Cohen Correlation Interpretation
$d > 0.8$	Strong
$0.8 \geq d > 0.5$	Moderate
$0.5 \geq d > 0.2$	Modest
$0.2 > d > 0.0$	Weak

The last step of the analysis was done through one-way ANOVA. This analysis revealed statistical differences among students in the Railway Mechanical Technology study program in terms of each band on IELTS speaking band descriptor; those are fluency and coherence; lexical resources; grammatical range and accuracy; and pronunciation. The score on each band range from 0 to 9.

FINDINGS

The first step of this study was conducting a pre-test to the participants, all students in B-class (N = 24). On the pre-test, the students had to create a 5-minute video individually about introducing himself/herself and mentioning all information needed when they wanted to apply for a job. The video had to be uploaded in Google classroom before the first meeting of the online speaking class started.

The next step was observing the online speaking class through the Zoom meeting platform. Classroom observation briefly described how the teacher implemented a flipped classroom in an online speaking class. After conducting the pre-test, the teacher shared the online speaking class schedule with their students and gave the first Youtube video link as the first material discussed the following week. The teachers asked the students to watch the video and create the same content about introducing themselves for 2 minutes. It consisted of name, place, date of birth, address, class, major, and motivation studying in Indonesian Railway Polytechnic, particularly in Railway Mechanical Technology.

Table 4
Class schedule

Meeting	Material	Platforms
	Pre-test	Google Classroom
1	Basic Introduction	Youtube, Zoom
2	Skills You Have	Youtube, Zoom
3	Strengths and Weaknesses	Youtube, Zoom
4	Review	Youtube, Zoom
	Post-test	Google Classroom

At the first meeting, the class was started with a discussion on the video and its content. It was done through the Zoom meeting platform. Several students asked the teacher some questions regarding the information presented in the introduction section. After that, each student had to introduce themselves in class. The teacher gave feedback to the student directly after he/she finished the turn. The feedback given was based on the IELTS speaking band descriptor in terms of fluency and coherence, lexical resources; grammatical range and accuracy; and pronunciation. This direct feedback aimed to correct students' performance and gave examples for the next student who had to perform not to make any incorrect language use or pronunciation. At the end of the meeting, the teacher concluded the first meeting results and gave a second video link that the students should watch and study before they joined the second meeting the following week. The second video content was about describing the skills that each student had to promote his/herself in front of the stakeholders.

At the second meeting, the teacher discussed the video given, which presented the required skills for applying for the job. Then it was continued to discuss students' skills that could support their performance in their future workplace. The teacher gave several questions regarding railway mechanical technology and other soft skills such as operating computer programs related to their major and English language competency. These activities were done to make sure that the students got a deep understanding of the topic. After that, each student performed one by one to tell about their skills for reaching their future job. During the students' performance, the teacher took some notes for evaluating and giving feedback to the students. Unlike the first meeting, the feedback on the second meeting was given after all students have done their presentation. The teacher discussed the feedback and washback of the second meeting and gave some suggestions to improve students' speaking skills. Before closing the class, the teacher gave the video link for the next meeting as before.

The third meeting was about the strengths and weaknesses that the students had for supporting their future careers. Based on the video given the previous week, it was suggested that the students had to present several strengths of their skills and attitude. Then they had to mention their weaknesses and offer a solution to overcome those weaknesses so that those weaknesses would not disturb or lower their work performance. Finished having a discussion, the teacher asked students to perform one by one. At this meeting, feedback was given by the teacher during the student's performance to make sure that the student's content, coherence, vocabulary, grammatical use, and pronunciation were correct. When all students have done their

performance, the teacher gave feedback in general for all classes and reminded them to replay the third video shared on the previous meetings (1st – 3rd) before joining the last speaking class meeting on the following week.

The last meeting was about review in which the students were asked to perform three materials discussed in the previous week on one session directly. Each student was given 5 minutes to present their basic information as an introduction, skills they acquired, and strengths and weaknesses. As this meeting was used to review the material, the teacher did not start the class with a lengthy discussion but recalling the memory from the previous session. After that, the student performed one by one, and the teacher gave feedback directly. During this meeting, the teacher also asked their peer to provide feedback for their friends by filling up a Google form. This was done to give the students a deep and complete understanding and feedback about their speaking skills that would benefit their future careers and the washback of their performance.

At the last meeting, the teacher also announced to the students about the post-test instruction. The students had to create a 5-minute video consisting of basic introduction, skills, and strengths and weaknesses. They were given a week to prepare the video, and it had to be uploaded on Google classroom the following week. The pre-test and post-test videos were scored based on IELTS speaking band descriptor then analyzed using several data analyses mentioned above to answer the second research question. The results of the pre-test and post-test were shown in table 5 below.

