

Implementation of Problem Based Learning Model in Elementary School

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ABSTRACT

This article aims to describe the implementation of problem based learning learning model in thematic learning with science content in elementary schools. The research method used is descriptive qualitative. The subjects studied were 10 students of fourth grade of SD Islam Terpadu Mutiara Hati. Data collection techniques were carried out through interviews, in-depth observation and documentation. The data analysis technique was carried out using data triangulation and conclusion. The results showed that the implementation of problem-based learning model could provide opportunities for students to express ideas actively and creatively. It also had an impact on student learning outcomes and motivation. Students were more active in participating in learning and do not feel bored during the learning process. Some of the obstacles in implementing the problem-based learning model are that students still not used to express their ideas and less confident in expressing their opinions. Another obstacle was that students were still not active in the group during the discussion activities.

Keywords: problem based learning, elementary school.

1. INTRODUCTION

Natural Sciences/*Ilmu Pengetahuan Alam* (IPA) is a science that studies the natural surroundings and their contents. This means that science studies all objects that exist in nature, events and symptoms that appear in nature, science can be interpreted as an objective knowledge. Fowler (in Trianto, 2010:136) argues that science is systematic and formulated knowledge, which relates to material phenomena and is based primarily on observation and deduction.

Improving the quality of learning is something that is endlessly discussed and pursued. Various efforts have been made to change and improve the quality of education so that it runs optimally. One of the efforts to improve the quality of education is to change the paradigm of education, especially in elementary schools, from teacher centered to student centered learning. This educational paradigm change also requires teachers to be more creative and innovative in developing learning in the classroom.

The achievement of the learning process can be seen from the learning outcomes obtained. These learning outcomes can be obtained through an assessment process (Rahmawati, et. al, 2022: 55). As educators, of course every teacher hopes that their students are able to achieve optimal learning outcomes (Sunardiyah, et. al, 2022: 905). However, in reality, the results of interviews with fourth grade students of SD Islam Terpadu Mutiara Hati indicate that many students think that the subject matter delivered by the teacher is difficult to understand, thereby decreasing student participation in classroom learning activities. In the end, the learning activities in the classroom become less conducive and tend to be boring, so that the impact on student learning outcomes is not as expected.

The results of the observation also show that students who cannot understand the material continuously feel inferior because they are left behind in the subject matter, especially in learning science which is difficult to understand. If this happens to a student at the end of the semester, the student may be left behind or failing a grade. This causes students to be mentally down and can make them lazy to go back to school. In addition to the impact on students, teachers also experience the impact of these problems. Teachers feel they have failed in the teaching and learning process, because teachers

cannot complete the competencies that are demanded by the curriculum in a timely manner, and must repeat learning in order to evaluate learning, in order to succeed in the future.

According to Sulistyorini (2007:9), science can be viewed in terms of products, processes and in terms of attitude development. That is, learning science has a process dimension, a product dimension (outcome), and a scientific attitude development dimension, all of which are interrelated with one another. It was further explained that science learning in elementary schools aims to make students have the following abilities: (1) Gain belief in God Almighty based on the existence, beauty and orderliness of His natural creation; (2) Develop knowledge and understanding of science concepts that are useful and can be applied in everyday life. (3) Develop curiosity, positive attitude and awareness about the interplay of the relationship between science, environment, technology and society; (4) Develop process skills to investigate the environment, solve problems and make decisions; (5) Increase awareness to participate in maintaining, safeguarding and preserving the natural environment; (6) Increase awareness to appreciate nature and all its regularities as one of God's creations; and (7) Acquire knowledge, concepts and skills in science as a basis for continuing further education.

Based on the explanation above, science learning should be carried out according to the characteristics of elementary school students, namely taught with concrete things and implemented directly in children's daily lives (Nisa, Prasetyo & Istiningsih, 2019: 102). Thus, students can have experience how to find a concept according to what is taught. If this is done, it will stimulate the development of students' thinking skills, one of which is by using a problem-based learning model. This learning model is used as a guide in designing the learning process (Nisa, 2020: 6).

In the implementation of problem-based learning model, students will be divided into small groups and work together to solve a problem that has been agreed upon by students and teachers related to the subject matter. The implementation of problem-based learning model makes students actively discuss with group members to solve problems and find their own concepts. When the teacher is applying the learning model, students often use a variety of problem-solving procedures. Therefore, like it or not, students are required to actively read and explain the material from teacher. In addition, they must actively seek additional information from various sources to solve problems in the discussion questions.

Problem-based learning model is one of teaching methods with a focus on real problem-solving processes in which students carry out group work, feedback, discussions, which can serve as a springboard for investigative investigations and final reports. Thus, students are encouraged to be more actively involved in the subject matter and develop critical thinking skills (Arends, 2008:93). Problem-based learning is an instructional (and curricular) that focuses on students conducting research, integrating theory and practice, and applying knowledge and skills to develop viable solutions to problems. Problem based learning is a learning model by exposing students to practical problems as a foothold in learning or in other words, students learning through problems which are then sought for solutions, so that student activity, creativity, and motivation also increase, so that it has an impact on optimal student learning outcomes. Trianto (2010:136) states that the purpose of problem-based learning is to help students develop thinking skills and problem-solving skills, learn authentic adult roles and become independent learners. In line with this opinion, problem solving is one of the problem-based teaching strategies where teachers help students to learn to solve problems through learning experiences.

2. METHODS

The research is a qualitative descriptive research, where the researcher is the key instrument. The data collection technique was carried out by triangulation (combination). Data analysis is inductive/qualitative, and qualitative research results emphasize meaning rather than generalization. Qualitative descriptive research aims to describe, explain and answer in more detail the problems to be solved, by studying as much as possible an individual, a group or an event. In qualitative research, humans are research instruments and the results are written in the form of words or statements that are in accordance with the actual situation.

