



Improving Critical Thinking Skills by Applying the Power of two Model in Elementary School Students

Radina Alfira Pratiwi¹, Iis Aprinawati², Fadhilaturrahmi³,
Yenni Fitra Surya⁴, Mohammad Fauziddin⁵
^{1,2,3,4,5} (PGSD, Tuanku Tambusai Hero University, Riau)

* Radina Alfira Pratiwi E-mail: ¹ radinaalfirapратиwi@gmail.com

Receive: 11/07/2022

Accepted: 10/08/2022

Published: 01/10/2022

Abstract . This study aims to improve the critical thinking skills of fifth grade students at SD 013 Kumantan for the 2022/2023 academic year, which consists of 10 students. The research method is centered on Classroom Action Research (PTK) which is carried out in two learning cycles. Each cycle consists of two meetings and four learning stages, namely: planning, implementing, observing, and reflecting. When the research was carried out in August 2022. Data collection techniques were in the form of documentation, observation and tests. The results of the critical thinking skills of fifth grade students at SDN 013 Kumantan in pre-action with a learning completeness percentage of 30%. In the first cycle the first meeting with a learning completeness percentage of 30% and in the first cycle the second meeting experienced an increase with a learning completeness percentage of 40%. In the second cycle, the first meeting also increased with a learning mastery percentage of 60%, and in the second cycle, the second meeting experienced another increase with a 90% learning completeness percentage. Thus it can be concluded that the application of The Power Of Two learning model can improve the critical thinking skills of fifth grade students at SDN 013 Kumantan.

Keywords : The Power Of Two Learning Model, Critical Thinking Skills, and Elementary School.

Introduction

One of the goals of 21st Century education is to develop students' thinking skills. One of the skills that must be developed is critical thinking skills. Susilawati et al., (2020) critical thinking is a reflective thinking ability that focuses on patterns of decision making about what must be believed, must be done and can be accounted for. Critical thinking skills are needed because someone who thinks critically will be able to think logically, answer problems well and be able to make rational decisions about what to do or what to believe.

Critical thinking skills are high-level thinking skills that have the potential to increase students' critical analysis power. Therefore, developing students' critical thinking skills in learning is an effort to improve student learning outcomes. The application of the 2013 curriculum is also an effort to improve students'

critical thinking skills. Students are required to have effective and creative thinking and acting skills in abstract and concrete realms as development through observing, asking, trying, processing, presenting, reasoning, creating independently according to their talents and interests (Ministry of Education and Culture, 2013). Susilawati et al., (2020) also said that critical thinking skills are a potential possessed by everyone, which can be measured, trained, and developed. So, it can be concluded that critical thinking skills are one of the important skills that must be possessed by students.

However, in reality, based on the results of initial observations that the researchers conducted in class V at SDN 013 Kumantan on March 10 2022, the researchers found that students' critical thinking skills were still low. This can be seen from the fact that there are still many students who do not understand the

learning material provided by the teacher. In addition to the problems in the learning process, namely the lack of students' ability to provide simple explanations and build basic skills regarding learning material, students are still not optimal in concluding learning, students are still not brave enough and actively argue in answering questions given by the teacher, students are less skilled in organizing strategies and tactics in the learning process. Even when students are asked to work on questions, they just want to finish quickly without considering the answers first, as a result, students become less thorough and less critical in thinking about an answer.

The low critical thinking skills of students are also reinforced by data on the acquisition of scores in the field that have not met expectations. It is known that in grade V there are still many students who have not achieved the KKM score that has been set, which is 75. Only 3 students or 30% achieve the KKM score. . While 7 students or 70% of students have not reached the KKM score. It can be seen that the students' daily test scores above have become the basis for researchers thinking that the critical thinking skills of fifth grade students at SDN 013 Kumantan in answering questions are still low and need to be improved.

The low critical thinking skills of students are due to the fact that in the learning process teachers still use conventional learning models. In the learning process the teacher still tends to use the lecture method. So that in the learning process students tend to be passive and unable to develop their critical thinking skills. Therefore, an effort is needed to improve the learning process. One effort that can be made to improve the learning process is to use the right learning model (Aprinawati, 2017). One learning model that can be applied is *The Power of Two learning model*.

According to Ansari et al., (2020) the cooperative learning model of *The Power Of Two type* is a strength of two that makes groups consisting of two people so that in solving problems students can exchange ideas with each other. The strength of both learning models can make students more active. Studying together is not always effective, there may be unequal participation, poor communication and confusion. This type of *The Power of Two* cooperative learning model is made to place students into groups and provide

assignments where they work together to complete their assignments, so they don't have to do it alone but together with group mates.

According to Kadir, (2018) *The Power of Two* model (the power of two heads) is a learning activity that is used to encourage cooperative learning and strengthen the importance and synergy of two people with the principle that thinking together is better than thinking alone. Based on some of the opinions of the experts above, it can be concluded that *The Power of Two* learning model is a learning process that unites two thoughts from two people to increase maximum thinking results because the power of two heads is better. By using *The Power of Two learning*, it is hoped that it can provide opportunities for students to play an active role in answering questions given, so that students are provoked to think critically in answering questions given by their teacher.

