

Problem-Based Learning (PBL) in Improving Critical Thinking in the Era of National Development

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Abstract: This research is motivated by the low results of students' critical thinking skills. The purpose of this study is to describe the improvement of critical thinking skills using the Problem-Based Learning (PBL) model on the integrated thematic grade IV SDN 03 Pakan Labuah Bukittinggi City. This type of research is classroom action research (CAR) using qualitative and quantitative approaches. The subjects of the study were the fourth grade students of SDN 03 Feed Labuah, Bukittinggi City, totaling 25 people. The study was conducted in two cycles. The results showed an increase in the average observations of the first cycle RPP was 73.60% (C) increased in the second cycle to 94.44% (AB), this was also seen in the average results of the implementation of learning aspects of the first cycle teacher was 74.99% (C) increased in cycle II to 95% (AB). In the aspect of students it is found that the average cycle I was 71.66% (C), increasing in cycle II to 93.33% (AB). While the average assessment of observations of students' critical thinking skills in the first cycle was 61.68% (C) and increased in the second cycle which was 83.45 (A-). Thus the Problem-Based Learning (PBL) model can improve critical thinking skills in integrated thematic fourth grade students at SDN 03 Feed Labuah Bukittinggi City.

Keywords: critical thinking, problem-based learning, learning model

I. INTRODUCTION

The rapid development of science and technology, provides many benefits and facilitates humans in carrying out their daily activities. But on the contrary, there are increasingly complex conflicts, such as moral decline or deterioration of one's mind.

This identifies that the challenges facing future generations will be even heavier. Therefore, one of the skills needed to face challenges in the future is critical thinking skills [1]. Because by thinking critically children do not just accept whatever is in front of them just like that, but the child will first consider whether to accept or reject it.

Critical Thinking Skill or CTS is an indispensable tool in modern society, enabling students to effectively face challenges in building new ideas, making correct choices, and understanding the world around them [2].

CTS are an indispensable instrument in modern society, enabling students to effectively face the challenges in building new ideas, making correct selections, and understanding the world around them. This means that critical thinking or CTS is an indispensable tool in modern society, enabling students to effectively face challenges in developing new ideas, making correct choices, and understanding the world around them [2].

Critical thinking learning, it would be better learning material in the form of something close to the lives of students [3]. Starting from behavior that looks at the world objectively, views the elements simultaneously, and begins to think operationally. Therefore proper learning is by linking the concept of subject matter in a single unit that is centered on the theme. Integrated thematic learning is used as a learning approach in the 2013 curriculum that uses themes.

Integrated thematic learning is a learning approach that involves several subjects to provide meaningful experiences for students [4]. Said to be meaningful because in integrated thematic learning, students will understand the concepts they learn through direct experience and relate them to other concepts they already understand.

Integrated thematic learning is integrated learning that uses themes to link several subjects so as to provide meaningful experiences to students. Integrated thematic learning emphasizes learning while doing something [5]. The teacher's experience becomes important for combining theory and practice as well as giving meaning to learning for students.

Based on observations that have been done on the fourth grade students of SDN 03 Feed Labuah, Bukittinggi City, it can be concluded that the students' critical thinking skills have not yet developed to the

maximum. This condition is seen in terms of students where (1) most students are not fully active and respond to questions raised by the teacher in learning, (2) some students find it difficult to express ideas or ideas in written or oral form because of students' opportunities to think about solving problems related with daily life not yet optimal, (3) some students have not been able to reason and develop their thinking skills, and (4) students have not been fully involved in solving problems, and (5) students are still learning lessons separately, so integrated learning for students is not meaningful, and (6) some students have not fully mastered the material being taught, due to the lack of development of material provided by the teacher for learning.

Based on the identification of the problem above, the most important problem to be overcome is the ability to think critically. This is because students are less involved in problem solving so the ability to reason and express ideas or ideas in writing is still low. This is caused by the teacher also giving less problems in accordance with the lives of students and not providing a real concept to students. In line with this, critical thinking skills can be obtained from learning that provides opportunities for students to solve problems [6].

To optimize the ability of students, especially critical thinking, teachers must use the right models in implementing thematic learning. One of them is by using the Problem Based Learning (PBL) learning model in improving students' critical thinking skills. Problem Based Learning is a learning model that uses real world problems as a context for students to learn about critical thinking and problem solving skills, as well as to gain knowledge and essential concepts of subject matter [7].

Problem Based Learning is a learning approach that uses real world problems as a context for students to learn about critical thinking and problem solving skills, as well as to gain knowledge and conceptual from subject matter [8]. The use of this learning model can improve students' skills and abilities in learning, so students will get satisfying learning outcomes after learning takes place. The advantages of Problem Based Learning (PBL) are: (1) Realistic with students' lives, (2) concepts according to students' needs, (3) fostering an attitude of inquiry, (4) retention of concepts becomes strong, (5) foster the ability to solve problems [9]. The use of Problem Based Learning (PBL) models is one of the solutions that researchers offer and is one model that can be used in the 2013 curriculum. The Problem Based Learning (PBL) model can be used as a model to improve critical thinking skills because it will greatly help the effectiveness of the learning process and can train students to solve real-world problems and train students to think

Based on the description above, this research specifically wants to describe: (1) planning the implementation of learning to improve critical thinking skills using the Problem Based Learning (PBL) model on integrated thematic learning (2) implementing learning to improve the ability to think critically using the Problem Based Learning model (PBL) on integrated thematic learning (3) The results of critical thinking skills using the Problem Based Learning (PBL) model on integrated

thematic learning. The purpose of this study was to describe the improvement of critical thinking skills using the Problem Based Learning (PBL) model in integrated thematic learning of fourth grade students at SDN 03 Pakan Labuah, Bukittinggi City.