This research was conducted on 10 students of fourth grade of SD Islam Terpadu Mutiara Hati. Researchers collect the data to solve the problem in this research. The object of this research is the implementation of problem-based learning model in science learning. Meanwhile, the subjects in this study were students of fourth grade of SD Islam Terpadu Mutiara Hati.

Data were obtained through interviews with teacher about the implementation of problem-based learning model in science learning in the fourth grade of SD Islam Terpadu Mutiara Hati. The data in this study were also obtained indirectly through the media, references, and literature studies related to the theory of the implementation of problem-based learning models in science learning.

The data acquisition technique used the technique proposed by Sugiyono (2016: 225), which consists of interviews, observations, documentation and triangulation or a combination. The interview technique was carried out by asking questions to the teacher. The purpose of this interview was to obtain in-depth data or information regarding the implementation of problem-based learning model in science learning.

The observations were made by observing directly about the implementation of problem-based learning model in science learning. In this reserach, researcher used one kind of triangulation, namely source triangulation. According to Sugiyono (2016: 241), source triangulation means getting data from different sources with the same technique. Data is said to be valid if there is consistency or conformity between the information provided by one informant and another. Thus, the focus of this research is the implementation of problem-based learning model in science learning. In this research, researcher was directly involved in the field for observation.

3. RESULTS AND DISCUSSIONS

Problem-based learning model in science learning provides opportunities for students to express ideas explicitly, providing experiences related to students' ideas. Thus, students are encouraged to distinguish and integrate ideas about challenging phenomena. Problem-based learning model in science learning encourages students to think creatively, imaginatively, reflects on models and theories, introduces ideas at the right time, tries new ideas, and encourages students to gain confidence.

This learning model is very suitable to be applied to science, because in science learning students are required to think actively, creatively, and imaginatively. Student creativity is highly demanded because in science learning, the material cannot only be memorized, but also practiced.

Problem-based learning model in science learning is an approach that uses real-world problems as a context for students to learn critical thinking and problem-solving skills, as well as to acquire essential knowledge of the subject. Problem-based learning model in science learning has the idea that learning can be achieved if educational activities are centered on tasks or problems that are authentic, relevant and presented in a context. Based on this opinion, it can be stated that problem-based learning is an alternative learning model that can be applied by educators. Teachers need to develop a classroom environment that allows an open exchange of ideas, so that the learning process emphasizes students in communicating with their peers as well as with their learning environment, thus, helping students become more independent in solving problems related to facts.

Students' understanding ability will increase when the teacher changes the learning design to student-centered learning. Learning designed by applying problem-based learning model is able to improve student learning outcomes in science.

The implementation of problem-based learning model is carried out in the following steps.

- a. Student orientation on problems. At this stage, the teacher explains the purpose of learning, encourages and motivates students to be actively involved in the learning process. The material presented in this lesson is related to heat energy. The teacher gave some problems such as why a wet cloth if it is dried in a hot place will dry quickly; why heated ice cubes will turn into water, and so on.
- b. Organize students for learning. In this step, students are grouped and given a problem to be solved with the group. Teachers help students to define and organize tasks in the learning process.
- c. Guide individual and group investigations. The teacher helps students to collect information about the learning material and make explanations, as well as present learning tools.
- d. Develop and present the work. Teachers help students plan, assist, and prepare individual and group assignments.
- e. Analyze and evaluate the problem-solving process. The teacher helps students carry out reflection or evaluation and provides feedback and moral messages from the results of the discussion.

The results of observations showed that students were more active in participating and did not feel bored during the learning process. In using this model, students were divided into small groups consisting of 2-3 students. The media used were interactive videos, pictures and simple tools that students use for practicum with their groups. In addition, the teacher also prepared work steps along with students' worksheet which contains a number of problems in the form of questions that must be answered. After finishing, each group was asked to present the result, and the other groups listened.

Through this problem-based learning model, students are more actively involved in solving the difficulties experienced by students during the science learning process in class. In science learning, the teacher applies the problem-based learning model correctly, so that learning outcomes will increase. The discussion above shows that the indicators of success are achieved. There is an increase in student learning outcomes in classroom learning activities by using problem-based learning model in the fourth grade of SD Islam Terpadu Mutiara Hati.

Some of the obstacles in implementing the problem-based learning model are that students still not used to express their ideas and less confident in expressing their opinions. Another obstacle was that students were still not active in the group during the discussion activities.

Based on the results of the research above, it shows that the determination of the learning model will determine the success of the learning process (Nisa, 2020). This problem-based learning model encourages students to be more confident and motivated in carrying out the learning process. This motivation and self-confidence then have an impact on the success of student learning outcomes (Nurmawati, et. al, 2022).

4. CONCLUSION

Based on the explanation above, it can be concluded that the problem-based learning model can increase students' self-confidence and student participation in class tends to increase, so that it affects their learning outcomes. It can be concluded that the teacher should always evaluate in his delivery whether it has been deemed effective or not. Therefore, teachers always need to develop learning in the classroom by using creative and innovative ideas, so that the classroom atmosphere remains active. So that, it will have an impact on the seriousness of children's learning in class.

Based on the results of the research, the researcher would like to give advice to SD Islam Terpadu Mutiara Hati as follows: (1) Students are advised to diligently read various sources in learning, so that students gain broad insight and are able to solve the problems they face in the learning process. (2) Teachers are advised to always provide a place for students to develop reading skills and use various kinds of learning innovations so that students feel happy and motivated in learning. (3) School is advised to always provide policies that lead to increasing learning resources and increasing human resources for school residents. (4) Other researchers are advised to conduct research using more complex variables so that problems in education can be minimized.

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