



The Effect of the Flipped Classroom Model on Self Efficacy Student in Limited Face Learning

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Abstract: Learning can run well and achieve the desired goals if students feel comfortable and not pressured and have high self-efficacy. Learning activities in Indonesia at the beginning of the COVID-19 pandemic had to be carried out through online or online distance learning, which had an influence on students' self-efficacy. During the research, MI Ar Rahmah, Bengle Village, Majalaya District, Karawang Regency, did not fully offline or face-to-face learning at school, so learning used offline and online methods. The learning model that can be applied in situations like this is the flipped classroom model. In learning using the flipped classroom learning model, it is expected that there will be an influence on students' self-efficacy. This study was conducted to prove whether or not there are differences in the self-efficacy of students who use the flipped classroom model and those who do not use the flipped classroom model in limited face-to-face learning at MI Ar Rahmah, Bengle Village, Majalaya District, Karawang Regency.

Keywords: Flipped Classroom; Limited Face Learning; Self Efficacy

Introduction

Learning activities in Indonesia at the start of the COVID-19 pandemic had to be carried out online or through distance learning. Pattanang, et al (in Ode et al., 2021) said during the implementation of distance learning, there were several problems, so that the quality of education in Indonesia was considered to have decreased compared to other countries during the COVID-19 pandemic.

Learning can run smoothly and achieve the desired goals if students feel comfortable, are not pressured, and have high self-efficacy. Self-efficacy is the self-confidence possessed by each individual in completing tasks and problems faced in certain situations and conditions so that they are able to overcome obstacles and achieve a predetermined goal (Jatisunda, 2017).

Self-efficacy can lead to different behaviors among individuals with the same abilities because self-efficacy influences choices, goals, problem solving, and persistence in trying. The positive influence of self-efficacy is indeed very large if a person has high efficacy, but if a person or individual who has low efficacy

considers himself unable to do what he should be able to do (Novena & Kriswandani, 2018).

In the context of education, self-efficacy needs to be owned by every student so that they are confident in their abilities and that no matter how difficult the material or practice questions are, they are sure they can solve them. In addition, self-efficacy encourages students to further mature themselves as a form of preparation for facing challenges.

Based on the researchers' initial observations on the process of learning activities at MI Ar Rahmah, Bengle Village, Majalaya District, and Karawang Regency, it is known that the process of face-to-face learning activities at school is not full every day. In other words, learning activities at MI Ar Rahmah use limited face-to-face learning.

The learning process is currently not fully offline or face-to-face at school, so learning uses both offline and online methods. According to Johnson, a flipped classroom is a method in the learning process that reduces the capacity of learning activities in the classroom by maximizing interaction with each other, namely teachers, students, and their environment (Sari

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et al., 2023). The learning model that can be applied in situations like this is the flipped classroom model. The flipped classroom learning model can be applied to limited face-to-face learning because it combines learning outside the classroom and in the classroom (Supriatna, 2021). Flipped Classroom can also be defined as a learning model that "reverses" traditional methods, where material is usually given in class and students do assignments at home (Sukmana & Suartama, 2019). According to Reigeluth et al., (In Agustin & Rindaningsih, 2022) in a flipped classroom, students must meet regularly in face-to-face settings; they must have access to technology used to communicate outside the classroom; and designed classroom learning must include student-centered assignments completed as part of the learning community.

The choice of the flipped classroom model is in line with the demands of 21st century competence, which directs the educational process to support active student learning, so that ideally the flipped classroom is designed in a structured manner by combining teaching practices with constructivist learning (Destriani & Warsah, 2022). A flipped classroom is a form of blended learning (through face-to-face and virtual/online interactions) that combines synchronous learning with asynchronous independent learning. Synchronous learning usually occurs in real time in the classroom. Students interact with a teacher and classmates and receive feedback at the same time (Gawise et al., 2021). A flipped classroom is a learning environment where students are designed to be better prepared to learn when they come to school (Sukma & Ulia, 2022).

The Flipped Classroom learning model makes students feel more interested in participating in lessons, so they are more enthusiastic and feel happier when the lesson takes place. The flipped classroom learning model is a reversal of traditional learning procedures, where what is usually done in class in traditional learning is carried out at home in a flipped classroom (Wibowo et al., 2021). This can foster learning motivation for students, which will have a positive impact on their learning outcomes (Delina Rusnawati, 2020). The flipped classroom learning model is an active learning design that requires students to complete assigned pre-class learning activities in preparation for face-to-face sessions. In learning using the flipped classroom learning model, it is hoped that there will be an influence on student self-efficacy. In applying the flipped classroom learning model, students' sense of self-efficacy is expected to increase by itself because they gain learning experience through material provided through online learning before participating in learning activities in class.

