ALENA – Journal of Elementary Education
Vol. 3 No. 1, January, 2025, Pages 1-10
e-ISSN: 2963-0649| DOI: 10.59638/jee.v3i1.252

IMPROVING CRITICAL THINKING SKILLS BY USING PROBLEM LEARNING MODELS BASED LEARNING IN GRADE V STUDENTS

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ARTICLE INFO

Article History :
Received : 2024-07-10
Accepted : 2024-07-26

Keywords:

Keyword 1; Problem Based Learning
Keyword 2; Critical Thingking
Keyword 3; Problem Solving

ABSTRACT

This study aims to find out: (1) The application of the problem-based learning model in grade V students of SDN 019 Sabbang, North Luwu Regency. (2) critical thinking skills in grade V students of SDN 019 Sabbang, North Luwu Regency. (3) The problem-based learning model can improve critical thinking skills in grade V students of SDN 019 Sabbang, North Luwu Regency by using the type of classroom action research (PTK) which consists of 2 cycles, namely cycles I and II, where each cycle consists of three meetings with four stages, namely planning, implementation, observation, and reflection. (4) PTK results in cycle I are categorized as lacking, where most students still have low learning outcomes and thinking skills. Furthermore, in cycle II, it is categorized as good, where the average student has high learning outcomes and critical thinking skills. (5) Critical thinking skills can be improved by applying the problem-based learning model in grade V students of SDN 019 Sabbang, North Luwu Regency.

1. INTRODUCTION

Education is one of the important aspects for humans in navigating life and realizing change, especially in the way of thinking and acting as a self-development activity so that humans can make themselves potential and quality in competing in the era of globalization. The change in educational patterns that is felt today is one of the characteristics of the era of globalization or called the era of openness as evidenced by science and technology, this era is called the 21st century. In 21st century learning, there are several indicators that must be achieved, one of which is the ability to think critically (Hasibuan & Prastowo, 2019)

Critical thinking skills are difficult to master, so it takes a lot of effort to understand the theory and additional practice to master it. Critical thinking will be at the root of most of the competencies that are most needed to welcome developments in the 21st century (Halim, 2022). Critical thinking skills are the ability to analyze, evaluate, and solve problems rationally and systematically. The relationship between PBL and students' critical thinking skills is very close because PBL is designed to stimulate their critical thinking skills. In the context of PBL, students are faced with problems that require in-depth analysis, alternative evaluation, and rational decision-making (Henricus Totok Yulianto, Atik Tusmiyati, and Heni Widiastuti, 2023). They need to use critical thinking to identify relevant information, evaluate arguments, and devise effective solutions. Through this process, students naturally develop abilities berfikir kritis mereka karena mereka harus menghadapi tantangan yang nyata dan menemukan solusi yang masuk akal (Zahir et al., 2022)

From some of the theories above, it can be concluded that critical thinking skills are very important and need to be applied starting from elementary school education. Critical thinking skills need to be taught to students in the learning process, namely to train students to be able to solve problems, and cultivate logical, systematic, critical, and careful skills as well as objective thinking needed in daily life. The importance of critical thinking is contained in QS. Ali Imran verse 190, which states: "Indeed, in the creation of the heavens and the earth, and the alternation of night and day, there are signs (of Allah's greatness) for the sensible person".

The meaning of the verse is that all of His creations in the universe are signs of Allah's greatness for those who are sensible and always use their common sense to believe in Allah SWT. This verse invites humans to think critically and reflect on the creation of heaven and earth, as explained in the tafsir of Al-Misbah, namely by optimizing the function of the brain to think about the creation of heaven and earth and utilizing the potential of its intellect to explore the signs of the greatness of Allah SWT so as to produce knowledge from the results of his critical thinking.

Based on the results of observations that have been carried out on Tuesday 3 0ktober 2023 at SDN 019 Sabbang, North Luwu Regency. Based on the observation of the learning process that has been carried out in the classroom, students' critical thinking skills are still very low. This is evidenced by the lack of student feedback during learning, so that the learning process becomes very monotonous. In addition to making observations in the classroom, the author also conducted an interview with the homeroom teacher of class V, from the results of the interview information was obtained that: (1) in learning activities the teacher still uses conventional learning models such as lectures, has not used a learning model that actively involves students, (2) the learning process is still teacher-centered, when the teacher asks questions, only a few students answer, (3) when working on the description questions, it is seen that students have not been able to understand, analyze and solve problems in the problem, (4) students have not been trained to analyze a problem, (5) poor classroom management, (6) lack of student motivation to learn.

