
EXPLORATION STUDIES OF SCIENCE EDUCATION LEARNING BASED ON ACTIVE LEARNING AT FIFTH GRADE ELEMENTARY SCHOOL STUDENTS IN DISTRICT KARANGANOM

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Abstract

The purpose of this research is to illustrates about science education learning based on active learning in fifth grade elementary school students in district Karanganom, Klaten, Central Java, Indonesia. The type of this research is qualitative description research. This research do through studies field to describe about the science education learning process in fifth grade elementary school. The sample of research conducted with cluster random sampling. Data collection techniques include interviews, observations, and note field. Data validation techniques used triangulation technique. Data was analyzed using interactive descriptive analytical model. The result showed that science education learning process in fifth grade elementary school in district Karanganom not run well. Science education learning in class still centered on the teacher, while the students passive in the learning process. Besides that teaching materials used are also very limited, its not up to date and its contents also not complete. The students need interesting teaching materials and able to make students learn actively and independently.

Keywords: Exploration Studies, Science Education Learning, Elementary School, District Karanganom.

INTRODUCTION

Basic education is conducted to develop skills and attitudes and provide basic knowledge and skills that are used as capital to live in society. In addition, basic education is a place to prepare learners to follow secondary education. Primary school education in Indonesia is conducted for 6 years starting from the age of 6 to 11 years. As Mowsesian (2010: 08) has discovered: "Elementary schools usually serve children between the ages of five and eleven years, or kindergarten through sixth grade. Some elementary schools comprise kindergarten through fourth grade and are called primary schools. These schools are usually followed by a middle school, which includes fifth through eighth grades. Elementary schools can also range from kindergarten to eighth grade". At this age learners are taught various disciplines, skills, and behavior as well as familiar surroundings.

In the implementation of elementary school learning, learning should emphasize the modern pedagogic dimension and prioritize personal experience through a scientific process. Daryanto (2014: 51) suggests that the scientific learning process is designed in such a way that students actively construct concepts, laws and principles. The stages of the scientific process are observing, formulating problems, proposing or formulating

hypotheses, collecting data, analyzing data, drawing conclusions, and ending by communicating the concepts that have been discovered. Based on this, learning should be linked to the environment and daily life of the students. Students should interact directly with what they learn in order to understand the material. Interacting directly can provide a good learning experience for students. In addition, students can also dig deeply. As revealed by Samatowa (2011: 5) that direct experience provides an important role as a driver of the pace of cognitive development of children and a suitable learning model for Indonesian children is learning through direct experience.

The age of primary school children is an important stage of development to support the success of further developments. The cognitive development of elementary school students is still in the stage of concrete operational. According to Agustiana and Tika (2014: 274) in the concrete stage students are able to think logically through concrete objects and is the beginning of rational thinking. Student thinking activities at concrete operational stage are done through real experience. This experience comes from the process of interaction with the object being studied. Students at the concrete operational stage can not think abstractly. Sains is one of the subjects in elementary school. In essence, Sains

learn about nature and environment around student. Trianto (2014: 136) states that Sains is a collection of systematic theories, its application is generally limited to natural phenomena, born and developed through scientific methods such as observation and experimentation and demanding scientific attitudes such as curiosity, openness, honest and so on. Science subjects teach how to behave scientifically by providing scientific problems and demanding students to solve problems using scientific methods as well. Therefore science learning should involve students to be active in solving scientific problems. Based on the mentioned, hence required atmosphere of learning according to student's thinking stage. If learning does not match the stage of student thinking then learning becomes meaningless. Based on this, then the learning process should require students to be actively involved in learning.

Silberman (2009: 10) argues that when the lessons are boring, often only with fun learning methods that can satisfy the students and motivate them to master it, even if the material is boring. It can be said that the method of active learning is one of the powerful ways used in learning activities. The active learning approach in the learning activities will be more effective if adjusted to the learning conditions and the ability of teachers in doing such approach. By applying this approach in learning, students are expected to be able to develop their capability and be able to find the relationship between the material learned and the real life to solve the problems that exist in everyday life. Things like this are small examples that teachers must really pay attention to in the delivery of the material can be in tune with real circumstances and students can be active in learning.

