Improving Student Learning Outcomes through the Numbered Head Together Learning Model on Always Saving Energy Material Grade IV Elementary School

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Abstract

This study aims to improve student learning outcomes on Always Save Energy Material using the Numbered Heads Together (NHT) Model in Grade IV SD Negeri 1 Sanggeue. The type of research used is Classroom Action Research (PTK) which is carried out with 2 cycles. Each cycle consists of 4 stages, namely planning, implementation, observation or observation, and reflection. The sample of this study was 18 grade IV students of SD Negeri 1 Sanggeue. Data collection techniques are carried out by observation and test methods, then the data obtained are analyzed descriptively. The results of the research obtained, the percentage of learning outcomes of pre-cycle students who experienced completeness was only 16.67%. After applying the NHT model, student learning outcomes increased to 44.44% in cycle I and increased again to 83.33% in cycle II. Based on this, it can be concluded that the application of the Numbered Heads Together (NHT) Model can improve student learning outcomes.

Keywords: Numbered Head Together; Learning Outcomes

Introduction

Education is important for humans to make a complete human being and is expected to be able to humanize a complete human being. Education is a conscious and planned effort to realize the learning process for students actively developing their potential to have spiritual, religious, self-control, personality, intelligence, noble character, and skills needed by themselves and society (Biesta, 2015; Nurbaiti et al., 2022). This can be achieved if teachers can apply learning models that are by the characteristics and abilities of students to create a meaningful learning process (Abele et al., 2015; Somertini, 2022). If it can be applied by the teacher, students can be actively involved in the learning process. Liveliness will require students to have courage and self-confidence so that students can get used to figuring things out or doing things on their own (Rahayu et al., 2019; Sumantri et al., 2022).

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Previous researchers (Yazar Soyadı, 2015) mentioned that there is a relationship between the ability of learning outcomes with effective and innovative learning methods. Students who have good learning outcomes will easily achieve maximum achievement in academics and school environments (Lin & Chen, 2017). But in reality, the learning process has not fully run well. This is revealed by several previous research results Zaini, (2018) That said, the main factor that hinders the improvement of student learning outcomes is caused by conventional learning models. The ability of learning outcomes is also influenced by student learning motivation (Gopalan et al., 2017; Khan et al., 2019).

Based on the results of preliminary pre-cycle observations in September 2023 conducted in grade IV of SD Negeri 1 Sanggeue on Always Save Energy Material, it was found that student activeness in learning is still low so student learning outcomes are also low and have not reached scores above the school's Minimum Completeness Criteria (KKM), which is 70. There are 3 out of 18 grade IV students of SD Negeri 1 Sanggeue who get scores above KKM. This problem occurs because students are not actively involved in the learning process as seen from the attitude of students who only hear and record important things from the teacher's explanation, students are also reluctant to ask and do not respond to teacher questions, students always feel sufficient with the material provided by the teacher causing low learning outcomes. If this continues to be allowed then there will be a decrease in learning outcomes for students. In line with research conducted by Sundari & Aulia (2022) Related to low student learning outcomes are also caused by several factors including the low learning model used by teachers is less varied and student enthusiasm for learning is low. If this situation is allowed to continue, then student learning outcomes will decrease and the desired learning goals will be difficult to achieve.

Based on the problems that have been described, it is necessary to apply a learning model that can increase student learning activity so that later it can improve learning outcomes. One learning model that can improve student learning outcomes is the Numbered Heads Together (NHT) model. NHT is a cooperative learning model that allows students to exchange information in solving problems (Oludipe, 2012; Rijal et al., 2021). The NHT model can be used in education that is guided by students who are more active than teachers, so students tend not to get bored with learning (Sulaimah et al., 2021). The syntax of the model consists of 6 phases, namely: 1) conveying goals and motivating learners, 2) presenting information, 3) organizing learners into study groups, 4) guiding study groups, 5) evaluation, and 6) awarding (Nahdiyah & Azizah, 2018). The purpose of this study is to determine the improvement of student learning outcomes through the Numbered Head Together (NHT) learning model on the material always saving energy in grade IV elementary school.

