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Use of inquiry model with realia media to improve results of science learning in class v students of primary school catholic santa lusia dalako

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Abstract
This study aims to improve the quality of the process and learning outcomes of science through the inquiry learning model with Media Realia about Light Traits in Dalako Catholic elementary school fifth grade V students. This research has been carried out on the 18th grade V Elementary School Catholic St. Dalako elementary school students. The research method used is classroom action research consisting of 3 cycles. There are four stages in the cycle, namely Planning, Implementation, Observation, and Reflection. The research data for the quality of student processes are obtained using observation sheets then compared with the established success criteria, while the student learning outcomes are obtained based on tests compared with minimum completeness criteria individually and classically. Data analysis for the quality of the process and learning outcomes using descriptive analysis percentage (%). The results of this study, the first cycle obtained the value of the average Class 66.11 to the second cycle obtained the value of the average class 70, 56. Cycle III obtained the average value of class 91.1. Finally there is an increase in the class average value. Cycle I to Cycle II experienced an increase of 11%, while Cycle II to Cycle III experienced an increase of 13%. thus it can be concluded that the inquiry learning model can improve the quality of the process and learning outcomes of the Dalako Catholic V elementary school class V students.

Keywords: model inquiry, reality media, learning outcomes, science

Introduction

Education is realized through the teaching and learning process in the classroom and outside the classroom. This process takes place through the interaction between the teacher and the students in an educative instructional situation through this teaching and learning process the students will experience a better and more meaningful process of development. In order for this to happen, the atmosphere of the learning process that is conducive is needed for students to go beyond the stages of learning meaningfully and effectively so that they become confident, innovative and creative individuals (solar 1992: 179).

As stated in the 2006 curriculum, science lessons in elementary science learning should be carried out in Scientific Inquiry to foster the ability to think, work, and be scientific and communicate them as important aspects of life skills.

Minister of Education No. 20 of 2006 concerning content standards. So from that research raised the issue of science for conducting Classroom Action Research. The Inquiry Model is one method of teaching. The term discovery / inquiry model is defined as a procedure that emphasizes individual learning of object manipulation or object arrangement / conditioning, and other experiments by students before generalizations or conclusions are made (Gilsrop, 1975). Inquiry is a model used in learning (physics or science) and refers to one way to question, seek knowledge or information or learn a phenomenon (Koes, 2003) [2]. The Inquiry Model according to Mudjito (1998) [3] is a model that directs students to carry out creative research and problem solving activities. The role of the teacher in this model is to help students choose topics, ask questions that are relevant to the topic, analyze sources, draw conclusions and examine conclusions critically. Students in implementing this method must learn to ask questions to find sources, gather information, compile answers or conclusions, express opinions and analyze their own opinions critically. Inquiry model is a way of presenting lessons that give the opportunity to students to find information with or without the teacher's help. This model involves students in mental processes in the context of their findings. Inquiry model allows students to find information that is needed for their learning goals (Sumantri, 1998/1999) [6].

Inquiry originates from the word Inquire which means asking, asking, capturing, or investigating, and inquiry means inquiry (Ahmadi, 1997: 76) [1]. Students are programmed to be always mentally and physically active. The material presented by the teacher is not just given and accepted by students, but students are bothered in such a way that they gain various experiences in order to "find themselves". Concepts planned by the teacher (Ahmadi, 1997) [1].

From the various opinions above, it can be concluded that the Inquiry model is a teaching procedure that emphasizes the activities of students independently to find science concepts, especially in science subjects that require mastery of scientific thinking. This model will lead students to be more active in conducting research inside and outside the classroom with the guidance of the teacher. According to Suryosubroto (2002) [8] explained

According to Rusman (2005) [5] Realia is all real media in the classroom, but can be used as an observation activity in the environment. Udin S.W (Patty, 2007) revealed that

Media realia is a visual aid in learning that serves to provide direct experience to students. This media is a real object of an object. Like currencies, plants, animals rocks, water, land, objects and so forth. Using real objects in the process is highly recommended, because students better understand the material being taught. According to Pujita (2008) reveals that the characteristic of realia media is the original object of an object intact, can be operated, alive, in its actual size and can be recognized as its original object.

From several media meanings above, the writer concludes that the media realia are: real media or real objects that can be seen, touched, held, and manipulated. Realia media is media that is not changed or original and not in the form of imitations or models of real objects taught.

Research Methods

The method or approach in this study used Classroom Action Research (CAR). This study uses a classroom design research proposed by Stephen Kemmis and Robbin MC Taggart in Zainal Aqib (2006: 30), using a spiral model consisting of four components, namely: (1) Planning, (2) implementing actions, (3) Observation, (4) Reflection.

When a cycle has been completed and the results are achieved and the overall student is subjected to action, then it will be determined whether re-planning is needed to be carried out in the form of a separate cycle or not, in order to achieve the results expected from student action research.

