

## **Implementation of Contextual Teaching and Learning (CTL) To Improve Student Learning Outcomes In Subject Study Forces Affect The Movement of Objects In Class IV SDN II Ponrewaru**

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### **Abstract**

*Based on the researcher's experience while teaching the style material influencing the motion of objects in class IV SDN II Ponrewaru, Kolaka Regency and the results of interviews with the class IV teacher for his experience teaching Natural Sciences, it does not activate students directly in the learning process, it does not give students the opportunity to construct knowledge that is has by connecting it with phenomena that exist in the environment around students. Based on this, the formulation of the problem in this study is whether the application of Contextual Teaching and Learning (CTL) can improve learning outcomes of the subject matter gaya affecting the motion of objects in class IV SDN II Ponrewaru, Kolaka Regency. This study uses a qualitative approach to the type of action research. Actions in this study consisted of two cycles. Each cycle goes through four stages, namely planning, implementing, observing, and reflecting. From the formulation of the problem, data presentation and discussion, it is concluded that learning through the application of Contextual Teaching and Learning (CTL) to improve student learning outcomes on the subject of styles influencing motion of objects in class IV DSN II Ponrewaru, Kolaka Regency, this learning is carried out in five stages, namely the initial stage , the core stage, and the final stage. activities in the early stages include: (1) explaining the learning objectives (2) explaining the tools needed and motivating students to be involved in problem solving activities. while the core activities consist of (1) managing students' initial knowledge to the problem (2) guiding the investigation and the group. While the final activity includes (1) reflecting on the problem solving process (2) providing an evaluation. Based on the evaluation of the process and the evaluation of the results in each study, the student learning outcomes in the subject of language gayainfluencing the motion of objects at SDN II Ponrewari increased by using the Contextual Teaching and Learning approach.*

**Keywords: Contextual Teaching and Learning, Outcomes learning**

### **INRODUCTION**

Learning outcomes are essentially changes in individual behavior that are relatively sedentary as a result of being interactive with the environment. Science learning outcomes, of course, must be linked to the goals of science education that have been included in the outlines of science learning programs in schools without forgetting the nature of science itself. therefore the lesson describes the learning outcomes that students must have and the way students obtain these learning outcomes. With the Contextual Teaching and Learning (CTL) approach it is very

important to be carried out in the teaching and learning process in order to improve student learning outcomes as well as teaching science subjects. Natural Knowledge (IPA).

In the 2006 Education Unit Level Curriculum (KTSP) it is stated that one of the studies of the material studied is the force affecting the motion of objects. Where KTSP here IPA aims for students to have the ability as: (1) Gaining belief in God Almighty based on the existence, beauty and order of His natural creation, (2) Developing knowledge and understanding of science concepts that are useful and applicable in everyday life, (3) Developing curiosity, a positive attitude and awareness about the interplay between science, environment, technology and society, (4) Develop process skills to investigate the natural surroundings, solve problems and make decisions, (5) Increase awareness to participate in maintaining, protecting and preserving the natural environment, (6) Increase awareness to respect nature and all its order as one of God's creations, (7) Acquire provision of science knowledge, concepts and skills as a basis for continuing education to SMP/MTs.

In elementary schools, science is a science that seeks to know about nature in a systematic way so that science is not only mastering a collection of knowledge in the form of facts, concepts or principles but also a process of discovery. Science education is expected to be a vehicle for students to learn about themselves and the environment as well as prospects for further development in applying it in everyday life. This is in line with what was stated (Trianto 2006: 100) defining natural science as knowledge that is systematic and regularly arranged, generally accepted (unifersal) and in the form of a collection of observational and experimental data. In addition, teaching science education, especially in elementary schools, can be interpreted as teaching about natural or educational concepts that touch aspects of nature and events in the surrounding environment.

