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The Influence of Cooperative Learning Model with Course Review Horay Type to Improving Physics Learning Outcomes

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Abstract
This study raises the problem of low student learning outcomes in physics subjects, the lack of student activity, and enthusiasm during learning. This Study aims to determine the effect of the Course Review Horay on physics learning outcomes. The population of this study were all students of class XI IPA MAN 4 Aceh Besar consisting of two classes. Sampling was taken using a total sampling technique with 32 students as the experimental class and 36 students as the control class. Data collection was carried out using test instruments, namely pre-test and post-test. The data analysis technique uses the N-Gain test to see the difference in the increase in student learning outcomes in the experimental class and the control class, then the data is analyzed using the t test to see the effect of the course review horay type cooperative learning model on the physics learning outcomes of MAN 4 Aceh Besar students. Based on the results of data analysis, it was obtained that the N-Gain for the experimental class was 0.78, which was included in the high gain index category, while the N-Gain for the control class was 0.69, which was included in the medium gain index category. The results of data analysis using the t-test show that t_{count} 2.292 > t_{table} 1.668. Thus it can be concluded that there is an influence of the cooperative learning model type course review horay on the physics learning outcomes of MAN 4 Aceh Besar students ($t_{count} > t_{table}$).

Keywords: *Cooperative learning, Course Review Horay, Learning outcomes*

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1. Introduction

Teachers have a central role in the teaching process [1]. Teachers are parents for student in environment school . The role of a teacher is not just to teach knowledge to students. However, teachers must be able to understand the various differences that exist in students in order to help them overcome learning difficulties [2]. Therefore, quality education in a school very determined by abilities possessed an internal teacher operate task [3].

In activity learning teachers often find students who are having difficulty in study. Difficulty Study is condition where student experience obstacle or disturbance in the learning process, causes can originate from internal factors as well factor external students [4]. Difficulty study can materialized in various type symptoms, for example concentration study decreased, weak or absence motivation in study, less like to eye lesson certain, as well feel difficult understand draft from material studied. Difficulty study this of course will influence learning outcomes [5].

Learning outcomes function to see the level of success of an educational institution or school in educating students. Learning outcomes gained student no the same, shows that students who get results satisfying learning can made indicator that student the has control material learning with good [6]. In effort achievement results study students to fit with the expected target, then in implementation the learning the teacher needs a learning model [7]. Learning model become matter important in learning because describe with clear activities what should done by teachers and student. Selection of learning models must customized with need study and nature variation as well as innovative. Basically, every subjects as difficult whatever if served with the right learning model and right, teachers and students can make lesson that easy to understood.

Based on observations to physics learning results documents and interviews conducted by researchers with physics teachers at MAN 4 Aceh Besar, researchers obtained information that students at this school tend to experience difficulties in understanding physics material. This can be seen from the results of students' daily tests. Only 50% of students achieved the specified Maximum Completeness Criteria (KKM) score of 75. From the results of researchers' observations, the implementation of physics learning tends to only focus on the teacher without involving students, as a result students are less interested and motivated to think about the learning material being studied. Apart from that, students are less active and enthusiastic during the learning process. This causes the learning outcomes obtained by students to be less than optimal.

Based on the problems above, it is necessary to carry out research using a learning model that can improve student learning outcomes in physics learning. Researchers found a cooperative learning model that can be used as a solution to this problem. According to [16] learning model cooperative realize activity centered learning on participant educate and teacher as facilitator. Specifically if linked with lesson difficult Physics understood and boring, then a capable model is needed create atmosphere class crowded but still conducive and also interesting liveliness students, namely the learning model cooperative type Course Review Horay (CRH).

Course Review Horay is one of cooperative learning model that can be push student for follow active in study [8]. This matter in accordance with what was stated by [17] learning model Course Review Horay can make student seen like as well as enjoy learning because participant educate those who can answer correct will shouted "*hooray*!!". With implementing a cooperative model type Course Review Horay participant educate required participate in a way active answer question and focus on understanding material.

This study is implementation of Course Review Horay type cooperative learning models. Study about cooperative learning model of the Course Review Horay type has been widely carried out, but for MAN 4 Aceh Besar with its heterogeneous student background it has never been carried out. This study actually in line with [9] which applies a learning model cooperative type course review horay in learning Physics for increase learning outcomes. Research [9] was carried out on class X students by providing treatment in the control class in the form of a conventional learning model. Meanwhile, in this research, the research subjects were class XI students and the Physics teaching materials used were momentum and impulse. Then in this research, the control class also implemented a cooperative learning model but with a different type. Objective this study is for know influence of learning models cooperative type course review horay to Physics learning outcomes MAN 4 Aceh Besar students.

2. Methods

This study use a quantitative approach and including quasi eksperimental. Research design used is nonequivalent pretest posttest group design because on this study want to see difference students' Physics learning outcomes in control class and experiment class [18]. As for pattern from the research design used displayed by Table 1.

