

## **ANALYSIS OF STUDENTS' CRITICAL THINKING SKILLS IN MATHEMATICS LEARNING CLASS V SDN 1 PEUKAN BADA**

**Tria Marvida<sup>1</sup>, Raziska Ibrahim<sup>2</sup>, Raudha Meutia<sup>3</sup>**

<sup>1,2,3</sup>Universitas Bina Bangsa Getsempena, Banda Aceh, Indonesia

\* Corresponding email: [tria@bbg.ac.id](mailto:tria@bbg.ac.id)

### **ABSTRACT**

Students need to be trained in high-level thinking skills in order to be able to build an understanding of mathematics and be able to solve it. Based on the results of observations, there are still many students who are not active in the learning process, for example they do not ask teachers about the material being taught. The purpose of the study is to determine the critical thinking ability of students in solving problems in fractions. The type of research used is descriptive with a qualitative approach. Observation, tests and interviews are the methods used to collect data. The research data was analyzed using the Miles and Huberman model. The results of the study showed that the critical thinking ability of grade V students of SDN 1 Peukan Bada in solving fractional problems was divided into three categories, namely high, medium and low. Students think highly with a figure of 16%. Students have medium thinking skills of 8% and low 76%.

**Keywords:** *Critical thinking, mathematics learning, elementary school*

### **INTRODUCTION**

Elementary school is an educational institution that must have a strong foundation and is expected to provide basic concepts for children. That is why the community must cooperate with the goals of basic education. To be able to realize this is possible in the learning process that takes place every day. (Unaenah and Sumantri 2019, 107)

One of the learning in SD/MI is mathematics. Prihandoko said the tool used to study other sciences is mathematics. Mathematics is important to learn because it can hone the ability to reason, deepen, compose, be careful

and imaginative, as well as the ability to collaborate. (Widiantri, Suarjana, and Mrs. Kusmaryatni 2016, 2)

Mathematics learning is a learning where children learn to solve a problem directed by the educator. Students who already understand the concept/way of working, they will be easy in solving these problems. When students are able to build an understanding of mathematics, then they can connect their knowledge and can determine problem solving well. Based on this, the ability to think critically is something that must be trained so that every child has it. (Munira 2020, 3)

Critical thinking is the ability to determine whether the information obtained through analysis activities can be said to be valid or not. Johnson stated that critical thinking is a targeted and explicit problem-solving activity. (Purbonugroho, Wibowo, and Kurniawan 2020, 53–54) Critical thinking indicators used are as follows:

Table 1. Critical Thinking Skills Indicators

No	Component	Indicators
1.	Interpretation	Be able to write what is asked clearly and precisely
2.	Analysis	Can write what needs to be done to solve the problem
3.	Evaluation	Can troubleshoot
4.	Inference	Be able to draw logical conclusions from what is requested

The observation findings made by researchers at SDN 1 Peukan Bada in grade 5 mathematics learning, found that students were passive in learning, for example by rarely asking teachers about ongoing subjects. Most of the 5th grade students have not been able to solve the questions asked by the teacher.

(Rizza 2020, 294) In his research on critical thinking skills in the problem solving exercises of flat building materials, it was shown that students with high critical thinking skills were 40.48%, medium 28.57% and 26.19%, and low were 4.76%.

Research conducted by (Dores ,S.Pd., M.Pd, Wibowo, dan Susanti 2020, 242). The results of the study showed that the mathematical critical thinking ability of grade IV students of SDN 03 Sebungkang was 29.58%, which was very low

Furthermore, research by (Purwati and Fatahillah 2016, 92). The results of the study explained that students' critical thinking skills were divided into three, namely, low, medium and high.

Based on this, the researcher wants to find out the students' critical thinking ability in solving problems in fractions. The researcher is interested

in conducting research "Analysis of Students' Critical Thinking Skills in Mathematics Learning Class V SDN 1 Peukan Bada".

## METHODS

Descriptive with a qualitative approach is the type of research used. Creswell defines a qualitative approach as an exploratory approach or an approach to finding and understanding a central phenomenon. (Semiawan, t.t., 7) Descriptive research is a search with a method to describe the results. (Ramdhan 2021, 7)

Class V students of SDN 1 Peukan Bada totaling 25 people were the subjects in the study. Research data was obtained by observation, tests and interviews. Observation is collecting data directly in the field. (Semiawan, t.t., 112) In this study, observation starts from identifying the place to be researched and to see the implementation of mathematics learning in class V.

The test was distributed consisting of 5 questions in the form of essays. The questions given are about solving fractional matter problems. After being given a test, the researcher conducted an interview. An interview is defined as a conversation *face to face*, where one party digs information from the interlocutor. (Fadhallah 2020, 1) In this study, the researcher only interviewed 3 students, each representing one category of critical thinking.

The stage of data analysis is *reduction, data display, and conclusion* proposed by Miles and Huberman is the analysis method used. (Umrati and Wijaya 2020, 88–89) The data from the critical thinking test when solving fractional problems was analyzed according to the scoring instructions given. The critical thinking test score was analyzed to find out the level of critical thinking of each student towards solving problems in fractions.

