

# Number Head Together Model in Social Learning

**Marien Pinontoan**

Elementary School Teacher Education Dept  
Universitas Negeri Manado, Indonesia  
marienpinontoan@unima.ac.id

**Abstract:** The purpose of this study was to find out how the application of the Numbered Heads Together learning model in grade IV Elementary School on social issues in social studies learning. This research method uses classroom action research proposed by Kemmis and Taggart, which consists of four stages, namely planning, implementing actions, observing, and reflecting. The subjects of the study were the fourth-grade students of Inpres 7/83 Batusaiki Elementary School with a total of 18 students, consisting of 8 male students and 10 female students. Data collection is done by observation, tests, and interviews during the teaching and learning process with the teacher in class. This research was conducted at SD Inpres 7/83 Batusaiki on 6 June and 13 June 2018. Data analysis based on observations on the assessment instrument sheet. The data is described in the form of a percentage. The application of the number head together learning model in social studies learning material social problems in fourth grade elementary school students can make students active and synergize with teachers as facilitators and managers of learning so as to enable the achievement of optimal student learning outcomes.

**Keywords:** number head together, social learning

## I. INTRODUCTION

Earth is a planet inhabited by various living creatures, one of which is humans. Humans as social beings have spiritual and physical needs. Physical Needs are needs related to material, such as eating, drinking, clothing, houses, cars, and so on. To meet the various needs of humans, they deliberately and unintentionally exploit the earth, which mostly affects the damage to the earth or the environment in which humans live [1]. For example, some cases of environmental damage by humans such as littering and cutting down trees without reforestation, resulting in flooding. This damage causes social problems.

Social problems are problems that occur in society [2]. Social problems are also often interpreted as a state of society that is not fair or abnormal. Social Problems are the difference between expectations and reality or as a gap between the existing situation and the situation that should be [3]. Social problems are seen by a number of people as unexpected conditions. Especially now there are many examples of social problems in the local environment that must be addressed and resolved

Education is the most appropriate vehicle in providing knowledge, skills, and attitudes about environmental care to humans. Through social studies learning in elementary schools is considered very appropriate in teaching environmental education to students. According to Sapriya social sciences is a field of study that is taught starting from elementary school to high school [4]. Environmental learning through social studies learning can be done by examining global issues. These global issues such as waste, environmental pollution, population issues, and others. Social studies learning in elementary schools is able to shape the young generation as heirs of the earth to love the environment for survival on earth.

From this description, social studies learning is needed in elementary schools based on environmental education. To make students understand the subject matter of social science that provides knowledge about environmental maintenance and influences the resolution of social problems in the community, we need a learning

model that is able to motivate students and provide opportunities for students to develop their creativity. One model that is student-centered and is able to develop creativity and improve student learning outcomes is the number head together learning model.

Number head together is one learning that emphasizes the specific structure designed to influence student interaction patterns. This number head together learning model is used to involve students in strengthening learning understanding or checking students' understanding of learning material. Number head together learning model trains students in developing the social skills that exist in each student and assigns responsibility to each student in the implementation of learning activities. Students can be active and learning more meaningful because students can experience direct learning that is done by experimenting activities [5].

From the description above, the researcher is interested in conducting research with the aim of applying the Numbered Heads Together (NHT) learning model in Class IV Elementary school on social problem material in social studies learning. Based on this background, the formulation of the problem in this study is how is the application of the Numbered Heads Together (NHT) learning model in Class IV Elementary school in social studies learning?

## II. METHOD

This research method uses classroom action research proposed by Kemmis and Taggart, which consists of four stages, namely planning, implementing actions, observing, and reflecting. The planning stage begins with preparing the Learning Implementation Plan, preparing teaching aids, preparing Student Worksheets, preparing Assessment Sheets, preparing teaching materials. Implementation of the planning stages is the researcher

Stages of the action carried out by researchers in the form of learning activities that are tailored to the design prepared, as a reference in the implementation of learning activities. The most important thing in this research is how to apply the Numbered Heads Together learning model

which consists of several stages, namely: the formation and numbering of groups, each group must have a textbook or manual, discuss the problem, call member numbers or provide answers, give a response, give a conclusion.

Observations are carried out in conjunction with the implementation of actions during the learning process and the observations made include student activities, material development, and student learning outcomes. observations made by the class teacher.

Reflection is carried out by analyzing and concluding observations about the implementation of learning. Shortcomings that occur in the learning process are increased at the next meeting so that students' learning completeness can be achieved.

The subjects of the study were the fourth-grade students of Inpres 7/83 Batusaiki Elementary School with a total of 18 students, consisting of 8 male students and 10 female students. Data collection is done by observation, tests, and interviews during the teaching and learning process with the teacher in class. This research was conducted at SD Inpres 7/83 Batusaiki on 6 June and 13 June 2018.