Table 1. Quasi- Experimental Design

Class	Pre-test	Treatment	Post-test
Experiment	O_1	X_1	O_2
Control	O_3	X_2	O_4

Information: X_1 = giving treatment form learning with use model learning cooperative type course review horay, X_2 = giving treatment form learning with use model learning cooperative type numbered heads together, O_1 and O_2 = pre-test and post-test class experiment, O_3 and O_4 = pre-test and post-test control class

This research was implemented in MAN 4 Aceh Besar in 2023/2024. The population research is all over student class XI IPA MAN 4 Aceh Besar consisting of from 2 classes namely XI IPA 1 and XI IPA 2 with amount student in a way whole is 68 people. Taking sample done with technique total sampling (total sample), obtained results that class XI IPA 1 as class experiment And class XI IPA 2 as class control.

The data collection technique uses student learning outcomes based on pretest and post-test using a multiple choice test instrument of 10 questions and a description of 5 questions at cognitive level C1-C4. Pre-test and post-test were carried out in the experimental class and control class with the same question format. The pre-test questions given before treatment have the same form and number as the posttest questions after treatment. The data analysis technique uses the N-Gain test to see the increase in student learning outcomes in the experimental class and control class. Then the data is analyzed using the t-test to see the effect of the Course Review Horay type from cooperative learning model on the physics learning outcomes of MAN 4 Aceh Besar students. The results and discussion can be made as a whole that contains research findings and explanations.

3. Results and Discussions

Learning activities were carried out over four meetings with material on momentum and impulse. Before learning begins, researchers give a pretest to see students' initial abilities. After the learning was completed, the researcher gave a post-test to see the abilities that students had achieved after applying the Course Review Horay type cooperative learning model in the experimental class and the Numbered Head Together type cooperative learning model in the control class. The average pre-test and post-test scores for the experimental class and control class can be seen in Figure 1.

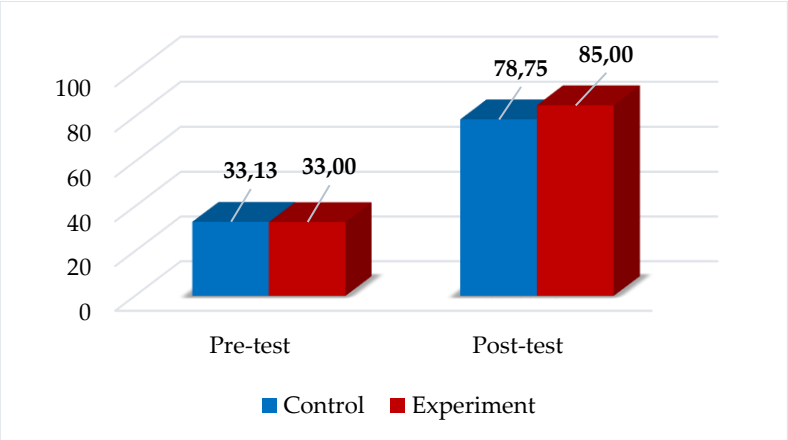

Figure 1. Students Learning Outcomes of Control Class and Experimental Class

Based on Figure 1 the result shows a comparison of the average pre-test and post-test scores in the control class and experimental class. In the control class, the average pre-test score was 33.13 and the average post-test score was 78.75. Research data shows that there is an increase in student physics learning outcomes of 45.62 from the pre-test score after implementing the Numbered Heads Together cooperative learning model. The same thing also happened in the experimental class, research data showed that there was an increase in students' learning outcomes in physics of 52.00 from the pre-test score after implementing the cooperative learning model type Course Review Horay. It can be seen that the average pre-test score for the experimental class is 33.00 and the average post-test score is 85.00.

Table 2. N-Gain Test Result

Class	Pretest Average	Posttest Average	N-Gain	Category
Experiment	33.00	85.00	0.78	High
Control	33.13	78.75	0.69	Medium

Based on the N-Gain test results in

Table 2, student learning outcomes in the experimental class obtained an average N-Gain of 0.78 or 78%, which is in the high category. Meanwhile, student learning outcomes in the control class obtained an average N-Gain of 0.69 or 69%, which is included in the medium category.

Table 3. Independent Sample t-test Result

Independent Samples Test				
		t-test for Equality of Means		
		t	df	Sig. (1-tailed)
Students learning outcomes	Equal variances assumed	2.292	66	0.013
	Equal variances not assumed	2.289	64.755	0.013

Based on Table 3, it can be seen that the *t*-value is 2.292. At the significance level α=0.05 with degrees of freedom (df) of 66.00 the t_{table} value is 1.668, so the t_{count} value is 2.292 > t_{table} 1.668. The significance value of the *t*-test (1-tailed) was obtained at 0.013. In accordance with the decision making criteria of 2.292 > 1.668, this shows the influence of the cooperative learning model type Course Review Horay on the physics learning outcomes of MAN 4 Aceh Besar students. The research objective in this study to know influence of learning models cooperative type Course Review Horay to physics learning outcomes MAN 4 Aceh Besar students. Based on the research results, it was found that student learning outcomes on Momentum and Impulse material were still relatively low. This low learning outcome can be seen from the results of the pre-test. Student learning outcomes based on the results of post-test in the experimental class and control class have increased. Even though student learning outcomes in both classes increased, student learning outcomes in the experimental class were higher than those in the control class. This is evident from the average post-test score in the experimental class of 85.00 and the average post-test score in the control class of 78.75 with a difference of 6.25.