Methodology

The research conducted is a class action research (PTK) consisting of two cycles, namely cycle I and cycle II, where each cycle consists of four stages, namely: planning, implementation, observation or observation, and reflection. This research was conducted at SD Negeri 1 Sanggeue, Ketapang Sanggeue Village, Pidie District, Pidie Regency. The population in this study amounted to 108 people. The sampling technique in the study used purposive sampling, the criteria taken by the researcher included grade IV elementary school students and were able to carry out the learning model provided by the researcher. Therefore, the number of samples amounted to 18 students consisting of 5 male students and 13 female students. Data collection techniques are carried out through observation and test activities. The test technique is carried out by giving questions in the form of descriptions to measure students' abilities after being treated, while observations in this study are used to obtain data related to student activity and teacher teaching in class. Data analysis techniques are carried out through percentage descriptive analysis with the help of Microsoft Excel.

Results and Discussion

Results

Before the implementation of cycles I and II, researchers first conducted observations and pre-cycles to find out the problems that occurred in grade IV SD Negeri 1 Sanggeue. This observation activity can be used to determine the initial condition of learning activities before being given action using the NHT model. Pre-cycle activities are used to determine student learning outcomes. Based on observations, it show that many students are still not actively involved in the learning process and only record teacher explanations without asking questions and discussing directly. Student learning outcomes obtained in pre-cycle activities are seen in the following table:

Table 1. Criteria for learning outcomes achieved by Students in Pre-Cycle Learning based on KKM

Cycle	KKM Value	Frequency	Sum	Percentage	Information	Average rating
Pre	≥ 70	3	18	16,67%	Complete	51,66
	< 70	15	18	83,33%	Incomplete	

Based on Table 1, the average score obtained by grade IV students in the pre-cycle was 51.66. The number of students who experienced learning completion or had achieved KKM scores was 3 students with a percentage of 16.67%, while the number of students who were incomplete or had not obtained KKM scores was 15 students with a percentage of 83.33%. Student learning outcomes in the pre-cycle are still not optimal because the average value of student learning outcomes is still low and has not reached the KKM set by the school, so an action plan is prepared in the first cycle by making improvements using the Numbered Heads Together (NHT) model.

Table 2. Criteria for learning outcomes achieved by students in learning based on KKM in cycle

Cycle	Value	Frequency	Sum	Percentage	Information	Average rating
I	≥ 70	8	18	44,44%	Complete	66
	< 70	10	18	55,56%	Incomplete	

In cycle I, the average score obtained by grade IV students increased by 66. The number of students who experienced learning completion or had achieved KKM scores also increased by 8 students with a percentage of 44.44%, while the number of students who were incomplete or had not obtained KKM scores was 10 students with a percentage of 55.56%. The average value of student learning outcomes in the first cycle has increased but has not reached the KKM score. Thus, there is a need for further learning using the NHT model to cycle II so that learning outcomes are maximized.

Table 3. Criteria for learning outcomes achieved by students in learning based on KKM in cycle II

Cycle	Value	Frequency	Sum	Percentage	Information	Average rating
II	≥ 70	15	18	83,33%	Complete	82
	< 70	3	18	16,67%	Incomplete	

Based on the research data above, the average score obtained by grade IV students has increased from the first cycle to 82. The number of students who experienced learning completion or had achieved KKM scores also increased from the first cycle by 15 students with a percentage of 83.33%, while the number of students who were incomplete or had not obtained KKM scores was 3 students with a percentage of 16.67%. Thus, the average value of student learning outcomes in cycle II using the NHT

model has increased from cycle I and has reached scores above KKM. The improvement of student learning outcomes in each cycle can be seen in the following diagram.
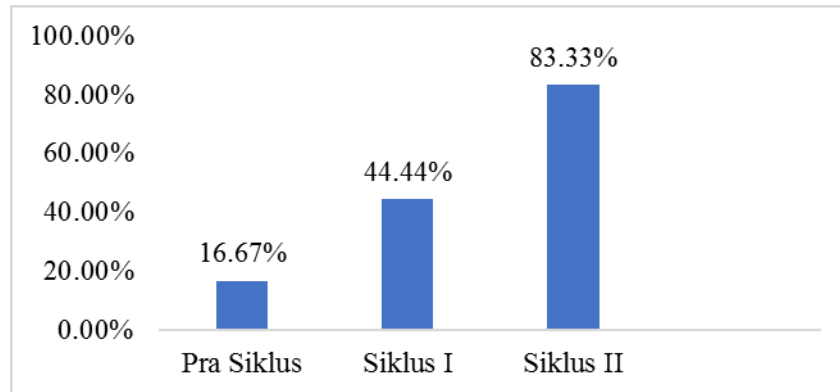

Figure 1. Percentage of student learning outcomes that experience learning completeness

Based on the data above, it is explained that the NHT model can improve the learning outcomes of grade IV students of SD Negeri 1 Sanggeue on the Always Save Energy material. The increase occurred from pre-cycle to cycle II because the teacher succeeded in making students actively involved in the learning process after using the NHT model, so that students understood the material provided and the learning outcomes also improved.