Referring to the definition of natural science, it can be concluded that the essence of natural science includes four main elements, namely: (1) Attitude: curiosity about natural phenomena and living things as well as causal relationships that create new problems that can be solved through the right procedures. Where science is Open Enden (2) Process: The scientific method includes the preparation of experimental design hypotheses or experiments evaluating measurements and drawing conclusions, (3) Products: in the form of facts, principles, theories, and concepts of natural science in everyday life. (4) Application: Application of the scientific method and science concepts in everyday life

From the explanation above, it can be said that learning science in elementary school is one of the learning programs that aims to foster and prepare students so that later they are responsive in facing challenges in their environment. Abruscato (Khaerudin 2005: 15) suggests that learning science in class can: (1)

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develop students' cognitive (2) develop student effectiveness, (3) develop psychomotor and train students to think critically and later students can face life challenges that are increasingly competitive and able to adapt to changes that may occur in the surrounding environment.

In addition, learning science in elementary school is expected to increase students' knowledge about the natural surroundings. The above is science learning in elementary schools and it is hoped that it can be achieved according to the learning objectives, but in reality it has not met expectations. This was revealed by Mususc (Haeruddin 2005: 40) that in reality most students are not able to make connections between what they learn and how to use it in real life.

The low science learning outcomes are influenced by several factors, including: students, teachers, school environment, community environment, and family environment. One of the problems faced by science teachers in teaching and learning activities is the lack of interest and motivation of students to understand science in depth. Students often feel compelled to take lessons, especially if the teacher is still used to making students good listeners without involving students to think and work actively.

The low student learning outcomes on the subject of force affect the motion of objects. This is caused by the lack of direct student involvement in the learning process, where students are only listeners and note takers of what the teacher conveys, and is dictated by the teacher in class so that students only memorize concepts and facts without knowing what and how and for what concepts and facts. what is learned and the teacher does not provide opportunities for students to construct the knowledge they have by connecting it with phenomena that exist in the surrounding environment.

While the results of observations and interviews with fourth grade students at SDN II Ponrewaru show that students do not master the concept of science, especially on the subject of force affecting the motion of objects. Students do not conduct experiments in the learning process, especially if the teacher is still accustomed to making students become students as good listeners without involving students to think and work actively. Based on the phenomena above, the researcher is interested in taking corrective action by applying the learning method that will be tried which is expected to improve student learning outcomes, especially in understanding the concept of force affecting the motion of objects using a contextual approach (CTL).

The above problems were revealed through pre-research in December 2007 (not published) based on the results of observations and interviews conducted with teachers and fourth grade students at SDN II Ponrewaru, it can be seen that the science learning process in elementary schools still has weaknesses where many teachers still place too much emphasis on the memory factor and there is still a lack of practicum in addition to that the activities are limited because the focus of the presentation is nothing more than listening to copying what is

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explained by the teacher, without giving students the opportunity to work actively and construct their knowledge on styles affecting the motion of objects resulting in low student learning outcomes. This is because in general the teacher only uses the lecture method in the learning process even though sometimes the teacher gives assignments to these students but only fills in worksheets based on information obtained from the test book without involving students directly with reality or by utilizing their environment. In addition, the teacher in giving questions is only limited to questions of memory and knowledge and does not lead to questions that refer to the development of children's thinking by connecting material styles affecting the motion of objects being taught with phenomena that exist in the environment around students.

One of the efforts made by the teacher to overcome this in an effort to improve learning outcomes on the subject of style affecting the motion of objects is to change or improve the learning model. The selected model can involve students actively and relate the lessons of style influencing the motion of objects to the real world and the environment around students.

One of the components that can be the focus of our attention is the teacher as the main element in the learning process, can relate to the understanding schemes that students already have, and students are given the opportunity to find their own lessons to be learned.