II. METHOD

This research is a Classroom Action Research (CAR). CAR is a research conducted to encourage education and improve the learning process. The types of considerations used are qualitative and quantitative.

A qualitative approach is used because the data generated in the form of information in the form of sentences that provide an overview of students' expressions relating to the level of understanding of subjects (cognitive), views or attitudes of students towards new learning techniques (affective), student activities following lessons, attention, enthusiasm in learning, self-confidence, learning motivation, and the like [10]. A quantitative approach is data that analyzes student learning outcomes using a percentage approach [10].

This research was conducted consisting of two cycles, namely cycle I and cycle II. The data sources of this study were 25th grade students of SDN 03 Feed Labuah, Bukittinggi City, totaling 25 people, including 12 women, 13 men, and class IV teachers, in integrated thematic learning process activities with a Problem Based Learning (PBL) model including : (1) planning, (2) implementing actions, (3) observing actions, and (4) analyzing / reflecting.

The data that has been collected is analyzed in stages: (1) Analyzing the data that has been collected both through observation and tests, (2) reducing the data including categorizing and classifying, (3) presenting data by organizing information that has been reduced, and (4) summarizing the results research.

III. RESULT AND DISCUSSION

Implementation of integrated thematic learning is carried out in accordance with a predetermined plan. In the implementation of learning, researchers refer to the planning contained in the form of lesson plans. In the first cycle of planning meeting 1 there were still many shortcomings including indicators that were formulated not in accordance with Operational Verbs. Another problem found is the formulation of learning objectives still lead to multiple interpretations and do not meet the criteria A, B, C and D. In addition, the shortcomings encountered were the selection and organization of teaching materials, not in accordance with the abilities and needs of students and the up-to-date updates were not seen.

In addition, shortcomings can also be seen in the allocation of time that is not in accordance with the time available. The division of time each meeting hour is based on the unit of learning objectives or the nature/type/type of subject matter [11]. The next drawback is the authentic assessment design, the suitability between forms, techniques and instrument skills and attitudes have not yet seen. Discussion of actions towards the implementation of integrated thematic learning to improve students' critical

thinking skills using the Problem Based Learning cycle I model includes: (1) introduction; (2) core and (3) cover.

1. Planning

Planning critical thinking skills using the Problem Based Learning model in integrated thematic learning is outlined in the form of RPP consisting of components of Core Competencies, Basic Competencies, indicators, learning objectives, learning materials, learning models and methods, media and learning resources, learning activities, and Score. The lesson plan is designed with PBL steps, namely: 1. Orient students towards the problem. 2. Organizing students to learn. 3. Guiding individual or group instructions. 4. Develop and present the work. 5. Analyzing and planning the problem solving process. The results of the first cycle learning plan evaluation meeting 1 were 69.44% with sufficient criteria. Then increase in cycle 1 meeting 2, which is 77.77% with good criteria, with an average in the first cycle is 73.60% (C). And increasing in cycle 2 is 94.44% with very good criteria.

2. Implementation

The implementation of critical thinking skills with the Problem Based Learning model in integrated thematic learning consists of preliminary activities, core activities, and closing activities. In the implementation of integrated thematic learning using the Problem Based Learning model the process assessment and final assessment are carried out. Implementation of integrated thematic learning by using the Problem Based Learning model is carried out with the steps: 1. Orienting students to the problem. 2. Organizing students to learn. 3. Guiding individual or group investigations. 4. Develop and present the work. 5. Analyze and evaluate the problem solving process. The results of observations of the implementation of integrated thematic learning using Problem Based Learning models in the first cycle of meeting 1 showed that the implementation of learning has not been maximized with the acquisition of the value obtained is 65.33 with sufficient criteria. In cycle 1, meeting 2 increased to 73.07 with good criteria, with an average of 69.20 (C). And further increased in cycle 2 with the acquisition of 84.46 with very good criteria. From this, it appears that there is an increase in the teaching activities of teachers at the implementation stage starting from cycle I to cycle 2.

3. The Results of Students' Critical Thinking Skills

The assessment of critical thinking skills using the Problem Based Learning model on integrated thematic learning is carried out during the learning process then by giving a critical thinking skills test given at the end of the learning process. The results of students' critical thinking skills have gradually increased from cycle I to cycle II. The average results of students in integrated thematic learning that meets the minimum completeness of learning in the first cycle of meeting 1 there are 5 students who completed 25 students, with an average student grade of 60.44 (C). Then increase in the first cycle of meeting 2 as many as 11 students completed out of 25 students, with an average student score of 73.74 (B). Then the average is

67.09 (B-). Then more increased in cycle 2 as many as 21 students completed out of 25 students, with the acquisition of an average student score of 84.72 (A-). Thus, an integrated thematic learning process using the Problem Based Learning model can improve students' critical thinking skills.

IV. CONCLUSION AND SUGGESTION

First, based on the results and conclusions of the study, it is suggested to the teacher that a teacher should really pay attention to the important components in the lesson plan. The elaboration of these components should pay attention to the needs and environment of students so that the learning process runs smoothly and the goals achieved can be realized optimally.

Second, an assessment conducted to find out whether the learning was successful or not is very important to note. The assessment conducted must be in accordance with the learning objectives to be achieved. This must be considered by the teacher in determining the assessment to be carried out so that the desired abilities of students can be measured appropriately, and organization of teaching materials, not in accordance with the abilities and needs of students and the up-to-date updates were not seen.

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