

APPLICATION OF THE PROBLEM BASED LEARNING MODEL TO IMPROVE CRITICAL THINKING SKILLS FOR V GRADE STUDENT OF SDN NO.211 INPRES CAMPAGAYA TAKALAR REGENCY

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ABSTRACT

The problem behind this research is the low student critical thinking skills in thematic learning for fifth grade students at SDN No.211 Inpres Campagaya, Takalar Regency. This study aims to describe the application of the Problem Based Learning model to improve critical thinking skills for 5th Grade SDN No.211 Inpres Campagaya Takalar Regency. The focus of this research is the application of the Problem Based Learning model and critical thinking skills. The results of this study show that there is an increase, namely teacher teaching activities and student learning activities as well as the results of students' creative thinking ability tests. In cycle I, teacher and student teaching activities are in the sufficient category (C) while in cycle II they are in the good category (B). In cycle I, teacher and student teaching activities are in the sufficient category (C) while in cycle II they are in the good category (B). , in the first cycle it was in the sufficient category (C) the second cycle it was in the good category (B). Students learning in the first cycle are in the sufficient category (C). So that the completeness of student critical thinking skills in thematic learning classically incomplete. While in cycle II the critical thinking skills that have increased are in the good category (B) so that the completeness of student critical thinking skills in thematic learning has been completed classically. The conclusion of this research is that the application of the Problem Based Learning model to improve student critical thinking skills in class V SDN No.211 Inpres Campagaya Takalar Regency.

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INTRODUCTION

Critical thinking is an ability that must be improved in the 21st Century in education. According to Wagner there are seven types of life skills needed in the 21st century where one of them is improving critical thinking skills (Zakiah & Lestari, 2019). Critical thinking skills become a necessity for everyone, especially in the world of education in particular for students, so that an educator must be able to develop the ability to think critically in students. According to Demiral, think Critical thinking is able to make students think more openly, able to formulate problems appropriately, collect relevant data and information, use ideas in effectively interpreting a conclusion by giving reasons and solutions, able to communicate effectively with others in finding out solutions to complex problems (Tumanggor, 2021).

Critical thinking skills are very important to be developed in world of education because it becomes a necessity for students to identify a problem to solve the problem. Solving a problem properly can be done in a way think carefully, look for facts and information, and have knowledge as a material consideration in making a decision.

Regulation of the Minister of National Education of the Republic of Indonesia number 41 2007 concerning process standards for primary and secondary education units states that it is a must to develop deep thinking skills learning process (Mardapi, 2007). Teachers are required to be able to develop thinking skills, both logical thinking skills, analysis, and ability to think critically. In this case,

a teacher really has important role in developing critical thinking skills in schools so that students are able to solve a given problem. According to Bloom in the cognitive taxonomy categorize ability levels Critical thinking starts from the level of C4 (analyzing), C5 (evaluating), and C6 (create).

Based on the results of observations made by researchers in class V SDN No. 211 Inpres Campagaya data can be obtained that there are problems in the thematic learning process, so that the comprehension of students' thinking is still said low. It was found that out of 25 students in grade 5 at the time of doing evaluation test at the end of learning there are 22 students with ability analyze on the application of the concept of heat transfer is very low so lead to students' understanding of the concept of participating in thematic learning reduced and 3 students who are already able to analyze the application of the concept heat transfer. This can happen for several reasons including: Aspects teacher (1) the learning process is dominated by the teacher in the sense that the teacher is more explained a lot of teaching material so that students just sat listening the teacher's explanation, (2) the lack of challenging questions asked by the teacher, (4) the learning model that does not involve students to participate actively in the learning process. Aspects of students (1) less students in giving opinions to improve skills and thinking critical in class, (2) students are less enthusiastic in participating in learning.