To improve student learning outcomes can be seen from 3 aspects, namely quantitatively, institutionally, and qualitatively. Syah (Rana Willis Dahar 2007: 5) where the quantitative aspect emphasizes the filling and development of cognitive abilities with meaningful facts, the institutional or developmental aspects emphasize the measure of how well student learning gains are expressed in numbers, while the qualitative aspects emphasize some good students' understanding and assessment of the surrounding environment so that they can solve the problems they face in everyday life. This understanding is the hope of all parties, but these expectations are not in accordance with the reality where the low student learning outcomes on the subject of force affect the motion of objects caused by a lack of involving students directly.

Contextual learning or Contextual Teaching and learning (CTL) is learning that helps teachers relate the material being taught to real-world situations and can encourage students to make connections between the knowledge they have and its application in their lives. In line with that Contextual Teaching and Learning (CTL) Muslich (Usman Samantowa 2006: 41) states that the CTL approach is a learning concept that can help teachers relate subject matter to real-world situations and encourage students to make connections between their knowledge and its application in everyday life. Students acquire knowledge and skills from limited contexts little by little and construct their own processes, as a provision for solving problems in their lives.

CTL learning allows students to think creatively by connecting different things that already exist, then comparing them with phenomena that exist in their environment so as to bring up new ideas or views.

In the explanation above, it appears that CTL learning allows students to connect things they already understand with phenomena that exist in their environment so as to strengthen their understanding of a problem or be able to gain a new understanding of a problem. In this case can improve learning outcomes.

## **METHOD**

This type of research is Classroom Action Research (CAR). The distinctive characteristics of Classroom Action Research are repeated actions to improve the teaching and learning process in the classroom, which were the subject of research by 15 students at SDN 2 Ponrewaru. Selecting grade IV students as respondents with reasons

1. There are problems experienced by grade IV students in learning science, the subject matter of force affecting the motion of objects.
2. The low learning outcomes of grade IV students on the subject of force affecting the motion of objects.

## **RESULTS AND DISCUSSION**

In this section, data and findings from science learning actions are presented, especially material that gayainfluences the movement of objects contextually using visual aids. Action data, findings and reflections were obtained through observations, field notes, and documentation of student learning outcomes. Data for each cycle is presented separately. The exposure to research data includes (1) exposure to cycle 1 action data, (2) exposure to cycle 2 action data. This aims to see the progress of the flow of each cycle.

### **A. Research result**

#### **1. Description of Cycle 1 Action Data**

In this section, the planning, implementation, results, and research findings of Cycle 1 are described. Exposure to the data was obtained through observations on the activities of teachers and students during material science learning gayaffecting the motion of objects. In the learning process gayainfluencing the motion of objects using the CTL approach is directed at students' successful achievement of learning outcomes.

Activities carried out in action 1 cycle 1 include planning, implementation, observation, and reflection. Each activity is described as follows.

**a. Planning.**

Before carrying out the action, the researcher and the class IV teacher collaboratively prepared a lesson plan using the learning unit model. The planning is prepared and developed based on the semester II program.

This lesson plan takes the subject matter gaya and sub-topic of gaya influencing the motion of objects. The subject matter is taken from the Education Unit Level Curriculum (KTSP) 2006 for grade IV elementary schools with an allotted time of 2 x 40 minutes.

Learning indicators to be achieved are students can understand that gaya can affect the motion of objects (KTSP 2006). Based on these learning indicators, researchers and teachers set learning objectives, namely (1) students can cite examples of events that prove that force can change a stationary object to move, (2) students can explain events that prove that a moving object can change direction if worn a force, and (3) students can name examples of events based on their experiences in the everyday environment which prove that objects can move if subjected to a sufficient force.

In achieving the learning objectives, this lesson plan is designed and structured based on contextual learning steps, namely problem orientation, managing initial knowledge of the problem, organizing and guiding individual and group investigations, analyzing and evaluating problem solving processes, and developing and presenting work results. included in the early learning activities, the core learning activities and the final learning activities. The focus of learning in the cycle 1 action plan is oriented towards increasing student understanding so that student learning outcomes on the material become better.