Observations in research are observing ongoing learning activities. At this stage the writer with the observer (class teacher) records and observes the teacher's activities in teaching and learning activities as study material in planning or making improvements to the implementation of the next action. Therefore we need a research partner to conduct research from the teacher's side using the observation sheet. And even the learning situation at the time of implementation is obtained through observation sheets, photo or video documentation. Student behavior to measure student activity, interest, attention and participation through observation of learning processes that involve collaborators (teachers as research partners) in the classroom using observation sheets. that occurs during learning and identifies student constraints in attending lessons.

The class teacher as the observer observes the researcher in the learning process, which is observed is the suitability of the teacher's actions by using the observation sheet. The teacher evaluates and evaluates the previous steps, namely: Planning, Action, and Observation. If the results obtained do not meet the KKM (Minimum Completion Criteria), the Class Action Researcher will proceed to the next Cycle.

In carrying out the second cycle actually has similarities when carrying out the first cycle, which distinguishes the second cycle of improvement of things that are not appropriate in cycle I. If the results cycle is still not optimal and it is still lacking, it is necessary to do cycle III research to fix the problem.

The research subjects were conducted at Catholic Elementary School of Saint Lucia Dalako while the research samples in the implementation of PTK included students who sat in class V (five) Elementary Schools with a total of 18 people consisting of 10 women 8 men and subjects that were the subjects of research namely science material about the properties of light with the use of the Inquiry method.

Data collection techniques are types of research data, (a) data of teacher and student activities in the process of learning science about the characteristics of light with the use of models of inquiry and media realia in Dalako Catholic V Elementary School class V. (b) Learning outcomes data after the teacher applies the Inquiry model in science learning, when the teacher applies the Inquiry model by following the steps of the model in sequence and practices about the properties of light, it is clear to improve student learning outcomes.

Data from observations are analyzed by research, then interpreted based on experience experienced by the teacher. While the analysis data is based on the provisions of student learning by comparing the learning outcomes of the research cycle. By using the learning completeness formula as the following: (Trianto 2011).

Formula:

$$KB = T / Tt \times 100\%$$

Information

KB = learning completeness
T = number of scores obtained by students
Tt = total score.

Research Results and Discussion

The results of the research conducted on the fifth grade students of SD Catholic Santa Lucia Dalako semester II of 2018/2019 about science learning showed that there were no science learning outcomes that reached KKM ≥75. Self-learning results from process scoring and learning outcome scoring. When the learning outcome scoring is only done at the time of scoring the results are formative tests so that the learning outcomes obtained by students cannot reach the optimal score and not complete. This is also indicated by the maximum score of 25 and a minimum score of 10 and an average score of 15. In this condition in learning does not refer to models that involve students such as the model of inquiry with media Realia. This can be seen in the RPP as the teacher's learning design does not make the RPP, the teacher also does not involve a particular approach and learning model used by the teacher. The learning conventional, namely teacher-centered learning. Students have never been involved in learning. Identify problems, formulate problems, collect data, process data, and draw conclusions, become students never given a chance to find your own concept. Instrument.

Cycle I

Table 1: Student Learning Outcomes in Research

No	Name	Value	Information	
			Complete	No Finished yet
1	L.1	65		✓
2	L.2	70		✓
3	L.3	70		✓
4	L.4	60		✓
5	L.5	50		✓
6	L.6	75	✓	
7	L.7	50		✓
8	L.8	60		✓
9	P.9	80	✓	
10	P.10	90	✓	
11	P.11	65		✓
12	P.12	45		✓
13	P.13	55		✓
14	P.14	65		✓
15	P.15	70		✓
16	P.16	85	✓	
17	P.17	70		✓
18	P.18	65		✓
Total		1.190 /180 x 100= 66.11	4 / 18 x 100 = 22.22	14/18 x 100 = 77.78

The results of the first research cycle reflection reflection analysis are as follows: Process quality from inquiry learning model after students complete the activity through the Inquiry learning model then using classroom action research data analysis is carried out on the quality of the process. The results of data analysis showed that, of the 18 students there were 4 students stated to be quite successful in the process using Inquiry learning models. The success of 4 students is in the range of 75% - 80%. While 14 students were on the criteria not yet successful, namely in the range of values ≤ - 70. Thus it can be concluded that in the first cycle students reached the percentage of 22.22%. Can be seen in the garafik below.

