

Critical Thinking Skill Improvement Using Problem Based Learning (PBL) Model of 4th Grade Students of Elementary School

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Abstract: *This research has begun from the problem of the lack of teachers involving students in the learning process, the learning received by students was not concretely connected with daily life, and the lack of student involvement in building critical thinking skills. This results in low critical thinking skills of students. This study aims to improve students' critical thinking skills in learning through PBL models of 4th grade students of Elementary School in 11 Air Camar. This type of research used Classroom Action Research (CAR) which was intended to contribute to the improvement of knowledge, style, techniques and methods of teachers in the classroom, and to provide insight into the behavior of teachers and students in applying learning. The research was conducted at Padang Air Elementary School 11 Air Camar in August to December 2018. The subjects in this study were fourth grade students of Air Camar 11 Elementary School, consisting of 16 students consisting of 16 boys and 10 female students. Based on the results of the study it can be concluded that through the PBL Model can improve critical thinking skills of fourth grade students in learning of elementary school 11 Air Camar, Padang City*

Keywords: Critical Thinking Skill, Problem Based Learning

1. Introduction

Integrated thematic learning needs to be prepared maximally with a variety of activities using a variety of learning approaches. Integrated learning places more emphasis on student involvement in the learning process or actively directs students in the learning process. With integrated thematic learning students gain direct experience and are trained to find their own various knowledge that is learned holistically, meaningfully, authentically and actively.

Law of the Republic of Indonesia Number 20 of 2003 concerning National Education System (SISDIKNAS) chapter II Article 3 explains that "National education functions to develop capabilities and shape dignified national character and civilization in order to educate the nation's life, aiming to develop students' potential to become humans who believe and fear the Almighty God, are noble, healthy, faithful, capable, creative, independent, and become citizens who are democratic and responsible "[1]

Critical thinking ability is one of life skills that needs to be studied and developed through the educational process. "The ability to think critically is an organized process that allows students to evaluate the evidence, assumptions, logic, and language that underlies other people's statements"[2]. The ability to think critically makes students not easily receive information or knowledge from one source, but students will try to find as many explanations and alternatives as possible to analyze, synthesize, and evaluate that knowledge so that they can finally make generalizations. The purpose of developing the ability to think critically is both learning to improve students' thinking skills in facing a dynamic and

ever-changing life. The same thing was expressed that now there has been widespread support and acceptance of critical thinking as an important dimension in learning. But in reality, students' critical thinking skills are still very low.[3]

One way to improve students' critical thinking skills was by using the Problem Based Learning learning model. In accordance that PBL models can improve critical thinking skills, foster student initiative in work, internal motivation in learning, and can develop interpersonal relationships in group work [4]. This learning model was able to improve students' critical thinking, where students will be explored in their abilities before the teacher explains about the material to be taught.

PBL was very suitable to help students become active learners because it puts learning in the real world a problem and makes students responsible for their learning. This has a double emphasis, namely to help learners develop strategies and build knowledge. This causes students' ability to learn critical thinking in analyzing and solving problems [5]. Students with critical thinking were students with the ability to identify, evaluate, and build arguments and the ability to solve problems correctly. Students who think critically will be able to help themselves or others in solving problems they face, indirectly increasing their learning competencies. If the learning competencies and critical thinking skills of Sisea increase, the learning objectives are achieved. So is the case which reveals that the use of PBL can influence critical thinking and student responses [6].

Based on this description, researchers are interested in raising it in a study entitled " Critical Thinking Skill Improvement Using Problem Based Learning (PBL) Model

of 4th Grade Students Of Elementary School

2. Literature Review

Critical thinking Critical thinking is a complex process of deliberation which involves a wide range of skills and attitudes [7]. It includes ;(1) identifying other people's position,(2) Evaluating the evidence for alternative points of view,(3) weighing up opposing argument and evidence fairly,(4) Being able to read between lines, seeing behind surface and identifying false or unfair assumptions,(5) recognizing techniques used to make certain position more appealing than other , such as false logic and persuasive devices,(6) reflecting on issues in a structure way, bringing logic and insight to bear,(7)drawing conclusions about whether argument are valid and justifiable, based on good evidence and sensible assumptions,(8) presenting a point of view in a structure, clear, well-reasoned way that convinces other.

Another opinion expressed critical thinking is a reasonable and reflective thinking that focuses on deciding what must be trusted or done [8]. Critical thinking is the ability to use logic. Logic is a way of thinking to get knowledge accompanied by an assessment of its truth based on certain reasoning patterns. Furthermore, Ennis said there are six basic elements in critical thinking abbreviated as FRISCO, namely Focus (focus), Reason (reason), Inference (concluding), Situation (situation), Clarity (clarity) and Overview (overall view) [9].

From the opinion of some experts regarding the notion of critical thinking above, it can be stated that critical thinking is a process of directed and clear mental activity about a problem which includes formulating problems, determining decisions, analyzing and carrying out scientific research that ultimately produces a concept believed to be based on sources Trusted. This ability is important to be developed and designed by teachers for students, considering that critical thinking skills influence learning achievement and help students understand the science concept in depth

Material and learning procedures that are used together to create Learning Competencies in students. To achieve the learning objectives that have been designed, a method is needed to realize a predetermined strategy. Strategy shows a plan to achieve something. Argues that the learning model is a plan or pattern that can be used to shape the curriculum (long-term learning plan), design learning materials, and guide learning in the classroom or others [10]. Therefore the importance of students' critical thinking skills plays an important role in improving learning. so that the right model is needed to improve it. one with a problem based learning model

That problem-based learning (PBL) was developed from the philosophy of constructivism, which states truth is an autonomous construction of knowledge [11]. That is, students will compile the knowledge they already have and from all new knowledge acquired. Problem-based learning is the delivery of learning oriented to open problem solving

[11]. The main purpose of education is to solve problems in life. In line with the above understanding, the Ministry of Education and Culture in 2013 stated that problem based learning is a learning approach that presents contextual problems that stimulate students to learn. The same opinion was expressed which states that problem-based learning is a set of teaching models that use problems as a focus for developing problem-solving skills, material and self-reinforcement [12].