Bergmann & Sams said the flipped Classroom Model is a new pedagogical model where the instructor shares predetermined digital resources with students through a platform outside the classroom, and related content is also taught through this outside platform asynchronously (Cabi, 2018). Bergmann, J., & Sams (Fauzi et al., 2022) argue that "Basically the concept of a flipped class is this: that which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class. Bishop and Verleger contended that a flipped classroom is an educational technique which consists of two significant components: (1) the use of computer technologies such as video lectures and (2) the involvement of interactive learning activities. Flipped classroom is an active, student-centered approach that was formed to increase the quality of period within class (Ozdamli & Asiksoy, 2016). The role of the flipped classroom model in presenting personal factors and personal behavior to students and teachers also requires meaningful learning support (Ramadhani et al., 2022).

The flipped classroom emphasizes the active participation of students in classroom activities (Sun & Wu, 2020). In the first learning stage, knowledge is transferred to the student through the Internet, without temporal or spatial constraints, to enable self-directed learning outside class. In the second learning stage, through peer and teacher-student collaborations and classroom interactions, students internalize the course material after adequate practice (Johnson et al., 2014). In theory, flipping the classroom appears sound: passive learning activities such as unidirectional lectures are pushed to outside class hours in the form of videos, and precious class time is spent on active learning activities (Mok, 2014).

Flipped classrooms may eliminate the ineffectiveness of face-to-face lessons and support lectures with the use of technology (Ahmad Basal, 2015). The literature indicates that a flipped classroom is effective in terms of increasing the grades of students when compared to a traditional, lecture-based class (Day & Foley, 2006). The flipped classroom provides a new methodology and modality for teaching and learning, which constitutes a role change for instructors who give up their front-of-the-class position in favor of a more cooperative and collaborative contribution to the teaching process (DU et al., 2014).

Based on the existing problems, the objectives to be achieved in this study are "to prove whether or not there are differences in the self-efficacy of grade IV students who use the flipped classroom model and those who do not use the flipped classroom model in limited face-to-face learning at MI Ar Rahmah, Benge Village, District Majalaya, Karawang Regency.

Method

This research was conducted at MI Ar Rahmah Bengle Village, Majalaya District, Karawang Regency, for the 2021–2022 academic year using a quantitative approach, namely experimental research that compared two different classes, namely the control class and the experimental class, with different learning models. The experimental class used the flipped classroom learning model, while the control class did not use the flipped classroom learning model but instead used the conventional learning model

The research was conducted on April 20–21, 2022. On April 20, 2022, the researchers gave an online pre-test for the experimental class and control class because it coincided with the online schedule for class IV. Apart from giving an online pre-test, in the experimental class, the researcher also provided a learning video about style and gave instructions to students in the experimental class regarding the material to be discussed in class. While in the control class, the researcher only gave assignments during online learning.

Then, on April 21, 2022, the research was carried out face-to-face in class. In the experimental class, the researcher first asked how far the students' knowledge of the style that had been previously studied at home had advanced, then reviewed the material about the style that had been conveyed in the learning video and gave students the opportunity to ask about material that was not understood, then gave practice questions about style. Whereas in the control class, the researcher only applied conventional learning, namely, the researcher explained material about style using the lecture method, then gave students the opportunity to hold a question-and-answer discussion, then gave practice questions about style. After learning was carried out in the control class and the experimental class, the researcher gave a post-test.

This research belongs to the true experimental design type using the pretest-posttest control group design. In this design, there are two groups selected using certain criteria, then given a pretest to find out whether there is a difference in the initial state between the experimental group and the control group (Sugiyono, 2017). The pattern of this research design is as follows:

Table 1. Pretest-Posttest Control Group Design

Class	Pre-test	Treatment	Post-test
Experiment	O ₁	X	O ₂
Control	O ₃	-	O ₄

Result and Discussion

Research data collected from pretest and posttest results the final test was given to experimental class students and control class students. The following presents statistical data for the final calculation of the student self-efficacy questionnaire given to students in the experimental class and control class, which was carried out before and after the learning process.

Table 2. Descriptive Statistics

N	Min.	Max.	Mean	Std. Deviation
Pre-test Experiment	11	16	13.52	1.671
Post-test Experiment	15	20	17.45	1.630
Pre-test Control	13	18	15.58	1.608
Post-test Control	14	19	16.32	1.536

Based on Table 2 regarding descriptive statistics, it can be seen that the average pre-test score for the experimental class was 13.52 and the average pre-test score for the control class was 15.58. This shows that the average score of the experimental class is smaller than that of the control class. The maximum pre-test score for the experimental class is 16 and the control class reaches 18, while the minimum score for the experimental class is 11 and the minimum score for the control class is 13.