One model that can be used to improve capabilities students' critical thinking in learning as well as triggering students to be actively involved directly on the learning process is the Problem Based learning model Learning (PBL). Problem Based Learning is a set of models learning that uses the problem as the main focus for develop students' critical thinking skills (Ernaini., 2019). Model learning Problem Based Learning can encourage students to learn through real problems in everyday life. "The Problem Based Learning (PBL) model is a learning model with a student learning approach to authentic problems so that students can construct their own knowledge, grow and develop higher skills and inquiry, empower students and increase self-confidence (Novianti et al., 2020, p. 195)."

The learning model that is in accordance with the 2013 curriculum is of course a must creating activeness and critical thinking skills for students at the time learning activities take place. In line with this, Taniredja too argues that mandatory learning activities are designed to add knowledge of students, by paying attention to the content or message to be conveyed conveyed to students, the characteristics of students, and suitability with material (Novianti et al, 2020). Based on the description above, it can it can be concluded that the Problem Based Learning (PBL) learning model is a model that raises a problem in the world real students who can be used as resources and means for learning and provide experiences for students.

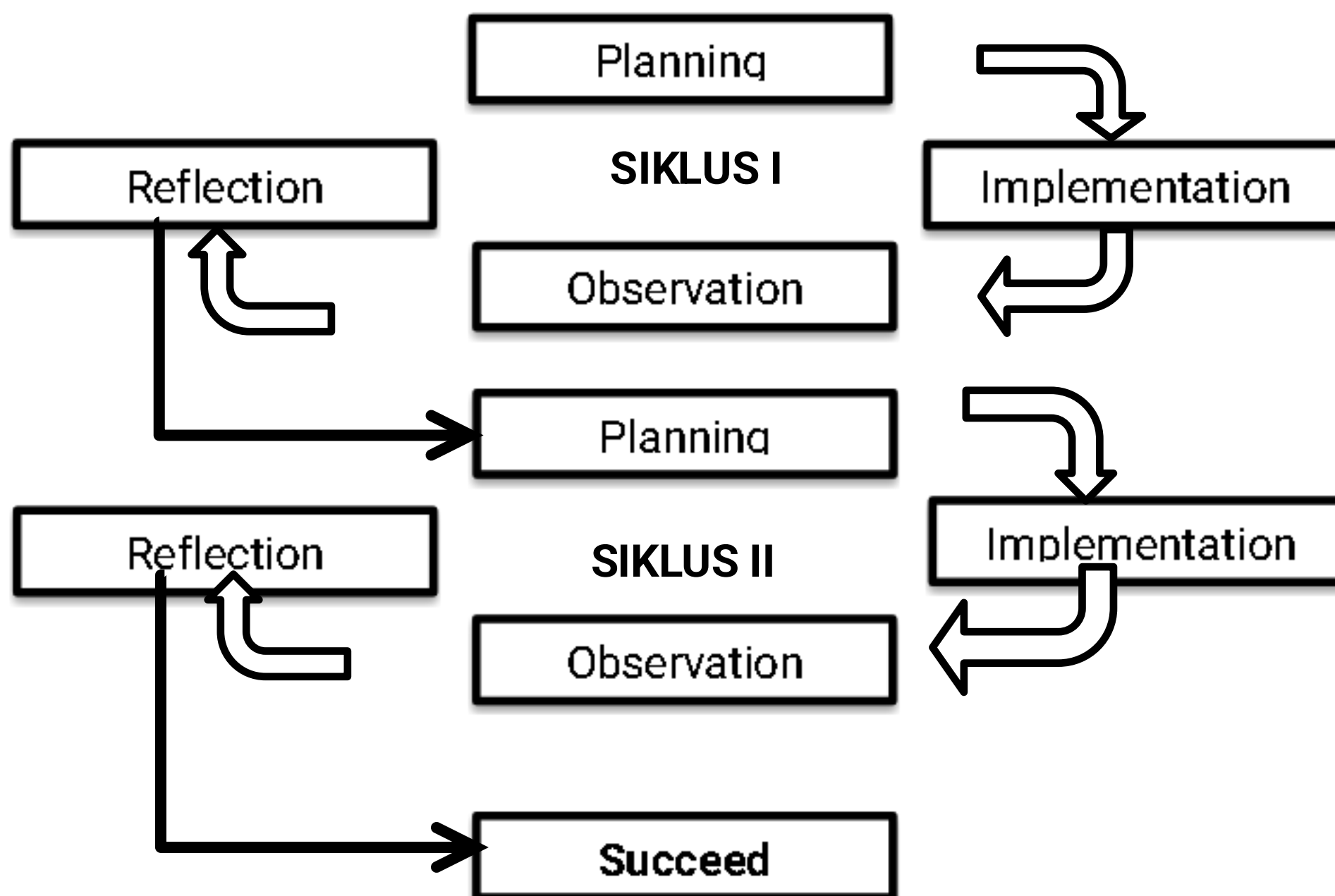
Problem Based Learning learning model is a model that can improve students' critical thinking skills. This is reinforced by previous research conducted by Ernaini et al (2021) entitled "Implementation of the Problem Based Learning (PBL) Learning Model to Improving Students' Critical Thinking Skills". The results of the study shows that the use of Problem Based Learning Learning Model in improving students' critical thinking skills have been achieved well. This can be proven from the increase in students' critical thinking skills in cycle I, namely 30% to 90% at the end of cycle II.

