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APPLICATION OF THE *CONTEXTUAL TEACHING AND LEARNING* (CTL) LEARNING MODEL IN ELEMENTARY SCHOOL SCIENCE LEARNING

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Abstract: The implementation of this research aims to improve students' knowledge and learning outcomes after the introduction of the contextual teaching and learning (CTL) learning model to the learning process. The purpose of learning using this model is to improve student learning achievement in 2024/2025. The author seeks to find out what learning outcomes students achieve through contextual teaching and learning (CTL) from previous learning. Based on our experience, students' interest in learning is low because teachers only use lecture and question-and-answer methods during learning. Teachers fail to carry out teaching and learning activities optimally. The primary issue is that teachers' learning processes do not fully contribute to enhancing students' academic achievement. In this case, the author tries to apply contextual teaching and learning (CTL) to the learning process in the classroom. In other words, implementing the contextual teaching and learning (CTL) model in the learning process is a crucial step towards enhancing student learning outcomes.

Keywords: Contextual teaching and learning model, student learning outcomes.

INTRODUCTION

The introductory section includes a theoretical review that includes problems, previous research, research gaps, and problem formulation. It is formatted in Times New Roman 12 font, 1 space, and uses APA citation 7. (Andini & Ratmanida, 2019)

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Learning is one of the efforts made to produce a change in all aspects of life that are interrelated. Learning outcomes are one of the aspects that are included in one of the things that must produce good changes. In addition, proper learning will provide benefits for individuals or groups in carrying out their lives.

Model learning (CTL) is a teaching and learning activity that helps teachers relate what they are teaching to real-world situations. Students can absorb subject matter by capturing the meaning of school material and capturing the meaning according to the assignment given by connecting new information with previous knowledge and experience, (Hasan, 2021). The *contextual teaching and learning (CTL) model* is the foundation of constructivist philosophy, (Karim, 2017)

Natural Sciences (IPA) is one of the four subjects in the curriculum at the SD/MI learning unit level (KTSP). Science provides a lot of exercises to develop a scientific mindset and cultivate scientific attitudes such as curiosity, honesty, and openness. But in reality, science learning often encounters obstacles, impatience (Napitupulu:2023). This is because learning activities tend to be monotonous because teachers only use traditional learning models. Although using this learning model is very simple and practical and often used by teachers, students find it less interesting and boring. Therefore, this has an impact on the low science learning achievement of four students, Ismoyo, et al (Napitupulu:2023).

Therefore, teachers need to use the right learning model according to the material they teach so that learning goals can be achieved optimally. The high and low learning outcomes of students are influenced by learning activities. My teacher uses the right learning model so that the student's learning outcomes are in accordance with the goals that should be achieved in learning (). One of the learning models that is believed to help students understand the concept of science is to use *the contextual teaching and learning (CTL)* learning model. Because science learning actually combines theories, concepts, and facts from students' daily lives. Therefore, the CTL learning model is considered suitable for use in science learning. This is because CTL emphasizes a thorough engagement process in finding the content to be learned and comparing it with the actual content, CTL's learning model to connect life situations to facilitate learning.

The problems that occur in elementary schools, especially in the learning process, teachers still apply or use lecture and monotonous methods. So that children when the learning process is inactive, they only listen to explanations from the teacher so that there is no reciprocal process between teachers and students. Teachers should use a variety of learning methods and models in the learning process, so that students become more active in the learning process. This is a problem that must be dealt with immediately, based on the explanation above, the author is encouraged to improve the science learning process with methods that can stimulate students to think while mastering the learning material.

Based on the above mistakes, a way is needed to improve science learning outcomes, considering the importance of science learning, in addition to being a competency achievement in learning in science education units, it also has an important role and function in daily life. In overcoming this, one of the alternatives that can be taken is to use a learning model that can provide motivation and students become active, focused in receiving learning so that learning outcomes can increase in accordance with the expectations and goals that have been determined.

Therefore, based on the description above, the researcher conducted a research entitled "Application of *the Contextual Teaching and learning* (CTL) learning model in elementary school science learning". *The contextual teaching and learning* model can improve student learning outcomes, because by using this learning model, students will understand and understand the learning material being taught. The *contextual teaching and learning* model trains critical thinking skills, encourages students to ask and answer questions, in addition to creating an active and conducive classroom atmosphere.

Based on these problems, researchers are interested in knowing what are the results and findings of previous research regarding the implementation of CTL in elementary schools?

RESEARCH METHODS

Research Design

This type of research is quantitative research that uses experimental research methods. In the design of this study, it is pre-experimental using a one-group pre-test post-test, which is to determine the effect or outcome after a treatment is carried out to assess (Simajuntak & Salihi, 2022).In the first stage, a pre-test was carried out to determine the student's learning

ability before being given treatment, and a post-test was carried out to determine the student's final learning ability after being given treatment. The experimental activity did not have a control class, to conduct this study. The study carried out the following research procedures: 1) learning preparation including making a learning plan, 2) verifying and preparing a learning plan, 3) conducting classroom observations, 4) and providing tests in the form of pre-test and post-test.