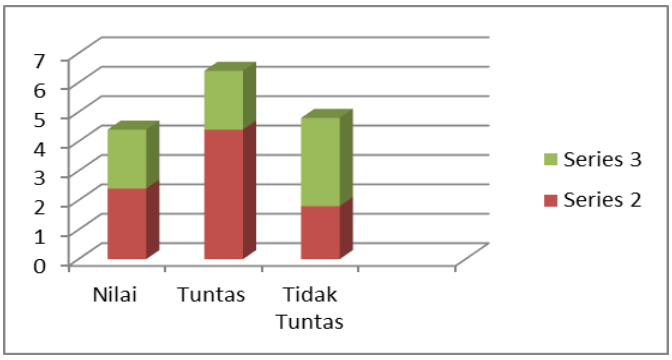

Fig 1

Instrument Student Learning Outcomes in Research
Cycle II

Table 2: Cycle II Results

No	Name	Value	Information	
			Complete	No Finished Yet
1	L.1	65		✓
2	L.2	85	✓	
3	L.3	65		✓
4	L.4	85	✓	
5	L.5	70		✓
6	L.6	70		✓
7	L.7	60		✓
8	L.8	75	✓	
9	P.9	50	✓	
10	P.10	80	✓	
11	P.11	85	✓	
12	P.12	75	✓	
13	P.13	90	✓	
14	P.14	55		✓
15	P.15	50		✓
16	P.16	80	✓	
17	P.17	60		✓
18	P.18	70		✓
Total		1,190 /180 x 100= 66,11	4 / 18 x 100 = 22,22	14/18 x 100 = 77,78

Based on the results of the analysis of reflection I where the results of I have not been achieved both in terms of process quality and results, a plan was made in terms of reviewing the program activities carried out. After students complete the activity through Inquiry learning strategies using Class Action Research, data analysis is carried out on the quality of the process. The results of data analysis showed that of the 18 students there were 8 students who could be said to be successful with a value of 81% - 82% in the process of using Inquiry learning models and the other still 10 students still did not succeed with a value of 75 - 75. evaluate the previous steps, namely: Planning, Action, and Observation. If the results obtained do not meet the KKM (Minimum Completion Criteria), the Class Action Researcher will proceed to Cycle III.

Cycle III

Table 3

No	Name	Value	Information	
			Complete	No finished yed
1	L.1	65		✓
2	L.2	85	✓	
3	L.3	65		✓
4	L.4	85	✓	
5	L.5	70		✓
6	L.6	70		✓
7	L.7	60		✓
8	L.8	75	✓	
9	P.9	50	✓	
10	P.10	80	✓	
11	P.11	85	✓	
12	P.12	75	✓	
13	P.13	90	✓	
14	P.14	55		✓
15	P.15	50		✓
16	P.16	80	✓	
17	P.17	60		✓
18	P.18	70		✓
Total		1,190 /180 x 100= 66.11	4 / 18 x 100 = 22.22	14/18 x 100 = 77.78

Based on the results of the first, second and third cycle research for the quality of the process and learning outcomes of the inquiry learning model. Then the learning process from the first cycle to the third cycle changes. This happens because the teacher pays attention to the parts in the steps of the inquiry learning model and can relate them to the topk they learn. This is in line with the opinion of Muhdorin (2013) that students must be actively involved in the process of finding and discovering things related to learning, not just passively accepting through verbal explanations, but must find themselves the essence of the material being taught. Then, the repetition of the steps in the inquiry learning strategy in learning made Dalako's fifth grade elementary school Catholic SD Santa have no trouble implementing it. An increase in the quality of the process due to the implementation of the Inquiry learning model can be seen in the documentation below:

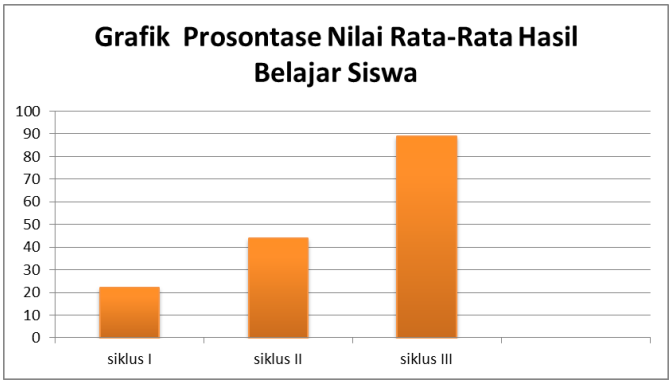

Fig 2

Conclusion

Through the implementation of activities in classroom action research, the authors draw conclusions: 1. the right inquiry learning model is expected in science learning by paying attention to the stages of implementation. 2. Repetition of learning steps from learning models Inquiry especially the process will make students and teachers accustomed to implementing it in each teaching and learning process.

1. Class Action Research is a research design to develop the quality of inquiry learning models in the class especially the Dalako Catholic V Elementary School class V students. In science learning so that there is an increase in the quality of student processes and learning outcomes.
2. The increase in the quality of the science learning process can be seen in the analysis of the evaluation process on the first cycle, showing the percentage obtained in cycle I 28, 57%, second cycle 81.85% and third cycle 86, 95% of these occurring a very large increase in cycle I through cycle three.

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