**Table 2. Critical Thinking Ability Criteria**

Value Range	Critical Thinking Ability Criteria
$0 \leq 60$	Low
$60 \leq 75$	Keep
$76 \leq 100$	Tall

Sumber (Munira 2020)

## RESULTS AND DISCUSSION

After identifying the research subjects, the research subjects were then given a test of critical thinking skills in solving problems on fractions. The test is carried out by giving students questions in the form of an essay that refers to indicators of critical thinking skills. After the data is collected, it is analyzed to find out how critical thinking skills students have.

After the data was analyzed, interviews were conducted with selected subjects. Then analyze the interview data for each topic. The following table presents the results of the analysis on each indicator of critical thinking ability in solving problems in fractions.

**Table 3. Analysis of Each Indicator of Students' Critical Thinking Skills**

<b>It</b>	<b>Critical Thinking Indicators</b>	<b>Category Percentage</b>	<b>Category</b>
1.	Interpretation	60%	Low
2.	Analysis	48%	Very Low
3.	Evaluation	48%	Very low
4.	Inference	24%	Very low

Based on table 3, it shows that each indicator has a different category. The critical thinking ability of students for each indicator is divided into 2 categories, namely low and very low. Of the four indicators above, the one that received the highest score was interpretation, which was 60%. The analysis and evaluation indicators are 48% and 24% are inferences.

Based on the results of the analysis, it can be seen that the critical thinking ability of each research subject has different achievements. Below is a description of the students' critical thinking skills as a whole.

**Table 4. Students' Critical Thinking Skills as a Whole**

<b>It</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Category</b>
1.	4	16%	Tall
2.	2	8%	Keep
3.	19	76%	Low

The average student in the class of SDN 1 Peukan Bada is in the category of low critical thinking ability with a figure of 76%. Students had high critical thinking skills of 16% and 8% moderate thinking skills. The analysis of the critical thinking skills of grade V students of SDN 1 Peukan Bada showed negative results. This can be seen from 25 students, 19 of whom have low critical thinking skills. Because of this, students' critical thinking skills need to be retrained so that they can develop.

The average percentage of results obtained by students must be at least high to be said to be critical thinking. Critical thinking skills can be further improved with the right efforts. Bloom explained that critical thinking can be

improved through higher-level thinking exercises, namely from the applied level to the evaluative level.

Teachers can try to improve their critical thinking skills by offering different opinions, sometimes teachers create song material to make students happy and engaged in learning. Questions and answers, tutoring/extra teaching outside of class hours, discussing friends' answers for students to exchange, interacting with friends so that students can get a lot of information. (Widiantri, Suarjana, and Mrs. Kusmariyatni 2016, 7–8)

## **CONCLUSION**

The critical thinking skills of grade V students of SDN 1 Peukan Bada in solving problems in fractions are divided into three categories, thinking high with a figure of 16%, medium 8% and low 76%. The results of the analysis of each indicator show that the index with the highest score is an interpretation of 60%. Analysis and evaluation indicators are 48% and inference is 24%.

## **REFERENCES**

- Dores, S.Pd., M.Pd, Olenggius Jiran, Dwi Cahyadi Wibowo, and Susi Susanti. 2020. "Analysis of Students' Critical Thinking Skills in Mathematics Subjects." *J-PiMat : Journal of Mathematics Education 2* (2): 242–54.
- Fadhallah. 2020. *Interview*. East Jakarta: UNJ PRESS.
- Munira, Siti. 2020. "Analysis of Students' Critical Thinking Skills in Solving Mathematics Problems for Class IV MIN 25 Aceh Besar." Thesis, Banda Aceh: UIN Ar-Raniry.
- Purbonugroho, Hananto, Teguh Wibowo, and Heru Kurniawan. 2020. "Analysis of Students' Critical Thinking in Solving Open Ended Mathematics Problems." *MAJU 7* (2): 10.
- Purwati, Ratna, and Arif Fatahillah. 2016. "Analysis of Students' Critical Thinking Skills in Solving Quadratic Equation Problems in Creative Problem Solving Model Learning" *7* (1): 10.
- Ramdhan, Muhammad. 2021. *Research Methods*. Surabaya: Cipta Media Nusantara.

- Rizza, Hamdan Muh. 2020. "Analysis of students' critical thinking skills in working on math problems" 2: 7.
- Semiawan, Conny R. t.t. *Qualitative Research Methods Types, Characteristics and Advantages*. Grasindo.
- Umrati, and Hengki Wijaya. 2020. *Qualitative Data Analysis of Concept Theory in Educational Research*. South Sulawesi: Jaffray Theological College.
- Unaenah, Een, and Muhammad Syarif Sumantri. 2019. "Analysis of Mathematical Concept Understanding of Grade 5 Elementary School Students on Fractional Materials." *Basicedu Journal* 3 (1).
- Widiantri, Ni kt. Maha Putri, I Md Suarjana, and Mrs. Kusmariyatni. 2016. "Analysis of Critical Thinking Skills of Grade IV Students in Mathematics Learning." *Journal PGSD Ganesha University* 4 (1).