Based on the background of the problems above, the researcher will conduct Classroom Action Research as an effort to improve the learning process and increase students' critical thinking skills with the title "Improving Critical Thinking Skills by Applying *The Power of Two Model* in Elementary School Students".

Method

This study used the Classroom Action Research (CAR) method. Research is carried out by designing, implementing and reflecting on collaborative and participatory actions that aim to improve the learning process in the classroom through an action in a cycle (Fadhilaturrahmi, 2017). Classroom action research is practical research that aims to correct deficiencies in classroom learning by taking certain actions in order to improve and improve classroom learning practices in a more professional manner (Surya, 2018). Furthermore (Surya, 2017) also explained that Classroom Action Research is research conducted by teachers in their own classes through self-reflection, with the main goal of improving their own performance. Classroom Action Research (CAR) was conducted in class V of SD 013 Kumantan with a total of 10 students, consisting of 5 female students and 5 male students.

This class action research procedure is in the form of a cycle, each cycle consisting of 2 meetings consisting of four stages, namely planning, acting, observing, and reflecting. This

classroom action research was conducted in 2 cycles. Cycle I meeting I was held on Tuesday, 02 August 2022, while meeting II was held on Wednesday, 03 August 2022. Cycle II meeting I was held on Tuesday, 09 August 2022, while cycle II meeting II was held on Wednesday, 10 August 2022

Accurate and complete data is needed in a research process, so to obtain these data various data collection techniques are needed, therefore the data collection techniques used in this study are 3 data collection techniques used, namely tests, observation, and documentation. While the research instrument used is in the form of a syllabus, lesson plans, teacher activity observation sheets, student activity observation sheets, and also a written test.

The data analysis technique used is using qualitative analysis techniques and quantitative analysis techniques. Qualitative data in this study are used to describe the learning activities of teachers and students based on the learning process by applying the model of *The Power of Two* . While the quantitative data in this study is used to measure the results of students' critical thinking skills.

In determining the assessment criteria for research results, 4 assessment criteria are grouped, namely Very Critical, Critical, Moderately Critical, and Less Critical . The criteria are as follows.

Table 1 . Criteria for Students' Critical Thinking Skills

intervals	Category
90-100	Very Critical
80-89	Critical
70-79	Pretty Critical
<69	Less Critical

Source: Wibowo, s. et al., (2021)

To determine mastery of classical learning can be used the following formula

$$KK = \frac{\text{jumlah siswa yang tuntas}}{\text{jumlah seluruh siswa}} \times 100\%$$

A student is said to be complete in learning if the student scores more than the Minimum Completeness Criteria (KKM) score of 75. Meanwhile, knowing classical completeness is said to be achieved if more than 80% of all students understand the learning

material that has been studied, Ennis in Amanda et al. , (2018) .

Results and Discussion

In this section, the findings from the research that has been carried out will be discussed. The following is the result of obtaining the value of students' critical thinking skills in cycle I can be seen in table 2 below.

Table 2 . Results of Implementation of Cycle I Meeting I and Meeting II

Description	Cycle I	
	PI	PII
Classic Presentation	30%	40%
Students Complete	3 people	4 people
Students Don't Complete	7 people	6 people
Category	Less Critical	Less Critical

Source: Data Processing Results of Critical Thinking Skills 2022

Based on table 2 above, it can be seen that the percentage of student completeness in cycle I meeting I increased to 30% with the number of students completing as many as 3 students. The incomplete percentage also reached 70% with the number of students who did not complete as many as 7 students. The category of student completeness is in the less critical category. Whereas in cycle I meeting II it reached 40% with the number of students completing as many as 4 students. The incomplete percentage reached 60 % with the number of students who did not complete as many as 6 students. The category of student completeness is in the less critical category.

Based on the results of the implementation of learning in cycle I, learning was still relatively inactive because when the teacher asked questions, students were still afraid and shy to express their opinions. During the learning process there were still students who did not dare and were shy. Teachers/educators play an important role in the success of learning and their success in guiding active students in learning.

Based on these data, the researcher concluded that the implementation of learning in cycle I was still not successful. Therefore, researchers and observers carried out actions in the next cycle, namely cycle II. The results of the acquisition of students' critical thinking skills in cycle II can be seen in table 3 below.

Table 3 . Results of Implementation of Cycle II Meeting I and Meeting II

Description	Cycle II	
	PI	PII
Classic Presentation	60%	90%
Students Complete	6 people	9 people
Students Don't Complete	4 people	1 people
Category	Less critical	Less critical

Source: Data Processing Results of Critical Thinking Skills 2022

Based on table 3 above, it can be seen that the percentage of student completeness in cycle II meeting I has increased to 60% with the number of students completing as many as 6 students. The incomplete percentage reached 40% with the number of students who did not complete as many as 4 students. The category of student completeness is in the quite critical category. Meanwhile, in cycle II, meeting II increased to 90% with a total of 9 students completing. The incomplete percentage reached 10% with the number of students who did not complete as much as 1 student. The category of student completeness is in the very critical category.