At the initial stage of learning activities, it is planned that the teacher will start learning by carrying out the first stage, namely student orientation to the problem. The activities carried out by the teacher are (1) explaining the learning objectives, namely regarding being gaya able to influence the motion of objects, (2) explaining the tools needed, and (4) motivating students to be involved in problem solving activities that will be carried out.

At the learning implementation stage or the core learning activities, it is planned for the teacher to start learning by carrying out the second and third stages in contextual learning, namely managing students' initial knowledge of problems, and organizing and guiding individual and group investigations. The activities carried out in these two stages are (1) asking students to express their prior knowledge of the material, (2) the teacher motivates students in building student knowledge from new experiences based on prior knowledge (constructivism), (3) the teacher poses questions that refers to developing students' creative thinking about the material, as well as guiding students to ask questions about the material (questioning), (4) organizing students into study groups (learning community), (6) collecting appropriate information through observations related to the material and carry out experiments to get

explanations and solve problems, and (7) observe events or phenomena that occur from the results of activities carried out so that students understand the material better ( inquiry) . Meanwhile, in the final stage of learning, the teacher plans to carry out stages 4 and 5 in contextual learning steps, namely analyzing and evaluating problem solving, as well as developing and presenting the work. Activities carried out in this stage include (1) reflecting on the problem solving process carried out ( reflection) , (2) measuring and evaluating student investigations and the processes they use ( authentic assessment), (3) planning and preparing work appropriate, such as reports of problem-solving activities that have been carried out ( modelling).

**b. Implementation**

The implementation of style learning influences the motion of objects by using a contextual approach in improving student learning outcomes in class IV SD Negeri II Ponrewaru, Kolaka Regency for action 1 of the first cycle held on Monday 5 May 2008 at 08.30 to 09.50. In carrying out this cycle 1 action, the teacher teaches material on styles influencing the motion of objects that are oriented towards learning characteristics (CTL) and contextual learning steps in improving student learning outcomes which include (1) orientation to problems, (2) managing initial knowledge to problems, (3) organize and guide individual and group investigations, (4) analyze and evaluate problem-solving processes, and (5) develop and present work results. The five learning steps are divided into 3 learning stages, namely the initial activity stage, the implementation/core learning activity stage, and the final learning stage.

At the initial stage of learning activities, the teacher starts learning by carrying out the first stage, namely student orientation to the problem. The activities carried out by the teacher in the first cycle of action are that first the teacher explains the learning objectives to students, namely regarding gayainfluencing the motion of objects, then the teacher explains the required equipment, and (4) motivates students to be involved in problem solving activities that will be carried out.

At the learning implementation stage or the core learning activities, the teacher starts learning by carrying out the second and third stages in contextual learning, namely managing students' initial knowledge of problems, and organizing and guiding individual and group investigations. The activities carried out in these two stages are (1) asking students to express their prior knowledge of the material, (2) the teacher motivates students in building student knowledge from new experiences based on prior knowledge (constructivism) , (3) guiding students to express questions about the material (questioning) , (4) organizing students into study groups (learning community), (6) gathering appropriate information through observations related to the material and carrying out experiments to obtain explanations and problem solving. Meanwhile, in the final stage of learning, the teacher plans to carry out

stages 4 and 5 in contextual learning steps, namely analyzing and evaluating problem solving, as well as developing and presenting the work. Activities carried out in this stage include (1) reflecting on the problem solving process carried out (reflection), (2) measuring and evaluating student investigations and the processes they use (authentic assessment), (3) planning and preparing work appropriate, such as reports of problem-solving activities that have been carried out (modelling).

## CONCLUSION

Based on the formulation of the problem, the results of data analysis and discussion, the results of this study can be concluded that learning using a contextual approach can improve student learning outcomes on material styles affecting the motion of objects, where learning is carried out in 5 stages, namely (1) student orientation to problems, (2) managing students' initial knowledge of the problem, (3) organizing and guiding individual and group investigations, (4) analyzing and evaluating the problem-solving process, and (5) developing and presenting the work.

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