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The Influence of the Flipped Classroom Model to Improves the Critical Thinking Skills Students

Ruslan Hasyim[1], Muhaiminah Akib[2], Fitri Fatika Astini[3]
[1 2 3]Universitas Muhammadiyah Sorong, Indonesia

[1]ruslanruse89@gmail.com , [2]mina.akib@gmail.com , and [3]Fitri.fatika19@gmail.com

**ruslanruse89@gmail.com*

Abstract

Critical thinking skills must be trained in learning, therefore researchers tried to apply the flipped class method to improve students' critical thinking. Research was conducted to describe the profile of critical thinking abilities through the implementation of flipped classes. The type of research used is quantitative descriptive research. The research uses a quasi-experimental design (quasi-experimental research). Data collection was obtained using test techniques. The test is used to measure critical thinking skills in accordance with the critical thinking indicator, namely FRISCO (Fokus, Reason, Inference, Situation, Clarity, and Overview). Data were analyzed using percentage correction and Ancova. The profile of students' critical thinking ability scores before treatment in the experimental class obtained an average of 38.30 (low). After implementing the flipped class, the thinking ability in the experimental class obtained an average of 86.00 (very high). Based on this analysis, it can be concluded that the profile Students' critical thinking abilities can be trained and improved through the implementation of flipped classroom learning.

Keywords**:** *Critical thinking, Flipped Classroom, Frisco*

INTRODUCTION

Critical thinking is a thinking process where someone manages their thinking more deeply, not how to think hard, but how their critical thinking skills are processed in more detailed thinking, something that is made concrete. According to Hidayah (2014:25) critical thinking is a cognitive activity related to the use of reasoning/thinking powers. Meanwhile, according to Slameto (2015:51) thinking is an activity to find true knowledge. Therefore, each person has a different pattern of thinking because the knowledge process is critical from a perspective. individual (Ennis, 1996). Students' low critical thinking skills can cause the following: students are unable to solve problems and offer solutions, which will form an inactive student character.

According to Retno et al., (2018) someone is said to have thought critically if knows the essence of the problem being faced have an opinion about the problem; can express problems can put forward a

hypothesis can make a summary of the problem, can prove a hypothesis can draw conclusions; and know the consequences of the decisions taken. According to Indawati (2021), a student is said to have critical thinking if he is able to think logically, is able to select and sort valid and relevant information and the results of his thinking follow the times. because this has not been drilled into learning, while according to Zubaidah (2010) this ability can be formed in learning. This is in accordance with the opinion of Choy & Cheah (2009) which states that critical thinking skills require continuous guidance. Students' low critical thinking abilities are related to the choice of learning methods (van Peppen et al., 2021).

By checking again. Students' low critical thinking abilities can cause the following: students are unable to solve problems and offer solutions, this will create an inactive student character and lack of self-confidence, and students are often inaccurate in defining learning theories (Rachmedita et al., 2017) . If this problem is allowed to continue to occur, it could give birth to a generation of mental decline in the nation and cause students' futures to become less bright (Luzyawati, 2017). Low critical thinking ability. According to Cahyono (2017), someone who thinks critically has the following characteristics can solve problem can analyze, analyze information can draw conclusions correctly. According to Indawati (2021), a student is said to have critical thinking if he is able to think logically, is able to select and sort valid and relevant information and the results of his thinking follow the times.

Learning model that can be expected to improve critical thinking skills is the flipped class learning model (Agung, 2021; Lee & Lai, 2017; Roudlo, 2020). Flipped class is a learning model with the concept of carrying out learning activities at home that should be done at school, and in class students do assignments or discussions that should be done at home (Bergmann & Sams, 2012).