Discussion

Based on the data analysis that has been done, in this study there will be 3 topics of discussion that will be described, among them pre-cycle, cycle 1, and cycle 2 are as follows:

1. Pre Cycle

Classroom Action Research (PTK) in the first cycle was carried out to make a comparison of learning using the Number Head Together learning model with learning without using the model only using lecture and question and answer methods. Pre-cycle learning is on energy source materials. In the learning process, many students do not focus on hearing the explanation of the material and when doing questions and answers, only a few of the students respond.

At the time the researchers distributed Student Worksheets (LKS) to each student, only a few students answered correctly. In the pre-cycle, the average score obtained by students was 52 so researchers can conclude that learning in the pre-cycle was not successful and far from expected, but the shortcomings in the pre-cycle must be corrected in corrective actions in the next cycle. Therefore it is necessary to continue on cycle I with various improvements.

2. Cycle I

Learning in Cycle I discusses the benefits of energy, learning is carried out in the first hour of learning. Learning in the first cycle is carried out by applying the Number Head Together model. In cycle I a group is formed whose selection of members is based on the number obtained by students as a member number in the group, then students use the number distributed by the teacher at the head. After group selection, researchers distribute material that will be discussed by each group.

Based on the observations of researchers, in cycle I students are more excited than in cycle I when participating in learning because learning carried out by applying the Number Head Together

learning model can improve student learning outcomes as seen from the increasing scores obtained by students. This is in line with the results of previous research Kurnia et al. (2019) state that the application of the NHT learning model is effective in improving student learning outcomes, especially for students who follow learning. During learning, the teacher also applies all the syntax contained in the NHT model in order including in motivate students. The existence of learning motivation given to students can change their habits in a positive direction, this has a major effect on their success in learning. The motivation of students to be serious and active in learning will affect their learning outcomes. This is reinforced by research (Saputra et al., 2018) That is, the provision of high motivation in learning has a positive impact so that the optimization of learning goals in the form of student learning outcomes can be achieved.

In cycle I the average value of the group is 75 and the average value of individuals is 66, the average value obtained in cycle II is higher than in cycle I. This is because in cycle I researchers apply the Number Head Together learning model.

3.Cycle II

Learning in cycle II discusses alternative energy materials, learning takes place on September 10, 2023, in the first hour. In this cycle, the learning activities apply the Number Head Together learning model, because seeing that student scores in the previous cycle did not reach KKM as a whole.

Based on the results of Classroom Action Research (PTK) in cycle II, learning activities using the Number Head Together learning model make students enthusiastic and active in learning because they are motivated to learn in groups or discussions with the Number Head Together model due to the exchange of opinions between one another and students who present the results of group discussions are responsible for discussions because researchers will call directly. Random number to present. This is in line with previous research Latifah, (2019) which states that the Numbered Head Together learning model, can increase student achievement, student creativity, delight students in learning, develop students' positive attitudes, develop student curiosity, and increase student insight.

In presenting the LKS that has been done by each group, students dare to come to the front of the class to present the results of their group work. Researchers gave awards in the form of praise and good grades to each group. In cycle II the average score obtained by students is greatly increased compared to pre-cycle and cycle I. Students obtained an average score of 82 in cycle II. From obtaining these values, researchers concluded that the application of the Number Head Together learning model to the material always saving energy has been completed. So the learning process with Classroom Action Research (PTK) is stopped in cycle II because it has reached completion. In cycle II students are very motivated by the application of the Number Head Together learning model which can make students easily understand the material, students are more active in learning, and can improve student learning outcomes.

Conclusion

Based on the results obtained from the research that has been done, it can be concluded that the application of the Numbered Heads Together (NHT) Model can improve student learning outcomes. This is evidenced by the increase in student learning outcomes each cycle.

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