Data analysis based on observations on the assessment instrument sheet. The data is described in the form of a percentage. As for the mastery learning formula used as follows [6]. The criterion for the success of this study is if mastery learning is greater than 85%.

$$CL = (T/Tt) \times 100\% \quad (1)$$

Note:

CL : Complete learning

T : Number of scores obtained

Tt : Total score

### III. RESULTS

This class action research was carried out in class IV Inpres 7/83 Batusaiki elementary school with 18 students of subject's research. This class action research was carried out in two cycles namely first cycle on June 6, 2019 and the second cycle carried out on June 13, 2019.

#### *Cycle 1 Plan Stage*

Cycle 1 learning planning is carried out through 2 x 35-minute learning planning process with social material. In this stage, the researcher also prepares subject matter that is adjusted to the steps of the joint head number learning model. The objectives of learning cycle 1 are 1) students are able to discuss examples of social problems and 2) students are able to describe social problems. At this stage, researchers develop learning media consisting of pictures of social problems and research instruments consisting of student worksheets for the learning process and assessment sheets to measure the learning process.

#### *Cycle 1 Implementation Stage*

Implementation of learning cycle 1 of the learning planning process that has been made. A description of the learning process that occurs.

##### *a. Initial activities*

This cycle 1 learning begins with the teacher giving greetings and asking one of the students to lead the open prayer. and then, the teacher asks news from the students

and makes a presence and the teacher asks students to pay attention to the cleanliness of the classroom. Next, the teacher shows the students a picture of a river full of garbage and a picture of a clean river and asks for their response to the differences in the two pictures.

The answers put forward by students are very diverse, and the teacher directs them to understand the learning objectives to be achieved namely: (1) students are able to cite examples of social problems; and (2) students are able to describe social problems, then the teacher provides motivation so that students can diligently and creatively follow learning process so that the learning objectives can be achieved.

##### *b. Core activities*

After the learning objectives are delivered the teacher divides students heterogeneously into 6 groups consisting of 3 people. The differences in group members are based on differences in gender, ethnicity, and social background. Each student in the group is given a number that is number 1, number 2, and number 3. Then the teacher divides the subject matter and student worksheets, and the students are asked to discuss the subject matter according to the instructions that the teacher gives.

During the discussion process the teacher walks around the class monitoring the course of the discussion, and also guides students who encounter obstacles and reprimands some students who are less active or just busy with themselves in the discussion process. Furthermore, the teacher mentions one of the numbers of students namely number 2, and students numbered 2 from each group come forward to explain the solution discussed for problem number 1, examples of social problems that occur in the neighborhood where students live.

After students finish presenting examples of social problems the teacher gives the opportunity to other students to provide responses and rebuttal to the results of the discussion of each group presented by numbered students 2. Then the teacher and students conclude the learning material i.e. examples of social problems that happening around the students' environment.

After the teacher and the students conclude the examples of social problems, again the teacher mentions one more number, number 1, to explain the results of each group's discussion about the description of the social problems presented earlier. The six students numbered 1 took turns explaining the results of their discussion. Students who first explain the description of social problems related to low education.

The second student describes social problems related to crime / fights and disputes. The third student explains the description of social problems related to the environment or garbage. The fourth student describes social problems related to poverty. The fifth student describes social problems related to unemployment. The sixth student describes social problems related to violations of discipline or norms such as alcoholics. After the students have finished presenting descriptions of the social problems the teacher gives the opportunity to other students to give responses and rebuttal to the results of the discussion of each group presented by students numbered 1. Then the teacher and students conclude the subject matter.

*c. Closing activities*

After the teacher and students conclude a description of social problems, the teacher provides an assessment sheet for students and is answered individually to check students' understanding of the sample material and a description of social problems that occur in the environment where they live.

After the students have finished completing the evaluation, the teacher provides homework for students to interview and discuss with parents about ways to deal with or reduce social problems that occur in their neighborhood. Then the teacher closes the lesson with prayer.

*Cycle 1 Observation Stage*

The stages of observation are carried out together with the stages of implementing the action. Observation results show that in managing the teacher's class is not very effective where there are still students who are less active and busy with themselves. This also happens because group friends still have not maximized the function of discussion or group learning. Likewise, the media prepared by the teacher is still limited to some examples of social problems so that students' attention is only on the picture of the social problems provided. Achievement of learning outcomes obtained by students through the assessment sheet is presented in Table 1 below.