The learning model is one of the most important elements in the learning process. A model can be interpreted as a concept used to explain something (Trianto, 2012, p.21). Meanwhile, the meaning of the learning model can be interpreted as the concept used by teachers in learning activities to achieve learning goals. The learning currently being carried out is more student-centred learning or what is usually called SCL (Student Centered Learning). SCL can help students to be more active in learning, find sources of knowledge or information independently, and be able to learn according to students' learning styles (Rokhmania and Kustijono, 2017, p.92)

Research conducted by Kurnianto , Wiyanti & Haryani in 2020 with the title "Critical Thinking Skills and Learning Outcomes by Improving Motivation in the Model of Flipped Classroom" obtained the results of the mean difference test analysis showing a significance value of 0.000 and linear regression results with a significance value 0.000 (<0.05). From these results, it can be concluded that the flipped classroom learning model is effective in improving thinking skills, critical thinking, science learning outcomes and learning motivation, there is a positive influence between learning motivation and critical thinking skills as well as students' science learning outcomes. The results of this research are relevant

because of the influence of flipped classroom learning on critical thinking skills, science learning outcomes and student learning motivation. This research examines the critical thinking abilities of science students, while this research examines the critical thinking abilities of high school students in biology subject

Flipped classes have many advantages. According to (Bergmann, J., & Sams, 2012), the following are why teachers should consider flipped classroom learning: following student developments according to the times, helping students who are busy, helping students who are having difficulty, helping students whose ability to understand the material is weak, efforts to stop and Repeating the teacher's explanation via video, Increasing interaction between students and teachers, teachers' desire to know their students better, Increasing interaction between students and student

By implementing the flipped classroom learning model, students are required to study independently outside class hours. In accordance with one of the stages of flipped class learning expressed by Bergman and Sams (2012), there is a discussion stage of material that has been studied previously. At this stage students are required to be more active and critical during the learning process. This indicates that there has been a process of understanding a concept independently towards a higher level of learning process. Based on this description, the author feels that it is necessary to conduct research to determine the effect of implementing the flipped class learning model on students' critical thinking abilities. So the researchers conducted research with the title "The Influence of the Flipped Classroom Model on Improving the Critical Thinking Skills of Muhammadiyah University Sorong Students ".

METHOD

The type of research used is quantitative descriptive. The research design used was quasi-experimental research using a pre-test and post-test. The experimental class conducted learning using the flipped classroom model. The research was carried out at the Muhammadiyah University of Sorong. The sampling technique was obtained by students majoring in English education as an experimental major. The material taught in research is about Descriptive Text.

Data collection uses techniques test. The test instrument used is in the form of 10 descriptive questions. The test instrument is prepared based on the integration between critical thinking ability indicators according to Ennis, namely FRISCO and learning indicators. The instruments used are syllabus, RPP, LKPD, tests, and observation sheets on the implementation of the learning model. Before use, the instrument is validated first. Instrument validation is carried out by validation from experts. Before being used, the test instrument was first tested in students of English language education who had already studied Descriptive Text.

RESULT

The material taught in this research is descriptive text material. Descriptive text is material that explains text that explains or describes people, animals or objects in terms of their shape and characteristics. This requires critical thinking skills so that students can be better able to manage and analyze information. This article explains that students who have critical thinking skills will easily solve problems.

Based on Table 1, the information obtained was collected using test techniques. The test instrument used was 10 descriptive questions. The test instrument is prepared based on the integration of critical thinking ability indicators according to Ennis, namely FRISCO, and learning indicators. The instruments used are the syllabus, lesson plans, LKPD tests, and observation sheets on the implementation of the learning model. Before use, the instrument is validated first. Instrument validation was carried out by expert validation. Before being used, the test instrument was first tested on class XI MIPA who had studied environmental change material. that the experimental class obtained the following results: the focus aspect was 32.21 and was in the low category; the reason aspect is 35.82 and is included in the low category; the inference aspect is 27.69 and is included in the low category; situational aspect of 57.05 and included in the medium category; the clarity aspect is 29.33 and is included in the low category; aspect description is 47.69 and is included in the medium category. Overall, the critical thinking ability profile of experimental class students before treatment was in the low category with an average score of 37.18. The low critical thinking skills of students before being given treatment are in line with the research results this was stated by Ardiyanti (2016).

