



The Implementation of *CORE* Type Cooperative Learning Model to Improve Students' Learning Outcome on Integrated Science Module in Junior High School of Pos Keadilan Peduli Umat (PKPU)

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ABSTRACT

The study aims to identify students' learning outcome, teachers' skills in managing class, along with students' response towards the implementation of *CORE* type cooperative learning model. The study employed Action Research using a descriptive statistical approach. The study was conducted through 4 stages: planning, acting, developing, and reflecting. The participants were 30 second-year Junior High School students of PKPU, and the data were elicited through the scores of students' learning outcomes, observation sheet of teachers' skills in managing class, and students' response sheets toward *CORE* type cooperative learning model. The finding indicated that students' learning outcomes improve from cycle 1 to cycle 3: in cycle 1, the individual completeness is 37% and the classical completeness is 40%; in cycle 2, the individual completeness is 63% and the classical completeness is 70%; in cycle 3, the individual completeness is 93% and the classical completeness is 90%. Moreover, teachers' skills in managing the class improve from moderate to a very good category, along with positive responses indicated by the students, where all students show positive responses towards the implementation of *CORE* type cooperative learning model. It is concluded that the model can significantly improve the students' learning outcome on integrated science module

Keywords: Implementation, *CORE* type cooperative, integrated science learning outcome.

INTRODUCTION

Education is the key for every nation to prepare for the future to compete with other nations. Education is required to give a more careful response to the changes occurring in society. In the current era of globalization, competition among countries is getting tougher; thus, to deal with this competition, a country must prepare themselves in various fields, one of which is education. National Education System Law No.2 of 2003 Article 1, states the meaning of education as follows:

Education is a conscious and planned effort to create learning atmosphere and learning process so that students may actively develop their potency to have religious-spiritual strength, self-control, personality, intelligence, noble character, and skills for themselves and society.

In line with the definition of education according to National Education System Law No.2 of 2003 Article 1: teachers must be able to provide good learning to students; accordingly, students are able to develop their self-competence. Moreover, school learning plays significant roles in developing the quality of human resources in Indonesia, in which if each individual is able to achieve a good education, he will be able to deal with obstacles and problems in his life. Thus, to achieve the goals, supporting and sustainable factors are required since, without those factors, the problems in education may arise.

One of the issues in education is a poor learning process leading to students' low learning outcomes on science subjects at schools. Several studies indicated the students' low learning outcomes on science subject in Indonesia including Aceh: *Trends International Mathematics and Science* (TIMSS) revealed that Indonesian students' competency in science subject is still not satisfactory, where Indonesia is in 45th with a score of 397 out of 48 countries. While according to Programme International for Students Assessment (PISA) in 2018, Indonesia is in 74th out of 79 countries with the score of 396, where the score is far below the average score of *Organisation for Economic Cooperation and Development* (OECD), which is 489.

Science is the study of nature and has a very broad bond related to human life meaning that learning science is not just about mastering knowledge regarding facts, concepts, principles, and laws, but also a process of discovery. Through adequate learning resources and technology, along with utilizing the surrounding environment as a source of learning in the community and the surrounding environment as well as the natural environment as a learning resource (Ministry of Education and Culture's Regulation No. 22 of 2006 concerning the content standard).

Low learning outcomes on science subject are also experienced by Junior High School students of *Pos Keadilan Peduli Umat (PKPU)*, Neuheun, Aceh Besar; their scores on science subject are relatively low identified through their test scores. Most of the students obtained a low score, which is below the minimum completeness criteria (72). The finding is based on the interview with one of the physics teachers in the school on January 20, 2020. In addition, based on the observation, several issues were also identified, which affects the students' low learning outcomes: fewer active students in the class, lack students' motivation and interest in the class, as well as students' difficulty in memorizing physics formulas.

One of the ways to overcome the issues is through selecting a learning model, which may support the learning process; accordingly, students are able to enhance their learning outcomes, particularly through the implementation of *CORE* type cooperative learning model. According to Shoimin (2014:39), several types of cooperative learning, one of which is *Connecting-Organizing-Reflecting-Extending (CORE)* consisting 4 phases: *Connecting* is an activity to connect old concepts or information with new concepts or information and between concepts; *Organizing* is an activity to organize ideas to understand concepts; *Reflecting* is an activity to rethink and explore concepts and information that have been obtained; *Extending* is an activity to develop, expand, use, and discover. Through implementing *CORE* type cooperative learning

model, students are hoped to be more active in the class than before; as a result, the learning process becomes efficient in improving students' learning outcome.

The study aims to identify the students' learning outcomes through employing the *CORE* model entitled: "The implementation of *CORE* type cooperative learning model to improve students' learning outcome on integrated science subjects in Senior High School of *Pos Keadilan Peduli Umat (PKPU)*".

Problem of Research

Low learning outcomes on science subject are also experienced by Junior High School students of *Pos Keadilan Peduli Umat (PKPU)*, Neuheun, Great Aceh; their scores on science subject are relatively low identified through their test scores. Several issues were also identified, which affects the students' low learning outcomes: fewer active students in the class, lack students' motivation and interest in the class, as well as students' difficulty in memorizing physics formulas. One of the ways to overcome the issues is through selecting a learning model, which may support the learning process; accordingly, students are able to enhance their learning outcomes, particularly through the implementation of *CORE* type cooperative learning model.