From some of the problems above, it can be seen that the low critical thinking ability at SDN 019 Sabbang, North Luwu Regency is caused by teachers who do not give space to students to awaken their critical thinking skills. Therefore, it is necessary to apply one of the learning model approaches that provides opportunities for students to awaken creativity and critical thinking skills. One of the learning models that is assumed to have characteristics to awaken students' critical thinking skills is the Problem Based Learning learning model.

Problem Based Learning is a learning model that introduces students to problems that are close and real to students' lives, so that students must be able to find alternative problem solving, be more active and critical, so that learning goals can be achieved (Mulyani, 2021). *Problem Based Learning* can provide a significant improvement in students' critical thinking skills through several ways. First, PBL provides a relevant and real context for the development of critical thinking skills (Sari et al., 2024) By facing real-world problems, students are more motivated to think deeply about problems and develop a more thorough understanding. Second, PBL combines active and collaborative learning, which allows students to discuss, exchange ideas, and learn from each other. This process not only enriches students' perspectives but also broadens their mindset and improves their ability to solve problems. Finally, PBL emphasizes on the use of critical thinking in facing complex challenges, allowing students to hone their analysis, evaluation, and synthesis skills on an ongoing basis (Aiman et al., 2023)

From some of the theories above, it can be concluded that the Problem Based Learning learning model is one of the learning models that is able to improve students' critical thinking skills because it has the characteristic of focusing on the chosen problem so that students not only learn concepts related to the problem but also methods to solve the problem, so that students will become more active and then create a learning atmosphere which is more conducive.

2. METHOD

This research is a classroom action research (*Clasroom Action Research)* which is carried out as a strategy to improve students' critical thinking skills. The flow of this research consists of 4 stages, namely: (1) planning, (2) implementation, (3) observation, and (4) reflection. The design of this research is carried out in accordance with the type of research used, namely Classroom Action

Research (PTK). Therefore, this study applies classroom action research steps starting from planning, implementation, action, observation, and reflection. Fourth, the steps in the classroom action research are carried out and form a cycle in its implementation is carried out in more than one cycle. Data collection techniques are carried out by means of observation, tests and documentation. The data analysis technique used in this study is quantitative descriptive analysis consisting of observation of learning implementation and observation of students' critical thinking skills.

3. RESULTS AND DISCUSSION

Result

This research was carried out using the Classroom Action (PTK) research method which was carried out in Class V SDN 019 Sabbang, Sabbang Village, Sabbang District, North Luwu Regency, South Sulawesi. This study uses two cycles, namely cycle I and cycle II which are carried out to obtain data on student learning outcomes. Each cycle consists of three meetings where the first to the third meeting and the third meeting is the provision of tests in the form of essay questions.

This activity is carried out to observe or observe student activities during the teaching and learning process. This observation or observation is carried out by an observer. This activity has the purpose of observing the implementation of learning and student activities in the teaching and learning process, the following are the results of observation or observation.

Table 3.1 Indicators of Teacher Implementation in Cycle I

No	Implementation Indicators for Teachers	Meeting I	Meeting II	Meeting III
1.	Teachers greet students at every meeting	√	√	√
2.	Every meeting begins with prayer	√	√	√
3.	Teachers always check student attendance before starting learning, which is consistent across all meetings	√	√	√
4.	Teachers do not convey themes and subthemes at each meeting.			
5.	Teachers communicate learning objectives during three meetings.	-	-	-
6.	There are appreciation activities carried out by teachers			
7.	The teacher explains the material to the students at all meetings	√	√	√
8.	Teachers divide students into groups	√	√	√
9.	Every meeting, the teacher gives questions to students to work on	√	√	√
10.	Teachers go around the classroom to help students who are experiencing difficulties when working on problems given	-	√	√
11	The teacher asks students to present the results of their discussion	-	-	√
12	Teachers give awards to students in the form of applause	-	-	√
13	The teacher concludes the material that has been learned	-	-	-
14	Teachers close learning by praying and Say greetings	√	√	√
	Total score	7	8	10
	Presented	50%	57%	71%
	Mailing	59%		
	Category	Less		

The table above shows that the average score of the category of learning implementation by teachers is 59%, which means that it is in the range of 50%-59%, which shows that the implementation of learning in cycle 1 is relatively poor.