After analyzing the data, the final result is that the self-efficacy of students who use the flipped classroom learning model is higher than that of those who do not, with a significant difference. This can be seen from the pre-test and post-test scores obtained by both groups. In the pre-test, the experimental class got an average score of 13.52, while the average score of the control class was higher, namely 15.58. The maximum pre-test score in the experimental class is 16, while the control class is 18. The minimum pre-test score for the experimental class is 11, and the control class is 13. Then, after being given different treatments, the experimental class gets an average score of 17.45, with a maximum score of 20 and a minimum score of 15. Meanwhile, the average score of the control class only reached 16.32, with a maximum score of 19 and a minimum score of 14. It can be seen that the experimental class received a greater improvement compared to the control class.

Hypothesis testing was carried out to find out whether there were differences in the average final data on the self-efficacy of students in the experimental class and the control class. In this study, researchers conducted hypothesis testing using independent sample t-test data with the help of the SPSS v.25 program.

Table 3. Calculation Results of the Independent Samples Test Hypothesis Test

		Levene's Test for Equality of Variances				t-test for Equality of Means			95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig.(2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Self Efficacy	Equal variances assumed	.110	.741	2.807	60	.007	1.129	.402	.324	1.934
	Equal Variances not assumed			2.8	59.791	.007	1.129	.402	.324	1.93

Based on table 3 regarding the calculation results of the Independent Samples Test, or t-test, it can be seen that the t-count value obtained is 2.807 greater than the t-table 1.699 and the 2-tailed significance is 0.007, so H_0 is rejected and H_a is accepted. This shows that there is a significant difference in average between the experimental class and the control class. A positive t-count value indicates that the average experimental class is higher than the average control class.

The results of the t-test show that there is an effect of learning using the flipped classroom model on student self-efficacy. This is in accordance with the results of data processing in the SPSS v.25 program using the t-test analysis with a significant level of 0.05. The results of the data calculations show that sig = 0.007. From the calculation process, the t-count value is 2.807 and the t-table value is 1.699, so it can be seen that the comparison between the t-count and the t-table is greater than the t-table (tcount = 2.807 > ttable = 1.699). Thus, if H_a is accepted and H_0 is rejected, it can be concluded that there is a significant difference in student self-efficacy between classes that use the flipped classroom model and the self-efficacy of students who do not use the flipped classroom model.

The flipped classroom learning model in this study is used as a learning model to measure student self-efficacy. Students who study with the flipped classroom learning model are more active in the learning process, have high self-confidence when answering questions given by the teacher, and have good learning independence after previously only carrying out learning at home due to the COVID-19 pandemic. This can make it easier for students to understand material about style.

The flipped classroom learning model is very influential on student self-efficacy because, by using the flipped classroom model, students become more active in the learning process, have high self-confidence when answering questions given by the teacher, and have good learning independence. In addition, self-efficacy can be influenced by the experience of success (the master experience), the experiences of others, verbal

persuasion, and the physiological and emotional conditions of each individual. From these factors, success is an experience that is felt directly by each individual. In general, successful performance is able to increase self-efficacy. Students who have experienced success in learning and have learned a subject matter will have high self-confidence (self-efficacy). Conversely, students who have experienced failure in learning and students who have never studied a subject matter at all will have self-efficacy that tends to be low (Hakim, 2015). The flipped classroom can be used to enhance learning and is not meant as a means to just record boring class lectures and force the students to watch them on their own time (Schmidt & Ralph, 2016). Flipped classroom is proven to improve student learning outcomes. In addition to learning outcomes, flipped classrooms can also improve critical thinking skills and communication skills so that this model can be used as a way for students to have 21st century skills (Yulianti & Wulandari, 2021). So, the self-efficacy of students who are given the flipped classroom model treatment is better than the self-efficacy of students who are not given the flipped classroom model.

Based on the results above, it can be seen that the flipped classroom model is better applied to students' learning activities. This is supported by the results of previous studies, which provide strong evidence for teachers to apply to learning activities in schools.

Conclusion

Based on the results of research that has been carried out by researchers, it can be concluded that learning activities using the flipped classroom model can have a positive effect on student self-efficacy in class IV MI. Ar Rahmah. These results can be seen through the results of the analysis of hypothesis testing, which was carried out with the t-test assisted by the SPSS v.25 program with a significant level of 0.05. The results of the data calculations show that sig = 0.007. From the calculation process, the t-count value is 2.807 and the t-table value is 1.699, so it can be seen that the comparison

between the t-count and the t-table is greater than the t-table ($t_{count} = 2.807 > t_{table} = 1.699$). Thus, if H_a is accepted and H_o is rejected, it can be concluded that there is a significant difference in student self-efficacy between classes that use the flipped classroom model and the self-efficacy of students who do not use the flipped classroom model.

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Author Contributions

Conceptualization: Yulistina Nur DS, data curation: Fajar Febriansyah, funding acquisition: Ayu Fitri, methodology: Yulistina Nur DS, visualization: Tia Latifatu Sadiah, writing-original draft: Yulistina Nur DS, writing-review & editing: Yulistina Nur DS, Ayu Fitri, Tia Latifatu Sadiah, Fajar Febriansyah.

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Conflicts of Interest

No conflicts of interest.

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