Research Focus

The study aims to identify students' learning outcome, teachers' skills in managing class, along with students' response towards the implementation of *CORE* type cooperative learning model.

METHODOLOGY OF RESEARCH

General Background of Research

The study employed Action Research, and the data is elicited through direct observation of the learning process in the class. In line with the characters of Action Research, the study has 4 cycles: *planning, acting, observing, and reflecting*. The research was conducted at the Junior High School of *Pos Keadilan Peduli Umat (PKPU)*, Neuheun, Aceh Besar.

Subject of Research

The participants were all second-year junior high school students of class I of PKPU (30 students).

Instrument and Procedures

Documents (students' learning outcomes), observation (teachers' skills in managing the class), and questionnaires (students' responses to the use of *CORE* type cooperative learning model) were used as the research instruments.

- a. Data on students' learning outcomes were obtained through a written test (10 questions) in a multiple-choice form with 4 options: a, b, c, d, arranged according to indicator stated in

lesson plan. The test was administered twice: before the class (*pre-test*) and after the class (*post-test*) in each cycle. Students were also informed before the exam regarding the questions' predictions that would appear on the exam, particularly on the "Light" topic, taught using *CORE* type cooperative learning model.

- b. Data on teachers' skills in managing the class were obtained through observation sheet consisting of initial activity, core activity, and closing activity, according to the lesson plan using *CORE* type cooperative learning model. The observation was conducted by two observers.
- c. Data on students' responses to the use of *CORE* type cooperative learning model were gathered through a closed questionnaire with two alternative answers that were distributed to the students in the last cycle (*reflecting*).

Data Analysis

Data were analysed using statistical analysis, particularly using the division and multiplication formulas. Moreover, the success criteria are indicators of research success.

RESULTS AND DISCUSSION

This classroom action research will yield results of each stage or cycle that has been carried out. The finding was described, analysed, and reflected to identify strengths and weaknesses in each learning cycle; accordingly, the finding may be implemented by teachers in the learning process and lesson plans.

It was revealed that the individual average completeness improves from cycle 1 to cycle 3.

The improvement of students' learning outcomes is presented in figure 1 below:

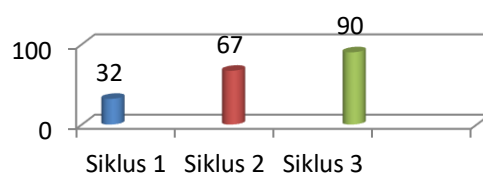


Figure 1. Individual Completeness

In addition to the individual completeness, the classical completeness also improved from cycle 1, cycle 2, and cycle 3.

The classical completeness is presented in figure 2 below:

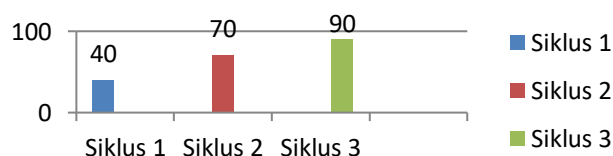


Figure 2. Classical Completeness

Based on the finding, the teachers' skill in managing the learning using *CORE* type learning model increase, which is briefly shown in figure 3.

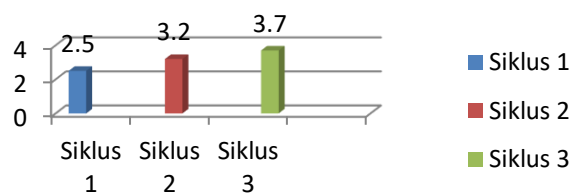


Figure 3. Teachers' skills in managing the class

Furthermore, the students' responses to the learning process implementing *CORE* type cooperative learning model are indicated good, which is briefly shown in figure 4:

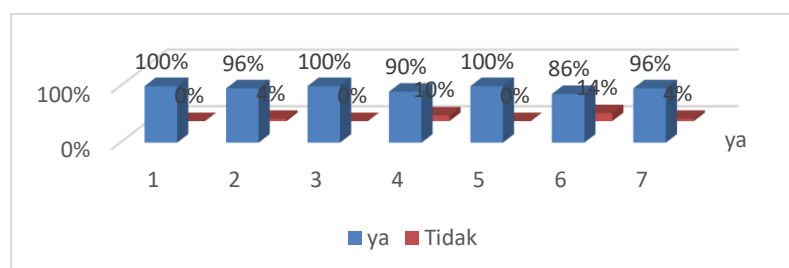


Figure 4. Students' responses to the *CORE* type cooperative learning model

The Graph above illustrates that most of the students show happiness to the learning process using *CORE* type cooperative learning model. Moreover, students indicate positive responses to the use of *CORE* type cooperative learning model in the class. The positive response indicates the students' enthusiasm concerning the learning model presented since it may motivate the students to improve their attention to the class, as they are directly involved in the learning process (Subarjo, M. D. P., et.al, 2014). The students' high response can indirectly assist the students to obtain the complete concept of the topic taught (Wardika, et.al., 2017). Based on the data above, the application of the *CORE* cooperative learning model has a positive impact on student learning motivation and is effectively used for efforts to improve student learning outcomes.

CONCLUSIONS

The use of the *CORE* cooperative learning model has a positive impact on student learning motivation so that student learning outcomes also increase. The application of this model needs to be done in various schools that have problems with student learning motivation. It is hoped that after using this learning model, student learning motivation will increase and have a positive impact on learning outcomes.

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