**Table 1**  
**The First Cycle Learning Outcomes**

Number	Student Name	Item of Question					Total Value
		1	2	3	4	5	
		Score					
		(20)	(20)	(20)	(20)	(20)	
1	A. S	20	20	-	20	20	80
2	A. F.	20	-	10	-	20	50
3	F. M.	20	20	10	20	20	90
4	J. S	20	-	10	10	20	60
5	J. R	20	-	20	10	20	70
6	K. M	20	20	10	20	20	90
7	K. P	20	-	10	10	20	60
8	M. S	20	20	20	15	20	95
9	M. P	20	-	20	-	20	60
10	R. K	20	-	10	20	20	70
11	S. S	20	20	10	15	20	85
12	S. T	-	-	10	10	20	40
13	S. M	20	-	20	15	20	75
14	V. P	20	-	10	15	20	65
15	V. R.	20	-	10	10	20	60
16	V. T	20	-	10	5	20	55
17	V. A	20	20	20	5	20	85
18	Y. S	20	-	20	15	20	75
<b>Total Score</b>							<b>1265</b>

Based on the data in table 1, it can be calculated learning completeness obtained in cycle 1 as follows.

$$CL = \frac{T}{Tt} \times 100\% = \frac{1265}{1800} \times 100\% = 70,28\%$$

The results of the evaluation of the achievement of learning outcomes in the first cycle is 70,28%.

*Cycle 1 Reflection Stage*

Learning outcomes achieved in cycle 1 of 70.28% have not yet reached the research success criteria of 85%. Therefore, the study continued in the second cycle, by making improvements to the deficiencies that occurred in

cycle 1. The second cycle of learning is learning that implements the number head learning model together, and also pay attention to the deficiencies that occur in the first cycle that is more effective in managing the class so that the process of discussion or collaboration in groups is created optimally and also maximizes the monitoring of the discussion process so that nothing is monopolize to answer questions independently and students are active in discussions not play.

*Cycle 2 Plan Stage*

Planning for cycle 2 learning is done through making a 2 x 35-minute learning process plan with social material and paying attention to deficiencies and obstacles that occur in cycle 1. In this stage the researcher also prepares subject matter that is adjusted to the steps of the number head together learning model. The purpose of learning cycle 2 is: (1) students are able to describe social problems; and (2) students are able to describe the causes of social problems and how to reduce the occurrence of social problems. At this stage the researcher prepares learning media in the form of video social problems and causes of social problems and research instruments in the form of student worksheets to monitor the learning process and assessment sheets to measure the success of the learning process.

*Cycle 2 Implementation Stage*

The implementation of learning cycle 2 follows the planning of the learning process that has been made. The description of the learning process that occurs is explained as follows.

*a. Initial activities*

This cycle 2 learning begins with the teacher giving greetings and asking one of the students to lead an open prayer. Furthermore, the teacher made a presence and asked news from students who did not yet exist and the teacher asked students to pay attention to the cleanliness of the classroom. Starting student learning activities, the teacher asks the results of homework provided. Next the teacher shows a video of examples of social problems and asks students for responses to the video being viewed.

The answers put forward by students were very diverse, and the teacher directed it to understand the learning objectives to be achieved namely: (1) students were able to describe social problems, and (2) students were able to describe the causes of social problems and ways to reduce the occurrence of social problems. then the teacher provides motivation so that students can diligently and creatively participate in the learning process so that the learning objectives can be achieved.

*b. Core activities*

After the learning objectives are delivered the teacher divides students heterogeneously into 6 groups consisting of 3 people. The differences in group members are based on differences in gender, ethnicity, and social background. Each student in the group is given a number that is number 1, number 2, and number 3. Then the teacher divides the subject matter and student worksheets, and the students are asked to discuss the subject matter according to the instructions that the teacher gives. During the discussion

process the teacher walks around the class monitoring the course of the discussion, and also guides students who encounter obstacles and reprimands some students who are less active or just busy with themselves in the discussion process.

Furthermore, the teacher mentions one of the numbers of students namely number 1, and students numbered 1 from each group come forward to explain the solution discussed for problem number 1, namely the description of social problems that occur in the neighborhood where students live. after students finish presenting the description of social problems, the teacher gives the opportunity to other students to give responses and rebuttal to the results of the discussion of each group presented by student numbered 1. Then the teacher and students conclude the subject matter, namely the description of social problems that occur in around the environment of students.

After the teacher and the students conclude examples of social problems, the teacher again mentions one more number, number 3, to explain the results of each group's discussion about the causes of social problems and how to reduce the occurrence of social problems. The six students numbered 3 took turns explaining the results of their discussion. Students are the first to explain the causes of social problems and how to reduce the occurrence of social problems associated with low education. The second student explains the causes of social problems and how to reduce the occurrence of social problems related to crime / crime and dissension. The third student explains the causes of social problems and how to reduce the occurrence of social problems related to the environment or garbage.