Table 3.2 Implementation Indicators for Cycle 1 Students

No	Implementability Indicators for Students	Meeting I	II	III
1.	Students follow the teacher's directions to prepare for learning activities	√	√	√
2.	Students pay attention to the teacher when checking attendance	√	√	√
3.	Students listen to the material delivered by the teacher well	-	-	√
4.	Students carry out appreciation activities according to the direction Guru	-	-	-
5.	Students listen to the material delivered by the teacher well	-	√	√
6.	Students follow every teacher's direction in the activity Learning	√	√	√
7.	Students follow the learning process calmly	-	-	-
8.	Students dare to speak up and answer questions teachers well	-	√	√
9.	Students sit in groups	√	√	√
10.	Students do assignments correctly			
11.	Students present the results of their discussion in front of the class	√	√	√
12.	Students give applause	√	-	-
13.	Students listen to the conclusions delivered by the teacher		-	√
14.	Students pray and say greetings	√	√	√
	Sum	7	8	10
	Presented %	42%	57%	64%
	Average	53.25%		
	Criterion	Less		

The table above shows that the average score of the category of learning implementation by students is 53.25%, which means that it is in the range of 50%-59%, which shows that the implementation of learning in cycle 1 is relatively lacking.

Table 23.3 Percentage of Test Results Cycle I

No	Result	Number (Person)	Percentage (%)	Ket
1	85-100	0	0	Very High
2	75-84	8	32	Tall
3	60-74	4	16	Enough
4	50-59	3	12	Low
5	0-49	10	40	Very Low
Total		25	100	

Source: data processed by researchers (2024)

Based on the table above, it can be seen that the number of students who obtained a score in the range of 85-100 was 0 people (0%), students who obtained a score of 75-84 were 8 people (32%), students who obtained a score of 60-74 were 4 people (16%), students who obtained a score of 50-59 were 3 people (12%), and students who obtained a score of 0-49 were 10 people (40%). These results show that most students obtained scores in the range of 0-49 which indicates that they are classified as failures.

The following are the results of the student test in PTK cycle I

Table 3.3 Summary of PTK Student Test Results Cycle I

Description Score	Value
N	25
Mean	62
Median	58
Mode	40
Maximum Score	80
Minimum Score	40

Source: data processed by researchers (2024)

Based on the table above, it can be seen that the average score obtained by students is 62 while the median score is 58, the mode value is 40, the maximum score is 70, and the minimum score is 25. The average score of 62 < the KKM is 75, so it can be concluded that the average student in cycle 1 learning is not complete.

The following is the completeness of the student test results in PTK Cycle I

Table 3.5 Completeness of PTK Learning Outcomes Cycle I

Interval	Frequency	Presentation (%)	Ket.
75 – 100	8	32	Complete
1. 74	17	68	Incomplete
Sum	25	100	

Source: data processed by researchers (2024)

The completeness of learning outcomes in cycle I was 32% or 8 out of 25 students were included in the complete category, while 68% or 17 out of 25 students were included in the incomplete category. Thus, it can be said that the level of learning outcomes in the first cycle has not succeeded in improving critical thinking skills by using *the problem-based learning learning model.*

The following is the documentation for the implementation of cycle 1

Figure 1. It is a learning process and experiments that are carried out inside and outside the classroom.