Based on the background above, it is necessary to do research with title "Implementation of Problem Based Learning Models to Improve Critical Thinking Skills for V grade Students of SDN No. 211 Inpres Campagaya Takalar Regency".

METHOD

This study uses a qualitative approach. Called qualitative because in this study the researchers used observation sheet to see an overview of all teacher and student activities during the learning process. Because it will be explained about increasing the test results of students' critical thinking skills by using Description Questions.

The type of research that will be used in this research is classroom or ordinary action research abbreviated as CAR which consists of several stages of implementation including: planning, research implementation, observation and reflection repeatedly is called a cycle. This class action research is carried out in one cycle or more by applying the Problem Based Learning model. The planned action flow in this study is presented as follows:



Picture 1 Research Design according to (Arikunto, dkk, 2006:16

This research was conducted at SDN No. 48 Inpres Galung Utara, Banggae Subdistrict, Majene Regency on Thematic learning and the time of the research implementation is in April of the even semester of the 2022/2023 academic year. The subjects of this study were teachers and fourth grade students of SD Negeri No. 211 Inpres Campagaya with 25 (twenty Five) students. The focus of this research is the application of the Problem Based Learning model and the learning outcomes of fourth grade students at SDN No. 48 Inpres Galung Utara, Banggae sub-district, Majene Regency. Data collection techniques used in this study were in the form of observation, tests and documentation. The research instruments in this researcher are (1) student worksheets (LKPD), (2) final evaluation tests, (3) teacher observation sheets, and (4) student observation sheets. To measure the indicators of the success of teachers and students in applying the Problem Based Learning model namely:

Table 1 The process level of success in applying the Problem Based Learning Learning Model

Nilai	Kategori
<20%	Very ineffective
21-40%	Less Effective
41%-60%	Effective enough
61%-80%	Effective
81%-100%	Very Effective

To determine the completeness of the incompleteness of the critical thinking Skills test results as follows:

Tabel 2 Indicators of Completeness and Incompleteness of The Critical Thinking Skills Test Results

Score	Category
70-100	Complete

0-69	Incomplete
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Data on the results of the Student's Critical Thinking Skills Test can be analyzed qualitatively to draw conclusions using table 3 as follows:

Table 3 Indicators Critical Thinking Skills

Level of Success %	Category
80-100	Very Critical
70-79	Critical
60-69	Enough Critical
20-59	Less Critical
0-19	Not Critical

Source: (Utami., 2021)

RESULTS AND DISCUSSION

RESULT

1. Description of initial Activities Before Action

On October 4, 2022, the researcher first visited the school where the research would take place by meeting the principal and class V teacher to discuss the research plan. research and subject matter to be taught. Learning activities are also only carried out 2 times a week. The researcher then met the fifth grade teacher to discuss the research plan. In addition to asking permission to conduct research in class V, the researcher and the class V teacher also discussed thematic learning content to be taught and adjusted to the learning schedule in class V. An agreement was obtained that the research implementation would begin on Tuesday, 5 October 2022 – 7 October 2022 , which is adjusted to the schedule determined by the homeroom teacher of class V SDN No. 211 Campagaya Instruction, Takalar Regency. Researchers have developed learning tools for research during two meetings in each cycle which are consulted with the class V teacher to correct and perfect the learning tools that will be used during research.