Based on the results and research findings, the application of the cooperative learning model type course review horay has an effect on students physics learning outcomes. This shows that the Course Review Horay type cooperative learning model contributes to the learning process and increases students' understanding of the material being taught.

This is in accordance with research conducted [10] showing that the results of learning physics using the cooperative learning model type course review horay are better than conventional learning. Similar research was also conducted [11] that the cooperative learning model type Course Review Horay was effective in improving students physics learning outcomes.

Course Review Horay is an application of learning that is fun, not monotonous and not boring so that it can increase student activity and student learning achievement. Apart from that, students will discuss in groups and each group will compete to work on questions given by the teacher and packaged in a game with certain rules agreed. The syntax of the cooperative learning model of the course review type is: (1) The teacher conveys the competencies to be achieved; (2) the teacher demonstrates/presents the material; (3) gives students the opportunity to ask questions; (4) to test understanding, students are asked to make boxes 9/16/25 according to needs and fill each box with numbers according to each student's taste; (5) the teacher reads the questions randomly and students write answers in the box whose number is mentioned by the teacher and immediately discuss it, if it is correct in Fill in the correct mark (✓) and fill in the wrong mark with a cross (×); (6) students who have received a vertical or horizontal or diagonal mark must shout HURRY!! or other shouts; (7) the student's score is calculated from the number of correct answers obtained; (8) closing [19]. The syntax of the cooperative learning model type Course Review Horay is also mentioned by [12], including: Step 1: Convey the competencies to be achieved. Step 2: Present the material according to the topic with questions and answers. Step 3: Divide students into groups. Step 4: Test students' understanding by asking students to make cards or boxes according to their needs and fill them with the specified numbers. Step 5: The teacher reads the questions randomly and students write the answers in cards or boxes whose numbers are mentioned by the teacher. Step 6: Teacher and students discuss the questions that have been given. Step 7: Those who get it right mark the checklist (✓) and immediately shout out loud. Step 8: Student scores are calculated from the correct answers and those who shouted the most hooray. Step 9: The teacher gives rewards to those who get high marks or those who get lots of cheers. Step 10: Closing.

In this research there are several factors that influence the high learning outcomes of students in the experimental class. Even though the experimental class and control class both apply the cooperative learning model, the types of cooperative learning for the two classes are different. The experimental class applies a cooperative learning model type Course Review Horay. In the Course Review Horay type, there is a phase of testing student understanding which is packaged in a form game. This is what differentiates the course review horay type from the numbered head together type. This game makes students participate actively in answering questions given by the teacher. Indirectly, this game makes students review the subject matter they have studied. This is in accordance with the opinion of [13] who explains the advantages of the cooperative learning model type Course Review Horay, namely creating a pleasant learning atmosphere because it is interspersed with entertainment, and practice cooperation in answering questions given by the teacher in groups. In line with the opinion of [14] cooperative learning type Course Review Horay has several advantages, including more interesting learning, encourage students to be able to immerse themselves in learning situations, not monotonous so that students are more enthusiastic, motivated, and enthusiasm when learning, and can train good cooperation and communication between students.

Implementation of the Course Review Horay learning model makes learning more enjoyable because the learning is interspersed with shouts if students get a correct mark (P) vertically, horizontally or diagonally and the group that gets the highest score is given a reward, besides that students become more interested and enthusiastic during the learning process [15]. Experts in the field of education believe that someone will understand something better if the learning process has an interesting, active and not boring learning atmosphere. Through game activities, students can gain knowledge related to the material and have fun entertainment during the learning process.

4. Conclusion

Based on the results of research conducted at MAN 4 Aceh Besar, it can be concluded that there is an influence of the cooperative learning model type course review horay on the physics learning outcomes of MAN 4 Aceh Besar students. This is proven from the results of hypothesis testing where the t_{count} 2.292 > t_{table} 1.668 and the significance value is 0.013 < 0.05. Therefore, this research suggests that teachers can use the course review horay type cooperative learning model as an alternative in the physics learning process. It is hoped that future researchers will be able to provide student activity observation sheets to observe all student learning activities during the learning process. Tt is hoped that future researchers, during the learning process, should pay more attention to time efficiency in each phase as stated in the cooperative learning model stage of the course review type.

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