The following are the observation results of PTK Cycle II

Table 3.6 Implementation Indicators for Teachers in Cycle II

No	Implementation Indicators for Teachers	Meeting I	II	III
1.	Teachers give greetings to students	√	√	√
2.	Teachers invite students to pray before starting Learning	√	√	√
3.	Teachers check student attendance	√	√	√
4.	The teacher conveys the theme and subtheme to be studied	√	√	√
5.	Teachers convey learning objectives	-	√	√
6.	Teachers do appreciation	-	-	-
7.	The teacher explains the material to be studied	√	√	√
8.	Teachers divide students into groups	√	√	√
9.	The teacher asks students to work on the given questions	√	√	√
10.	Teachers go around the classroom to help students who are experiencing difficulties when working on the given questions	√	√	√
11	The teacher asks students to present the results of their discussion	√	√	√
12	Teachers give awards to students in the form of applause Hand	√	√	√
13	The teacher concludes the material that has been learned	-	-	√
14	Teachers close the learning by praying and saying greetings	√	√	√
	Total score	11	12	13
	Presented	78%	85%	92%
	Mailing	85%		
	Category	Very good		

The table above shows that the average score of the category of learning implementation by teachers is 85%, which means that it is in the range of 80%-100%, which shows that the implementation of learning in cycle II is very good

Table 3.7 Implementation Indicators for Cycle II Students

No	Implementability Indicators for Students	Meeting I	II	III
1.	Students follow the teacher's directions to prepare for learning activities	√	√	√
2.	Students pay attention to the teacher when checking attendance	√	√	√
3.	Students listen to the material delivered by the teacher well	√	√	√
4.	Students carry out appreciation activities according to the teacher's direction	-	-	-
5.	Students listen to the material delivered by the teacher well	√	√	√
6.	Students follow every teacher's direction in learning activities	√	√	√
7.	Students follow the learning process calmly	-	-	-
8.	Students dare to speak up and answer questions teachers well	√	√	√
9.	Students sit in groups	√	√	√
10.	Students do assignments correctly	√	√	√
11.	Students present the results of their discussion in front of the class	√	√	√
12.	Students give applause	-	√	√
13.	Students listen to the conclusions delivered by the teacher	-	-	√
14.	Students pray and say greetings	√	√	√
	Sum	11	12	12
	Presented %	71%	78%	92%
	Average	80%		
	Criterion	Very good		

The table above shows that the average score of the category of learning implementation by students is 80%, which means that it is in the range of 80%-100%, which shows that the implementation of learning in cycle 1I is very good.

Table 3.8 Percentage of PTK Test Results Cycle II

No	Result	Number (Person)	Percentage (%)	Information
1	84-100	15	60	Very high
2	75-84	5	20	Tall
3	60-74	3	12	Enough
4	50-59	1	4	Less
5	0-49	1	4	Very Less
Total		25	100	

Source: data processed by researchers (2024)

Based on the table above, it can be seen that the number of students who obtained a score in the range of 84-100 was 15 people (60%), students who obtained a score of 75-84 were 5 people (20%), students who obtained a score of 60-74 were 3 people (12%), students who obtained a score of 50-59 were 1 person (4%), and students who obtained a score of 0-49 were 1 person (4%). This result shows that most students obtained a score in the range of 80-100 which indicates that it is classified as very good.

The following are the learning outcomes of students in PTK Cycle II

Table 3.9 PTK Learning Test Results Cycle II

Description Score	Value
N	25
Mean	80
Median	85
Mode	90
Maximum Score	99
Minimum Score	45

Source: data processed by researchers (2024)

Based on the table above, it can be seen that the average score obtained by students is 80 while the median score is 85, the mode value is 90, the maximum score is 99, and the minimum score is 45. The average score of 80 > the KKM is 75 so it can be concluded that the average student in cycle II learning is complete.

The following is the completeness of student learning outcomes in PTK Cycle II

Table 3.10 Completeness of PTK Learning Outcomes Cycle II

Interval	Frequency	Presentation (%)	Ket.
75 – 100	20	80	Complete
1. 74	5	20	Incomplete
Sum	25	100	

Source: data processed by researchers (2024)

The completeness of learning outcomes in cycle II was 80% or 20 out of 25 students in the complete category, while 20% or 5 out of 25 students were in the incomplete category. Thus, it can be said that the level of learning outcomes in the second cycle has succeeded in improving critical thinking skills by using *the problem-based learning model.*

The following is the documentation for the implementation of cycle 1

Figure 2. It is a learning process and experiments that are carried out inside and outside the classroom.