To clearly know the improvement of each action can be seen in Figure 1 below:

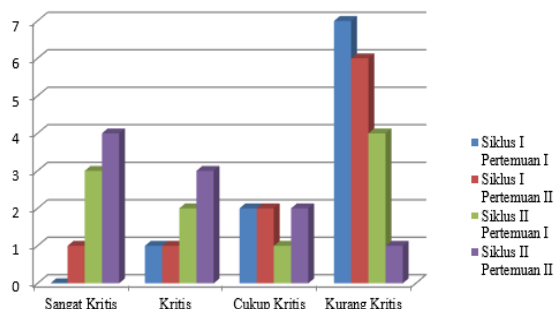


Figure 1. Graph of Students' Critical Thinking Skills at Each Meeting.

Based on the data obtained, the researchers concluded that the implementation of learning in cycle II was said to be successful. Therefore the researcher finished the implementation of the action only up to cycle II. Overall the use of *The Power Of Two model* to improve the critical thinking skills of fifth grade students at SDN 013 Kumantan has reached a point of success.

In cycle II, the learning process has gone better, because students have been able to carry out learning according to the steps contained in the lesson plan. During the learning process, many students pay attention to indicators of critical thinking skills, such as students who are willing to answer when asked

by the teacher, even students who actively ask the teacher about things they do not understand.

Based on the results of the implementation in cycle I and cycle II, it can be concluded that critical thinking skills through *The Power Of Two learning model* can improve the critical thinking skills of class V students at SDN 013 Kumantan.

Conclusion

Based on the results of research conducted by researchers using *The Power Of Two model* to improve the critical thinking skills of fifth grade students at SDN 013 Kumantan . The results showed that the use of the *cooperative script model* could improve the listening skills of fifth grade students at SDN 008 Langgini. This can be seen from the results of the critical thinking skills of fifth grade students at SDN 013 Kumantan in the pre-action with a learning completeness percentage of 30%. In the first cycle the first meeting with a learning completeness percentage of 30% and in the first cycle the second meeting experienced an increase with a learning completeness percentage of 40%. In cycle II, meeting I also experienced an increase with a percentage of learning completeness of 60%, and in cycle II, meeting II experienced an increase again with a percentage of learning completeness of 90%. Thus it can be concluded that the application of *The Power Of Two learning model* can improve the critical thinking skills of fifth grade students at SDN 013 Kumantan.

Bibliography

- [1] Amanda, S., Muharrami, L., K., Rosidi, I., & Ahied, M. (2018). Improving Students' Critical Thinking Ability in Science Learning Using SETS-Based Problem-Based Learning Model . *Journal of Natural Science Education Research* , 1 (1), 57–64. <https://journal.trunojoyo.ac.id/nser/article/view/4199>
- [2] Ansari, L., Salwah., & Ekawati, S. (2020). Application of the Power of Two Cooperative Learning Model to Improve the Mathematical Critical Thinking Ability of Class VIII Students of Middle School. *Journal of Mathematics Research And Mathematics Education* , 3 (2), 56–85. <https://doi.org/10.33578/pjr.v4i1.7936>

- [3] Aprinawati, I. (2017). Improving Science Learning Outcomes with the Problem Based Instruction Learning Model in Class V SD. *School Journal (Js)*, 1 (2), 33-42.
- [4] Fadhilaturrehmi, F. (2017). Application of a Scientific Approach to Improve Students' Mathematical Communication Skills in Elementary Schools . *Eduhumaniora: Journal of Basic Education*, 9(2), 109-118.
- [5] Kadir, Y. (2018). Application of The Power Of Two Learning Method To Improve Mathematics Learning Outcomes. *Journal of Social Education, Science and Humanities* , 4 (2), 650–656.
- [6] Surya, Y., F. (2017). Application of the Experimental Method to Improve Science Learning Outcomes for Class IV Students at SDN 011 Langgini, Kampar Regency. *Basicedu Journal*, 1(1), 10-20.
- [7] Surya, Y., F. (2018). Application of the *Number Head Together Model* to Improve Social Studies Learning Outcomes for Class IV Elementary School Students. *Basicedu Journal*, 2(1), 135-139.
- [8] Susilawati, E., Agustinasari., Samsudin, A., & Siahaan, P. (2020). Analysis of the Level of Critical Thinking Skills of High School Students . *Journal of Physics and Technology Education* , 6 (1), 11–16. <https://doi.org/10.29303/jpft.v6i1.1453>
- [9] Wibowo, s., A., Murtono, Santoso, & Utaminingsih. (2021). The Effectiveness of Textbook Development Based on Multicultural Character Values on Students' Critical Thinking Skills. *Journal of Education and Culture* , 11 (1), 54–62. <https://doi.org/10.24246/j.js.2021.v11.i1.p54-62> .

Author Profile

Radina Alfira Pratiwi was born in Salo, December 24, 1999. The second child of 3 siblings and is the child of the couple Sumardi and Sri Rahayu. Researchers are conducting a study majoring in the Elementary School Teacher Education (S1 PGSD) study program at Pahlawan Tuanku Tambusai University until 2022.