Based on the above description, the problem that arises is how is the science lesson in class V students of Elementary School?. The questions of this research are: (1) how is the condition in the field about the implementation of science learning in class V students of Elementary School? (2) how is the implementation of learning resources and the active learning-based learning model in the students of class V Elementary School?. The purpose of this research is to know the application of learning of science based on active learning on class V student of Elementary School. Based on the general objectives are then elaborated into specific objectives, namely: (1) knowing the field conditions related to the implementation of learning science-based active learning on class V Elementary School students, (2) describe the implementation of learning resources and active learning-based model in class V Elementary School students.

RESEARCH METHOD

The type of research used is descriptive research. Activities undertaken are exploratory studies undertaken to collect information related to the science learning process in class V Elementary School. This exploratory study was conducted to obtain in-depth information about: (1) real conditions of science learning in Karanganom region, Klaten district; (2) the real condition of the needs of teachers and primary school students in the utilization of learning resources, teaching materials and active learning models in science learning.

The study was conducted at the beginning of the 2017/2018 academic year. The subjects of this study were (1) students of class V of elementary school; (2) elementary school class V teachers. The school used by researchers is Elementary School in Karanganom area, Klaten district. The determination of primary school is done by cluster random sampling. Based on the sampling result, the subjects of the study were the students of class V Soropaten Elementary School 2, and Brangkal State Elementary School 2. The total number of research subjects were 28 students and 2 class teachers. The data obtained in this study is qualitative data. Data collection techniques include (1) observation; (2) interviews; and (3) field notes. Data validation technique used is triangulation method. Data analysis technique is done using interactive analysis model with qualitative descriptive technique.

RESULT AND DISCUSSION

Based on observations, interviews, and field notes, it can be seen that students achievement in science subjects is still low and still centered on teachers. Teachers dominate learning by lectures, while students tend to be passive and the scientific process in learning becomes neglected. In addition the teaching materials used are also very limited so that the lack of reference resources in learning. In the process, science learning should use learning resources and learning models that can give an idea of the content of the material given. In addition, learning resources and learning models used must also be in accordance with the development of students who are still in the stage of concrete thinking. The learning model should emphasize the provision of a hands-on learning experience through the use and development of process skills and scientific attitudes. In principle, the scientific process is very useful to form students understanding of learning materials. Understanding that is formed through the scientific process experienced directly by the students can last long in the memory of students so that learning becomes more meaningful and quality.

Qualified learning has at least some indicators: challenging, fun, encouraging exploration, giving successful experiences, and developing thinking skills (Hidayatulloh, 2009). One of the efforts so that students can do the learning with meaningful and quality is by the use of teaching materials and learning models that involve students to be active and directly involved in learning. In active learning, students are required to discover for themselves the concepts of the material being studied. Camacho and Legare (2015) in the *Journal of Instructional Research* states that “Active learning techniques encourage students to reflect on the materials, analyze, process, and prepare to discuss all strategies confirmed to improve higher order thinking skills”.

CONCLUSION AND SUGGESTION

Based on the results of the analysis and discussion above, it can be concluded that the learning of science in class V Elementary School in Karanganom District has not run optimally. Science learning is still centered on the teacher, while the passive students in the learning process. The scientific process is neglected in the learning activities. In addition, teachers rarely use a learning model that keeps students active in the learning process. This study is contrary to the principle of science learning that should be.

Based on the results of exploratory studies in the field can be concluded, namely first, in general science learning is still centered on the teacher. Teachers have not implemented active learning in the classroom. In addition, learners said the teaching materials used are still limited. A book is used for 4-5 students. Second, the application of active learning science-based learning in primary schools has not been fully programmed properly. It can be seen from the use of teaching materials used focused on a single resource course and not accompanied by other teaching materials. In addition, the applied learning model is still dominated by lectures. Based on these conclusions, then if necessary some things as follows. First, improving teachers understanding of science learning based on active learning. Secondly, it is necessary to provide instructional materials that can attract the attention of learners in following the learning. Third, an active learning model is required to enable students to learn meaningfully.

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