Discussion

This research is carried out using the Classroom Action Research (PTK) method where the implementation consists of 2 cycles, namely cycle I and cycle II. Cycle I will be held on March 8-11, 2024, while cycle II will be held on March 13-15, 2024. Each cycle consists of two meetings, where one to three meetings provide material and in the third meeting a test in the form of essay questions is also held. The activities carried out in cycle I have not been successful so they are continued in cycle II which is an improvement from the previous cycle. Each implementation cycle consists of 4 flows, namely planning, action, observation, and reflection. This research begins with planning, where the researcher prepares learning tools, conducts analysis related to the subjects to be taught, makes teaching material sheets and compiles each student observation sheet. Furthermore, at the action stage, the researcher uses several learning tools that are in accordance with the learning design which includes the preliminary, core, and closing stages. Then at the observation stage, it is carried out by observing student activities during the learning process which aims to observe the implementation of learning and student activities during learning. Then the final stage, namely reflection, aims to find out the shortcomings of the implementation of actions carried out in each cycle.

Based on the results of research conducted by researchers, the problem-based learning model is able to improve the critical thinking skills of grade V students of SDN 019 Sabang, North Luwu Regency. This can be evidenced by the increase in activeness and critical thinking skills and student learning outcomes. Where in PTK Cycle I, most students still have low learning outcomes and critical thinking skills, namely the completeness of learning outcomes in cycle I is 32% or 8 out of 25 students are included in the complete category, while 68% or 17 out of 25 students are included in the incomplete category. Furthermore, in the second cycle of PTK, the percentage of completeness of learning outcomes in the second cycle is 80% or 20 out of 25 students are included in the complete category, while 20% or 5 out of 25 students are included in the incomplete category. Thus, it can be said that the level of learning outcomes in the second cycle has succeeded in improving critical thinking skills by using *the problem-based learning model.*

Overall, PBL is not only an effective learning method in teaching material, but also a powerful tool for developing students' critical thinking skills. By providing relevant context, promoting active learning, and emphasizing on complex problem-solving, PBL helps students to become more critical, analytical, and independent thinkers. Thus, PBL is not only about solving problems, but also about forming solid critical thinking that can be applied in a variety of life contexts.

The results of this study are in line with the results of research conducted by (Cholilah, 2020) which in his research concluded that problem-based learning is able to improve the critical thinking skills of students. PBL does not only focus on conveying information, but rather on developing critical thinking skills. One of the main advantages of PBL is that it challenges students to deal with complex real-world situations (Yuningsih et al., 2024). seringkali dengan informasi yang tidak lengkap atau ambigu (Malik et al., 2023). Proses ini memaksa siswa untuk tidak hanya mengandalkan pengetahuan faktual, tetapi juga untuk mengembangkan keterampilan analitis dan pemecahan masalah yang mendalam (Syauki et al., 2023). Selain itu, PBL mendorong siswa untuk mengambil peran aktif dalam pembelajaran mereka, karena mereka harus mengidentifikasi sumber daya yang relevan, bekerja sama

with fellow students, and formulate solutions that can be accounted for. Thus, not only academic skills are enhanced, but also students' interpersonal abilities and independence. Additionally, through PBL, students learn to appreciate the importance of different viewpoints and approaches to problem-solving, as they often have to consider different perspectives in reaching effective solutions (Supriadi et al., 2023)

4. CONCLUSIONS AND SUGGESTIONS

Based on the results of the above research, it can be concluded that problem-based learning can improve the critical thinking skills of Class V students of SDN 019 Sabbang, North Luwu Regency. This can be evidenced by the increase in the level of student activity and student learning outcomes in PTK Cycle II where in PTK Cycle I, most students still have low learning outcomes and critical thinking skills.

In connection with the above conclusion, the following suggestions are proposed: For the next researcher, the next researcher is expected to add several learning methods to test the extent of the effectiveness of the learning model in improving students' critical thinking skills, for example *the wordwall or quizziz* method. For teachers, teachers should also use better learning media to help in supporting the implementation of *the problem-based learning* model so that learning activities become more interesting.

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