Research Subject

Write down the research subject using a clear subject selection method.

In this study, the data collection technique carried out was by conducting a search on several journal sites such as google schoolar that is accredited by SINTA. The initial stage that the researcher does in collecting data is by searching for the topic or field of study that he wants to be searched. In this study, the topic used is (Application of *the Contextual Teaching and learning* (CTL) learning model in elementary school science learning).

Data Collecting

Data collection uses literature studies using google schoolar by writing down the topic to be analyzed. Furthermore, the researcher first reads the journals that have been found, after reading them, then the researcher downloads the journal to be analyzed according to the criteria that the researcher will use. The researcher found 10 journals related to the topic to be discussed.

Data Analysis

The data analysis technique used is the Effect Size test, which is to show how much the treatment or intervention affects the bound variable

RESEARCH RESULT

The application of the CTL model is facing science learning outcomes

The application of the learning model in the process of teaching and learning activities can have a positive impact. Some of the abilities and competencies that are expected to be possessed by students, so that they can develop comprehensively, expected competencies such as skill competencies, attitudes that can help students actively participate both in the

school, home, and community environments, cognitive competencies that include analytical, and creative. Students in this case are expected to be able to understand, analyze, and evaluate information logically, as well as produce creative ideas in solving problems.

In Permendikbud No. Law Number 22 of 2016 concerning standards for the primary and secondary education process, it is stated that learning in schools must be interactive, intuitive, fun, challenging, and motivate students to actively participate. In addition, Education must also provide sufficient opportunities for students to show initiative, creativity, and independence according to their talents, interests, and physical and psychological development. Each school needs to plan learning, implement the learning process, and assess the learning process to improve graduates effectively and efficiently, especially in learning outcomes.

Science learning outcomes can be improved by using *the CTL (Contextual Teaching Learning) model.* CTL emphasizes the relationship between subjects and real life, making it easier for students to understand the concepts they learn. Some of the reasons why CTL is effective in improving science learning outcomes are: CTL learning helps students understand science content by connecting it directly to real-world situations and helping students see the relationships between the concepts they have learned. Their daily lives. This will make learning more meaningful and increase learning motivation. This is in accordance with the concept of science learning which relates theories, concepts, and facts to students' daily lives. Piaget said that elementary school-aged children aged 7 to 11 years are in the concrete operational stage. Children at this age cannot think abstractly, they can only think concretely, therefore learning should present the subject matter in concrete or real form.

The Ministry of National Education (2002) in the contextual learning guide published by the Ministry of National Education, stated that CTL is a learning approach that helps teachers relate subject matter with the real-world context of students. In science, this involves connecting science concepts with natural phenomena or events that exist in the student's environment, so that knowledge becomes relevant and easily digestible.

Komang Ayu in her research stated that the application of the environment-based CTL learning model has a significant effect on the learning outcomes of elementary school students. The results of other studies also show that the CTL learning model has a significant impact on student learning outcomes, especially in science subjects (Rismadi, 2018).

Application of the CTL model to increase the creativity of primary school students

Contextual Teaching and Learning (CTL) is a learning approach that connects subject matter with real-life situations experienced by students on a daily basis. This model aims to make students more active and creative in solving problems by relating material to real-world contexts,The Importance of Creativity of Elementary School Students Creativity at elementary school age is very important because: Helping students think critically and innovatively, Improving problem-solving skills, Developing student confidence, Fostering a more active and fun interest in learning.

The CTL model encourages student creativity in several ways, namely: Contextual Learning By relating the subject matter to real life, students are more easily comprehended and motivated to think creatively, Inquiry-Based Activities Students are given the opportunity to explore problems, ask questions, and find solutions, It encourages original and creative thinking. In the CTL model, students often work in groups, discuss, and share ideas, this broadens horizons and creativity, Authentic Assignments Project-based assessments or creative assignments encourage students to produce innovative work. Example of the application of CTL in the school environment in Science Learning: The teacher brought up the topic of "recycling" by asking students to make crafts from used items. It blends artistic creativity and scientific understanding. The CTL model has been shown to increase student creativity because it encourages active and interactive learning. Students are more enthusiastic and motivated in learning because the material is presented in a real context. Critical and creative thinking skills improve as students are given the freedom to explore ideas.

The CTL model is very effective in increasing the creativity of elementary school students because learning becomes more meaningful and relevant to students' lives. Through this approach, students not only understand the subject matter, but are also able to think critically, innovatively, and have creative problem-solving skills.

CONCLUSION

Based on the review literature in this study, the overall Contextual *Teaching And Learning* (CTL) learning model is proven to have a positive effect on teaching activities. This model provides facts and experiences in the learning process that are more interesting and challenging for students by being related to the real world. The *Contextual Teaching And*

Learning (CTL) model is also very efficient in improving competencies and abilities for students, such as thinking creatively, learning according to facts, and solving problems encountered in daily life, and can improve the learning outcomes of elementary school students.

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