Table 5
Pre-test and post-test score

Score	Pre-test		Post-test	
	Total Students	Percentage	Total Students	Percentage
0	1	4.17%	-	-
1	5	20.83%	-	-
2	2	8.33%	-	-
2.5	6	25%	-	-
3	4	16.67%	8	33.33%
3.5	3	12.5%	4	16.67%
4	3	12.5%	6	25%
4.5	-	-	4	16.67%
5	-	-	2	8.33%
6	-	-	-	-
7	-	-	-	-
8	-	-	-	-
9	-	-	-	-

Table 6
Descriptive statistics

Score Band	Test	Mean	SD	Min	Max	Skewness	Kurtosis
Fluency and Coherence	Pre-	2.46	1.14	0	4	-.46	-.68
	Post-	3.75	0.79	2	5	-.71	-.35
Lexical Resources	Pre-	2.25	1.15	0	4	-.21	-.68
	Post-	3.75	0.94	2	6	.55	-.03
Grammatical Range and Accuracy	Pre-	2.5	1.21	0	5	-.16	-.35
	Post-	3.83	0.82	2	5	-.20	-.40
Pronunciation	Pre-	2.54	1.25	0	5	-.18	-.54
	Post-	3.67	0.82	2	5	.20	-.58
Total Scores	Pre-	2.44	1.11	0	4	-.47	-.57
	Post-	3.75	0.68	3	5	.35	-1.07

Before analyzing the pre-test and post-test scores, they had to be analyzed using a descriptive statistic to know the data distribution. In total, the mean of the students' scores (N = 24) indicated an increase from 2.44 (SD = 1.11) to 3.75 (SD = 0.68). For each band, the means of students' scores also showed improvement: fluency and coherence band from 2.46 (SD = 1.14) to 3.75 (SD =0.79); lexical resources band from 2.25 (SD = 1.15) to 3.75 (SD = 0.94); grammatical range and accuracy band from 2.5 (SD – 1.21) to 3.83 (SD = 0.82); and pronunciation band from 2.54 (SD = 1.25) to 3.67 (SD = 0.82). Based on skewness and kurtosis values, the data in table 2 were normally distributed because the results laid between -2 and +2. These findings meant that the data could be analyzed in the paired-sample t-test.

Table 7
Paired-sample t-test

Pre-test Post-test	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std Deviation	Std Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Fluency and Coherence	1.29	.75	.15	1.61	.97	8.43	23	.00
Lexical Resources	1.5	.98	.20	1.91	1.09	7.51	23	.00
Grammatical Range and Accuracy	1.25	.94	.19	1.65	.85	6.49	23	.00
Pronunciation	1.29	1.04	.21	1.73	.85	6.08	23	.00
Total	1.31	.70	.14	1.61	1.02	9.13	23	.00

A paired-sample t-test was conducted to compare the means of students' scores before and after joining flipped model in online speaking class. In total, there was a significant difference in students' scores for pre-test and post-test which resulted M = 1.31; SD = 0.70; t (23) = 9.13, p = .000. These indicated that the flipped model in online speaking class significantly impacted students' learning achievement. In fluency and coherence band, there was also increasing trend from pre-test and post-test which resulted M = 1.29; SD = 0.75 t (23) = 8.43, p = .000. The trends both in lexical resources and grammatical range and accuracy bands were incline from pre-test and post-test. Lexical resources band was M = 1.50; SD = 0.98 t (23) = 7.51, p = .000. Grammatical range and

accuracy band resulted M = 1.25; SD = 0.94 t (23) = 6.48, p = .000. The last band, pronunciation, it resulted M = 1.29; SD = 1.04 t (23) = 6.08, p = .000.

Pearson r coefficient was calculated to know the correlation between pre-test and post-test. From the data, it could be seen that the total scores of pre-test and post-test showed a strong correlation which meant that the flipped model in online speaking class improved students' scores significantly. The results were the same with the total scores on fluency and coherence and grammatical range and accuracy bands, which was the strong effect. Unlike those three categories, the correlation between lexical resources and pronunciation bands showed a moderate effect.