2. Cycle I Action

The implementation of this research action was carried out in accordance with the plan that had been made It was agreed by the teacher and researcher that there were 2 meetings in the first cycle, namely on 5 and 7 October The year 2022 is in accordance with the initial plan that has been agreed upon by researchers and teachers of grade V of SDN No. 211 Inpres Campagaya Takalar Regency.

Table 4 Observation Results of Cycle I Teacher Teaching Activities With the Application of Problem Based Learning Models in Learning

Cycle I	Total Score Acquisition	Max Score	Presentage	Category
Meeting I	30	60	50%	Effective Enough
Meeting II	41	60	68%	Efektive

Based on table 4, it can be concluded that the presentation of the results of observations of teacher teaching activities in cycle I above, at meeting I obtained an overall score of 30 out of a maximum score of 60 with a percentage of 50% which was stated to be in the Pretty Effective category. Meanwhile, at the second meeting, the overall score was 41 out of a maximum score of 60 with a percentage of 68% and was stated to be in the Effective category.

Table 5 Observation results of student learning activities in cycle I with the application of the Problem Based Learning model in learning

Cycle I	Score Total	Score Max	Presentage	Category
Meeting I	28	60	53,33%	Effective Enough
Meeting II	39	60	60%	Effective

Based on table 5 above, it can be concluded that the results of observing student activities in the first cycle of meeting I obtained an overall score of 28 with a maximum score of 60 with a percentage of 46.66% which was stated to be in the Effective Enough category. While the overall meeting II obtained was 39, the maximum score was 60 with a percentage of 65% and was stated to be in the Effective category.

Table 6 Descriptive Data of Frequency and Percentage of Students' Critical Thinking Skills Test Results in Cycle I

Score	Category	Frequency	Persentage
0-19	Not Critical	0	0%
20-59	Less Critical	9	36%
60-69	Enough Critical	6	24%
70-79	Critical	10	40%
80-100	Very Critical	0	0%
Total		25	100%

Table 7 Description of the Frequency and Percentage of Completeness of Students' Critical Thinking Skills in Cycle I.

Score	Category	Frequency	Persentage
70-100	Complete	10	40%
0-69	Incomplete	15	60%
Total		25	100%

Based on the data in the table above it states that out of 25 students, 10 students with a percentage of 40% are included in the complete category and 15 students with a percentage of 60% are included in the incomplete category. These results indicate that the first cycle, the completeness of students' critical thinking skills test results in thematic learning has not been achieved. Where it can be seen from the number of students whose learning outcomes are less than 80% complete, because the success indicator suggests that if 80% of the total number of students achieves the KKM score of ≥ 70 in Thematic learning through the application of the Problem Based Learning learning model it is considered classically incomplete. Thus the learning objectives have not been achieved so that learning can be continued in the next cycle.

Based on the results of observations on teacher teaching activities and student learning activities by applying the Problem Based Learning learning model in class V SDN No. 211 Inpres Campagaya Takalar Regency, as well as analysis of data on tests of students' critical thinking skills from meetings I and II, the findings obtained during the learning process can be recorded to be used as a reflection in cycle I, namely as follows:

- 1) Teacher activities using the Problem Based Learning learning model still have deficiencies that are not implemented and forgotten. As for the efforts or reflections made at the next meeting, namely the teacher is expected to carry out the steps of the Problem Based Learning model which did not have time to be carried out at the previous meeting, such as the teacher motivating students to be involved in the problem solving process, the teacher encouraging students to ask questions regarding the subject matter provided, the teacher ensure that group members understand their respective assignments, the teacher directs students to look for answers carefully, the teacher provides opportunities for other groups to provide their responses and the teacher asks students to mention the obstacles encountered during the learning process. Based on the above efforts, it is hoped that at the next meeting there will be an increase in teacher activity in applying the Problem Based Learning model to Thematic learning.
- 2) Student activities in the teaching and learning process using the Problem Based Learning model in cycle I also still have deficiencies. The improvement or reflection efforts at the next meeting are that students are expected to be familiar with and understand the application of the Problem Based Learning model so that students are actively involved in learning, actively find and solve problems, are active in group work, and are active in providing responses in group discussions. Based on these efforts, it is hoped that at the next meeting there will be an increase in student learning activities by applying the Problem Based Learning model.
- 3) The results of students' critical thinking skills tests in cycle I showed that the research had not reached the predetermined results. Data analysis of students' critical thinking skills test results in cycle I can be seen in Appendix 32, which shows that the total score of the students is that there are students who score on the evaluation test. This happens because students still pay less attention to the material contained in teaching materials and students still do not understand working on questions in the form of descriptions related to heat transfer and explanatory text so that students get low scores under the KBM. As for improvement or reflection efforts that will be carried out by the teacher at the next meeting, namely the teacher is expected to be able to make teaching materials and make questions that are easier for students to understand so that students have no difficulty in answering these questions so that the value of student learning outcomes can be completed classically 80% at the next meeting . Based on the description above, it can be concluded that the results of the research conducted in cycle I have not been completed. Therefore, the researcher continued the research into cycle II stage.

3. Cycle II Action

The implementation of the second cycle was carried out on 19 and 21 April 2022. The activities in the second cycle were the same as the activities in the first cycle which included planning, implementation, observation, and reflection

Table 8 Observation Results of Cycle II Teacher Teaching Activities With the Application of Problem Based Learning Models in Learning

Cycle II	Total Score Acquisition	Max Score	Presentage	Category
Meeting I	53	60	88,33%	Very Effective
Meeting II	57	60	95%	Very Effective

Based on the table above, it can be concluded that the presentation of the results of observations of teacher teaching activities in cycle II above, at meeting I obtained an overall score of 53 out of a maximum score of 60 with a percentage of 88.33% which was stated to be in the Very Effective category. Meanwhile, at the second meeting, the overall score was 57 out of a maximum score of 60 with a percentage of 95% and was also stated to be in the Very Effective category.

Table 9 Observation results of student learning activities in cycle I with the application of the Problem Based Learning model in learning

Cycle II	Score Total	Score Max	Presentage	Category
Meeting I	50	60	83,33%	Very Effective
Meeting II	59	60	98,33%	Very Effective

Based on table 4above, it can be concluded that the results of observing student activity in cycle II meeting I obtained an overall score of 50 out of a maximum score of 60 with a percentage of 83.33% which was stated to be in the Very Effective category. Meanwhile, the overall score for meeting II was 59, with a maximum score of 60 with a percentage of 98.33% and was stated to be in the Very Effective category.

Table 10 Descriptive Data of Frequency and Percentage of Students' Critical Thinking Skills Test Results in Cycle II

Score	Category	Frequency	Persentage
0-19	Not Critical	0	0%
20-59	Less Critical	0	0%
60-69	Enaugh Critical	3	8%
70-79	Critical	12	52%
80-100	Very Critical	0	40%
Total		25	100%

Table 11 Description of the Frequency and Percentage of Completeness of Students' Critical Thinking Skills in Cycle II.

Score	Category	Frequency	Persentage
70-100	Complete	22	88%
0-69	Incompete	3	12%
Total		25	100%

Based on table 11 it states that out of 25 students, 22 students with a percentage of 88% are included in the complete category and 3 students with a percentage of 12% are included in the incomplete category. These results indicate that learning completeness in cycle II has been achieved classically because the number of students who have completed more than 80% of students obtains grades according to KKM, namely ≥ 70 in thematic learning through the application of the Problem Based Learning learning model is considered classically complete.