In addition to some of the opinions above, the Problem Based Learning learning model is a way of presenting lesson materials by making the problem a starting point for discussion to be analyzed and synthesized in an effort to find solutions or answers by students [13]. The problem can be submitted or given by the teacher to students, from students with the teacher, or from the students themselves, which are then used as discussion and find solutions to student learning activities. From some of the opinions above, it can be stated that problem based learning is a way of presenting lesson material that makes the problem the main ingredient in learning where students are conditioned to find solutions to the problem independently or in groups.

3. Research Methods

This research was a Classroom Action Research (CAR) study which is intended to contribute to the improvement of knowledge, style, techniques and methods of teachers in the classroom, and to provide insight into the behavior of teachers and students in applying learning [14]. "Classroom action research is an examination of learning activities in the form of an action, which is deliberately raised and occurs in the classroom together" [16]. There are four components of research in each cycle, namely planning, action, observation and reflection [17].The location of the study was carried out at 11 Air Camar Public Elementary School in Padang. The time of the study in October 2018 and the duration of the research action were 2 cycles during the science learning process took place. The subjects in this study were fourth grade students with 26 students. The technique of collecting data uses observation. The research instrument were items about critical thinking skills

3.1. Research Results are

Observation conducted for each meeting, which is to fill the observation sheet of teacher activities in learning through the Problem Based Learning Model. Data from these observations are obtained through observation sheets of teacher activities and items about critical thinking skills. The results of theanalysis of observer can be seen in Table 1 below:

Table 1: Analysis of Results

No	Aspects	Cycle I	Interp.	Cycle II	Interp.
1	Teacher act.	73.75	Good	86.25	Very good
2	Percentage	0	Low	80.80	Good

From the results of the study, the activities of teachers in the

first cycle took place well and in the second cycle it could be increased to 86.25 and went very well. So that learning with PBL models is successful. From Critical Thinking Skills. Students in the first cycle are 0 which run poorly. And can be increased in the second cycle of 80.80 and goes well. Overall learning with the PBL model can be said to be successful

3.2 Discussion

Based on observer observation data on teacher activities in managing learning in the first cycle (73.75%) and cycle II (86.25%) so that from cycle I to cycle II, the average percentage increase has reached 13.5% and has been able to said good. For the percentage of completeness of the Critical Thinking Skill I test (0%) and the second cycle (80.8%) so that it reached an 80.8% increase in the excellent category.

The increase that occurred in the achievement of learning outcomes of science learning in grade IV students in the second cycle also showed that improvements to the policy implementation of the action had succeeded well. Critical Thinking Skills that are successfully achieved by students with an average number of 41.85 in the first cycle, increased to 78 in the second cycle. The increase in Critical Thinking Skills certainly indicates that learning with the use of PBL models, in addition to improving the fun learning process also enhances Critical Thinking Skills. If the fun learning process can be improved and Critical Thinking Skills also increase, it can be said that the effectiveness of learning can also be improved.

If traced further, the increase in achievement of Critical Thinking Skills is closely related to the fun learning process felt by students. Therefore, success in increasing the achievement of Critical Thinking Skills may be triggered by a pleasant learning atmosphere. This guess is based on several reasons, the following:

First, the PBL model can strengthen students' concepts of learning material given by the teacher. Interestingly, the PBL model can be used as a way of remembering information. Thus it can be interpreted that the use of the PBL model can be used as a way to increase learning pleasure.

Second, the PBL model can train students to be critical of the material. A good relationship between students and teachers makes the learning atmosphere pleasant. This can be seen when students answer incorrectly, the teacher does not directly say that the student's answer is wrong. The teacher asks other students to be able to answer the question. After several students answer the question, then the teacher responds to the students' answers. The teacher says good, or smart for students who answer correctly, thus the motivation of students to learn well can occur, because to get good words, or smart students must be able to answer questions correctly. And help students to be mutually responsible.

4. Conclusions and suggestions

4.1 Conclusions

Based on the results of the study it can be concluded that through the PBL Model can improve critical thinking skills of fourth grade students in paying attention to teacher explanations, courage to ask, courage to answer questions, work on time during learning at 11 Air Camar elementary school. This can be seen from the increase in indicators of success from Cycle I to Cycle II, namely from 0% to 80.80%. It can be concluded that the implementation of learning through PBL Model in class IV 11 Air Camar elementary school. has increased and can be said to be good, because it has reached the target of 75%

4.2 Suggestions

Based on the conclusions above, some suggestions can be made for improving learning outcomes, including:

- 1) For students, it is expected to improve students' critical thinking skills in learning.
- 2) For teachers, the implementation of learning through PBL models can be used as an alternative variation in the implementation of learning and can improve students' critical thinking skills.
- 3) For schools, as a reference for teachers and principals on the importance of learning methods and knowledge of the prerequisites in learning.
- 4) For further research, so that the implementation of the PBL Model is more effective if it is applied in a wide or open room and given variations in the form of practice questions

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