Table 8
Pearson correlation

Score Band	Test	Mean	SD	Pearson Correlation	Sig (2-tailed)
Fluency and Coherence	Pre-	2.46	1.14	0.76	0.000
	Post-	3.75	0.79		
Lexical Resources	Pre-	2.25	1.15	0.58	0.003
	Post-	3.75	0.94		
Grammatical Range and Accuracy	Pre-	2.5	1.21	0.61	0.001
	Post-	3.83	0.82		
Pronunciation	Pre-	2.54	1.25	0.40	0.540
	Post-	3.67	0.82		
Total Scores	Pre-	2.44	1.11	0.80	0.000
	Post-	3.75	0.68		

The Cohen d effect size of the flipped model in online speaking class was strong in all aspects, total scores, and all bands (fluency and coherence, lexical resources, grammatical range and accuracy, and pronunciation). This meant that implementing flipped model in the online speaking class strongly affected students' learning outcomes.

Table 9
Cohen's d effect size

Pair (Pre-test and Post-test)	Cohen's d	Effect Size
Fluency and Coherence	1.31	strong
Lexical Resources	1.43	strong
Grammatical Range dan Accuracy	1.29	strong
Pronunciation	1.61	strong
Total	1.42	strong

Based on the One-way ANOVA calculation in table 11, there were different results in the total score and each band. On total score and fluency and coherence, lexical resources, and grammatical range and accuracy bands, the sig result was .000, while on pronunciation band, the sig = .001. Although there were different sig results, it did not have different interpretations because in assuming one-way ANOVA, if the sig. result > 0.05, it meant that the means were the same (no differences).

Table 10
One-way ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Fluency and Coherence	Between Groups	20.021	1	20.021		
	Within Groups	44.458	46	.966	20.715	.000
	Total	66.479	47			
Lexical Resources	Between Groups	27.000	1	27.000		
	Within Groups	51.000	46	1.109	24.353	.000
	Total	78.000	47			
Grammatical Range and Accuracy	Between Groups	21.333	1	21.333		
	Within Groups	49.333	46	1.072	19.892	.000
	Total	70.667	47			
Pronunciation	Between Groups	15.188	1	15.188		
	Within Groups	51.292	46	1.115	13.621	.001
	Total	66.479	47			
Total Scores	Between Groups	20.672	1	20.672		
	Within Groups	39.158	46	.851	24.285	.000
	Total	59.828	47			

DISCUSSION

The implementation of the flipped model in the online speaking class has been discussed previously. The class lasted for four meetings (1 meeting/week; 2 hours/meeting), with each different material in every meeting. The online speaking class implementing flipped model utilized some digital platforms, such as Google Classroom, Youtube, and Zoom meeting. In creating flipped classroom, there are several things that teacher needed to point out for having a successful class: (1) determining class goal; (2) designing lesson plan which includes class schedule and material; (3) preparing video; (4) discussing the material in class; (5) assessing the outcome; and (6) evaluating the experience. The learning goal should be in line with students' needs in learning English. In this study, the students had to meet stakeholders' requirements for creating an introduction video. Therefore, the materials focused on the introduction part. The video that is used in class has to be prepared or recorded before the class. It is suggested to include animations or quizzes to engage students rather than simply capture lectures (Basal, 2015). By having this video, students have more time to spend with the material and rewind if they want to reaccess the material or speed through what they have already understood (Egbert et al., 2015).

Furthermore, the flipped learning model in an online speaking class presented in this study offers two kinds of flipped learning approaches: asynchronous and synchronous. The asynchronous learning is done through Youtube videos given to the students each week of the previous meeting and video recording done by the students, which have to be uploaded in Google classroom during pre-test and post-test. The synchronous learning is done by utilizing the Zoom meeting platform, which adopted eight steps of SOFLA (Synchronous Online Flipped Learning Approach): (1) pre-work, (2) sign-in activity, (3) whole group discussion, (4) breakouts, (5) shareouts, (6) preview and discovery, (7) assignment instructions, and (8) reflection (Marshall & Kostka, 2020). However, the observation results showed that the eight steps could not run well on the first and third Zoom meetings. The last step, reflection, could not be done at the first

meeting due to the lack of time. While on the third meeting, breakouts and shareouts time could not be done because there was trouble on the Zoom meeting platform so that the teacher could not breakouts the room to have the small-group discussion. During the second and fourth meetings, the eight steps could be done thoroughly, resulting in students' comprehensive understanding of the material.