Based on the results of observations on teacher teaching activities and student learning activities by applying the Problem Based Learning learning model to class V thematic learning at SDN No.211 Campagaya Instruction, Takalar Regency, as well as analysis of data on tests of students' critical thinking skills from meetings I and II, the findings are obtained. occur during the learning process can be recorded to be used as a reflection in cycle II, namely as follows:

1) If you look at the learning process that has been carried out by the teacher where in cycle II the teacher is seen to be more in control of the Problem Based Learning learning model so that it has

increased and is in very Effective Category. The teacher has also been able to condition the class well during the learning process. Teachers have also been able to direct and guide students in implementing each step in the Problem Based Learning learning model.

2) Student activities in the learning process using the Problem Based Learning learning model in cycle II have increased and are in Very effective category, because students are used to and have understood the application of the Problem Based Learning model so that students are actively involved in learning, active in solving a problem. problems, active in working together in groups, active in explaining the results of group work, active in providing responses in group discussions.

3) The results of students' critical thinking skills tests in cycle II show that the research that has been carried out has achieved the expected success previously. Analytical data on the results of students' critical thinking skills tests in cycle II can be seen in Appendix 33, which shows the results of students' critical thinking skills tests have been completed in a classical manner, namely reaching 88%, while students who did not reach the KKM there were 3 students with a percentage of 12%. in attachment 33. Thus it can be said that the learning process in cycle II the results of students' critical thinking skills tests have increased through the application of the Problem Based Learning learning model in the thematic learning of class V SDN No.211 Inpres Campagaya Takalar Regency, so it does not need to be continued in next cycle.

DISCUSSION

This research was carried out using Classroom Action Research (CAR) procedures using two cycles. The research was carried out in the odd semester of 2022 with class V research subjects at SDN No. 211 Campagaya Presidential Instruction, Takalar Regency. Before carrying out the research, the researcher first came to the school to meet the Principal to ask for research permission. After that, the researcher consulted the fifth grade teacher, the researcher asked questions based on the results of the students' critical thinking skills which were still relatively low. It was found that the Minimum Completeness Criteria (KKM) for was ≤ 70 . The results of the critical thinking skills test of 25 students showed that several students did not reach the KBM. In addition, the researcher set a schedule according to the learning schedule in class V SDN No. 211 Campagaya Instruction, Takalar Regency.

Learning in cycle I had two meetings with the focus of material at meeting I was sub-theme 2 learning 1 and meeting II was sub-theme 2 learning 2, while in cycle II meeting I discussed sub-theme 2 learning 5 about heat transfer by radiation as well as explanatory text material and meetings II discusses sub-theme 2 learning 1 material objects that inhibit and accelerate heat and explanatory text which is carried out according to the syntax of the Problem Based Learning learning model. The first stage is the orientation of students to the problem, students pay attention to the questions given by the teacher. In the second stage, namely organizing students to study, at this stage students are formed into several groups to make observations and solve problems contained in the LKPD together with their group mates. The third stage is guiding individual and group investigations, at this stage students are given the opportunity to ask questions about things they have not understood. The fourth stage is developing and presenting the work, at this stage students are asked to present the results of their group discussions in front of the class. The fifth stage is analyzing and evaluating the problem-solving process, at this stage students are given the opportunity to provide responses to the presenter group according to their understanding. In cycle I there are still many deficiencies in the learning process using the Problem Based Learning learning model.

The results of observing the teacher's teaching in the first cycle of the first meeting obtained an overall score of 30, a maximum score of 60 with a percentage of 50% which is stated in the quite effective category. Meanwhile, at the second meeting, the overall score was 41 with a percentage of 68% and was still categorized as effective.

The results of observing student learning activities in the first cycle of meeting I obtained an overall score of 28, a maximum score of 60 with a percentage of 46.66% which was stated in the quite effective category. While at the second meeting, the overall score was 39, a maximum of 60 with a percentage of 65% and was in the Effective category.