Table 1

NO	INDICATOR	PERCENTAGE	CRITERIA
1	F (Focus)	32,21	Rendah
2	R(Reason)	35,85	Rendah
3	I (Inference)	27,69	Rendah
4	S(situation)	57,05	Sedang
5	C(clarity)	29,33	Rendah
6	O(Overview)	47,69	Sedang
	Rata-Rata	37,18	Rendah

The profile of students critical thinking abilities before learning is obtained from the results of post-test.

Table 2

NO	INDICATOR	PERCENTAGE	CRITERIA
1	F(Focus)	71,63	Learning
2	R(Reason)	91,83	Very high
3	I(Inference)	72,31	High
4	S(Situation)	92,95	Very high
5	C(Clarity)	76,44	High
6	O(Overview)	83,08	Very high
	Rata-Rata	86,00	Very high

Being given treatment, the experimental class was in the moderate to very high category of dependent variable (critical thinking ability). Hypothesis testing was carried out using the ANCOVA test which tested the pretest and post test score.

Table. 3

CLASS	**SIGNIFICANT**		**CONCLUSION**
Experiment	0,00	0,05	H0 di tolak

The results of the ANCOVA test obtained a significance value of 0.00. The significance value is smaller than 0.05. So from these results it can be stated that the profile of high school students' critical thinking abilities increases through the implementation of the flipped classroom learning model. The adjusted R squared value is 0.659, which means the flipped classroom can improve the profile of students' critical thinking abilities by 65.9%. The results of the research can be concluded that the application of the flipped classroom learning model has an effect on students' critical thinking abilities. This is in accordance with the statement of Kurnianto et al (2019); Maolidah et al. (2017) ; Widyasari et al. (2021); Agung (2021); Roudlo (2020); Alfina et al. (2021); Rodriguez et al. (2019) that the flipped classroom learning model is effective in improving critical thinking skills.

Students' critical thinking abilities increase because in flipped classroom learning activities students are required to understand the material they study independently and look for their own sources of knowledge. This opinion was expressed by Nurhayati et al., (2019) Roudlo, (2020).

DISCUSSION

Overall, the critical thinking ability profile of students in the experimental class after treatment was in the very high category (86.00). This happens because flipped classroom learning requires students to read or watch videos before class that contain learning material so that students can answer better and participate more actively in discussions (Etemadfar et al., 2020).

The focus aspect is that students are expected to be able to identify the core of a given problem According by Cahyono, 2016. The low ability of students to identify a problem is due to the lack of knowledge obtained, the more we explore knowledge, the younger we are as students to get to the point of

the problem. This is because at the flipped classroom learning stage there is more time to understand the material and provide more opportunities to ask questions and discuss (Lo & Hew, 2017).

The reason aspect requires students to find an appropriate reason for the answer given. Students with high critical thinking skills will be able to provide correct reasons for the answers to the questions they answer, while students with moderate critical thinking skills can only provide correct answers but cannot provide reasons. This opinion was expressed by Amanda & Nusantara, 2020.

The situation aspect refers to students' ability to find answers, use data or information to solve problems. Before being given treatment, the profile of students' critical thinking abilities in the experimental and control classes was still in the low category. The application of the flipped learning teaching model in experimental classes can direct students to actively look for learning resources. According to Radiah, 2022. Aspects of clarity students are required to provide more detailed explanations. Before being given treatment, the experimental and control classes were in the low category. This is because students do not or do not have in-depth knowledge of the topic being asked, so students will not be able to provide a detailed explanation. This statment was expressed by Anggraeni et al. (2017).

The overview aspect requires students to review their work from beginning to end. This is done to ensure the correctness of students' answers. This opinion was expressed by Setiana et al. (2020). Before being given treatment, the experimental class was in the medium to very high category. If the overview aspect is low, this is because students do not check their answers again.

CONCLUSION

The profile of students' critical thinking abilities before treatment in the experimental class had an average score of 38.30 (low) After treatment, the critical thinking ability profile of the experimental class had an average score of 86.00 (very high) After treatment, the critical thinking ability profile of the experimental class had an average score of 86.00 (very high) so it can be concluded that H_1 is accepted. From these results, it was found that the flipped classroom learning model had a real effect on increasing the profile of students' critical thinking abilities.

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