The students have been assessed and evaluated through pre-test and post-test, which were conducted before and after the online speaking class. Through the IELTS speaking band descriptor, it could be found that there was one student (4.17%) who did not submit the video during the pre-test. A high percentage of the students, 20.83% (5 students), showed no communication possible with no rateable language. Two students (8.33%) performed with a long pause, produced isolated words in unintelligible pronounce, and could not use simple basic form. In better performance (level 3), four students conveyed the basic message with simple vocabulary in simple basic sentence form. The best performance on the pre-test was on level 4, in which three students (12.5%) achieved this level as they could link basic sentences but with frequent repetitions, self-corrections, errors, and mispronounce. The rest of the students were in level 2.5 (6 students, 25%) and 3.5 (3 students, 12.5%), in which their performances were in between level 2 and 3 for level 2.5 and in between level 3 and 4 for level 3.5.

On post-test, students performed better in which the lowest level was in level 3, and the highest was in level 5. In level 3, there were eight students (33.33%), followed by four students (16.67%) at a slightly higher level, which was 3.5. Students in level 4 were 25% (6) and four students (16.67%) in the 4.5 level. In level 5, two students (8.33%) produced simple speech fluently in basic sentence form, but more complex communication caused fluency problems; attempted to paraphrase but with mixed success; had reasonable accuracy and could use some pronunciation features.

Students' learning outcomes on pre-test and post-test have been analyzed in comprehensive ways to get a broader understanding of the effectiveness of the flipped model in online speaking classes. The first analysis of the descriptive statistics method has shown significant improvement on the mean of total scores and each speaking band descriptor. The analysis of the paired-sample t-test revealed that there is a considerable impact of the flipped classroom in the online speaking class. This is supported by the Pearson r correlation, which shows the strong effect on total scores and the three speaking band descriptors (fluency and coherence, lexical, grammatical resources and accuracy, and pronunciation). In contrast, on lexical resources, the effect is moderate. The effect size on the Cohen d coefficient describes that it strongly affects improving students' learning outcomes in all speaking band descriptors and total scores. The last analysis on one-way ANOVA defines no difference in the post-test improvement results between the group, within the group, and in total participants whether in total score and each speaking band descriptor.

Compared to the traditional method, the flipped classroom has shown more benefits in its implementation, especially in online learning during the covid-19 pandemic (Kostka & Lockwood, 2015). This study supports this finding as the flipped model in online speaking brought some advantages. First, the findings have shown that flipped model

improved students' speaking performance significantly in the online speaking class. This is in line with previous research studies conducted in online classes, which found that flipped learning was an effective method of improving students' learning outcomes in speaking skills (Chen & Liu, 2019; Ubaedillah & Pratiwi, 2021). Second, there is more time for the students to practice in online class during Zoom meetings as they have already had prior knowledge about the materials, so the teacher does not need many times to explain it. The Zoom meetings are used for discussion and students' practice. This means that flipped model in the online speaking class is a kind of student-centered learning (Mulyadi et al., 2021; Pratiwi et al., 2016) which could promote students' active learning (Al Mulhim, 2020) and higher-order thinking skill (Riza & Setyarini, 2020) through class discussion. Third, the material of flipped model online speaking class can be accessed anywhere and anytime so that the students have plenty of time to practice more outside the classroom. In this case, the students have the flexibility to study in the flipped model of online speaking class (Yoon & Kim, 2020). The learning process could be more enjoyable and enhance their learning motivation (Phoeun & Sengsri, 2021).

CONCLUSION

There are no exact steps or design ideas on how to design a flip model. In many works of literature, flipped instruction described how the students simply watch the video lectures outside of class and complete activities in class. However, it did not directly fit the students' needs or context very well (Egbert et al., 2015). Nevertheless, there is limited empirical research on flipped learning, particularly in the Indonesian university context's online classroom and speaking skills. This study highlights the implementation of the flipped classroom in an online speaking class could be one alternative model for fulfilling the need for online learning during the covid-19 pandemic. Besides, this model effectively improves students' learning outcomes and promotes active learning during the teaching and learning process. The students have had the basic knowledge from the materials discussed in class. Thus, the students can follow the discussion well as they know what the material being presented in class was and ask the questions if there was any point they could not get. Furthermore, the findings of this study could inform the process of conducting flipped classrooms and establishing best practices in online speaking classes. The students' learning outcomes analysis has been presented to answer the second research question.

Some limitations should be acknowledged in this study as this study only focuses on the pedagogical implications and the evaluation of the flipped model in an online speaking class. This is also classroom-based research in which only one group of students is observed. The findings might have different results if the study uses other research designs, such as experimental research. Future research is suggested to study students' response and feedback of flipped in an online speaking class by giving questionnaire and teacher's perception by having an interview or filling-up open-ended questionnaire. Broadening the topic into other language skills, such as listening, reading, or writing, is also recommended to get a comprehensible concept of conducting flipped model in an online class.

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