The results of students' critical thinking skills tests in cycle I. The results of the descriptive analysis of frequency and percentage of the acquisition scores of students' critical thinking skills tests in thematic learning after applying the Problem Based Learning model showed that in cycle I no

students scored 80- 100 very critical categories with a percentage of 0%, students who scored 70-79 in the critical category totaled 10 students with a percentage of 40%, students who scored 60-69 in the fairly critical category totaled 6 students with a percentage of 24%, students who scored 20-59 in the less critical category are 9 students with a percentage of 36%, while students who score 0-19 are 0 students with a percentage of 0%. The results of the frequency and percentage descriptive data show that out of 25 students, 10 students with a percentage of 40% are included in the complete category and 15 students with a percentage of 60% are included in the incomplete category. These results indicate that in cycle I, the completeness of students' critical thinking skills test results in thematic learning through the application of the Problem Based Learning learning model has not been achieved. Where it can be seen from the number of students whose learning outcomes are less than 80% complete, because the success indicator suggests that if 80% of the total number of students achieves the KKM score of ≥ 70 in thematic learning through the application of the Problem Based Learning learning model it is considered classically complete. Thus the learning objectives have not been achieved so that learning can be continued in the next cycle.

The results of observing the teacher's teaching activities in cycle II meeting I obtained an overall score of 53, a maximum score of 60 with a percentage of 88.33% which is stated to be in the Very Effective category. while at the second meeting the overall score was 57 with a maximum score of 60 with a percentage of 9% and was also in the Very Effective category.

The results of observing student learning activities in cycle II meeting I obtained an overall score of 50, a maximum score of 60 with a percentage of 83.33% which is stated to be in the Very Effective category. while at the second meeting the overall result was 59, the maximum score was 60 with a percentage of 98.33% and was stated to be in the Very effective category.

The final test results for students' critical thinking skills in cycle II, while the results of the descriptive analysis of the scores obtained from the critical thinking skills test results in thematic learning after the application of the Problem Based Learning model showed that in cycle II there were 10 students who scored 80-90 in the very critical category. or 40%, values 70-79 with a critical category of 12 students or 48%, values of 60-69 with a fairly critical category of 3 students or 12%, values 20-59 with a less critical category of 0 students or 0%, and also there were no students who scored 0-19 with a percentage of 0%. While the results of the frequency and percentage decryption data show that out of 25 students, 22 students with a percentage of 88% are included in the complete category and 3 students with a percentage of 12% are included in the incomplete category. These results indicate that learning completeness in cycle II has reached classically because the number of students who have completed more than 80% of students who have scored according to KKM, namely ≥ 70 in science subjects through the application of the Problem Based Learning learning model is considered classically complete.

Based on the results of observations of teacher teaching activities, student learning activities, and the increase in students' critical thinking ability test results from cycle I to cycle II in the description above, it can be concluded that the application of the Problem Based Learning learning model to improve critical thinking skills of fifth grade students of SDN No.211 The Campagaya Presidential Instruction for Takalar Regency was stated to be able to improve students' critical thinking skills so that there was no need for action research in the next cycle.

CONCLUSION

Based on the research results obtained, it can be concluded that the application of the problem-based learning model can improve the critical thinking skills of fifth grade students at SDN No.211 Campagaya Instruction, Takalar Regency. This is evidenced by the results of teacher and student activities as well as the results of students' critical thinking skills tests. The description of the increase can be seen from each cycle. In the first cycle, the meetings I and II were in the categories of Effective and Effective respectively, while in the second cycle, the meetings I and II were in the category of Very Effective. While the results of students' critical thinking skills tests in cycle I with a percentage of 40% were in the less category (K) so that the completeness of students' critical thinking ability test results had not been completed classically, while in cycle II with a percentage of 88% the results of students' critical thinking ability tests had increased and is in the good category (B) so that the students' critical thinking ability test results have been completed classically, and the

application of the Problem Based Learning learning model can improve the critical thinking skills of class V SDN No.211 Inpres Campagaya, Takalar Regency.

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