The fourth student explains the causes of social problems and how to reduce the occurrence of social problems related to poverty. The fifth student explains the causes of social problems and how to reduce the occurrence of social problems related to unemployment. The sixth student explains the causes of social problems and how to reduce the occurrence of social problems related to violations of discipline or norms such as alcoholics. after students finish presenting the description of social problems the teacher gives the opportunity to other students to give responses and rebuttal to the results of the discussion of each group presented by students numbered 1. Then the teacher and students conclude the subject matter

*c. Closing activities*

After the teacher and students conclude the material about causes of social problems and ways to reduce the occurrence of social problems, the teacher provides an assessment sheet for students and is answered individually to check students' understanding of the material causes of social problems and how to reduce the occurrence of social problems that occur *in the environment they live*. Then the students have finished completing the evaluation, the teacher given motivation and closes the lesson with prayer.

*Cycle 2 Observation Stage*

The stage of observation is carried out together with the stage of implementing the action. Observation results show that the teacher has tried to manage the class as much

as possible and can foster positive student behavior by showing empathy and showing an open attitude towards students. this increases the motivation of students so they are enthusiastic in learning. Achievement of learning outcomes obtained by students through the assessment sheet is presented in table 2 below.

**Table 2**  
**The Second Cycle Learning Outcomes**

Number	Student Name	Item of Question					Total Value
		1	2	3	4	5	
		Score					
		(20)	(20)	(20)	(20)	(20)	
1	A. S	20	20	20	20	20	100
2	A. F.	20	10	20	20	20	90
3	F. M.	20	20	20	20	20	100
4	J. S	20	20	10	15	20	85
5	J. R	20	20	20	15	20	95
6	K. M	20	20	20	20	20	100
7	K. P	20	10	10	15	20	75
8	M. S	20	20	20	20	20	100
9	M. P	20	20	10	15	20	85
10	R. K	20	20	20	20	20	100
11	S. S	20	20	20	20	20	100
12	S. T	20	10	10	20	20	80
13	S. M	20	20	20	20	20	100
14	V. P	20	20	20	10	20	90
15	V. R.	20	10	20	15	20	85
16	V. T	20	20	10	20	20	90
17	V. A	20	20	20	20	20	100
18	Y. S	20	20	20	20	20	100
<b>Total Score</b>							1675

Based on the data in table 2, it can be calculated learning completeness obtained in cycle 2 as follows.

$$CL = \frac{T}{Tt} \times 100 \% = \frac{1675}{1800} \times 100\% = 93,06\%$$

The results of the evaluation of the achievement of learning outcomes in the second cycle is 93,06%.

*Cycle 2 Reflection Stage*

Learning outcomes achieved in cycle 2 amounted to 93.06%. the achievement of these learning outcomes has met the criteria for research success that is at least 85%. Therefore this research can be said to have been successful and not continued in the next cycle.

Learning of the second cycle is learning that implements the number head together learning model that is able to arouse students' curiosity and gives courage to students to appear in front for presented of the results of their group discussions, so as students directly involved in the learning process and knowledge building through various learning activities.

**IV. DISCUSSION**

The implementation of this class action research was carried out in 4 stages namely planning, implementing the action, observing and reflecting. The implementation of this research was carried out in two cycles, namely the first cycle on June 6, 2019 and the second cycle carried out on June 13, 2019. The implementation of the first cycle of learning did not meet the criteria for research success, because the achievement of learning outcomes in cycle 1 was 70.28% while the criteria for research success required a minimum of 85% completeness.

This is caused by several things including external factors that are very influential namely the teacher [7]. In the learning process that applies the number head together learning model, the teacher has not managed the class maximally, so the planned learning process has no power created in the discussion process [8]. On the other hand, students also as part of external factors supporting the achievement of optimal learning outcomes have not provided synergy in the application of the learning model. Because observations show that some students are still selfish, that is they just want to work alone and some students are just busy playing.

In the second cycle of learning, researchers try to maximize their role as facilitators of learning that applies the number head together learning model. the second cycle learning process has been able to provide results of 93.06. The results of this second cycle of research indicate that the criteria for research success have been achieved. The application of the number head together learning model which is part of cooperative learning in the second cycle has made students work cooperatively in small groups carefully structured so as to maximize their own learning and each other [9].

When the teacher chooses to learn in the second cycle, the teacher has been able to carry out his task as a manager of the learning process so that the second cycle learning process is able to make students achieve optimal learning outcomes. this is in line with the opinion of Tuerah which states that learning management influences teacher performance [10], in this case teacher performance is the result of student learning.

Based on the description above, it can be drawn several important points, namely teacher has a great influence in the management of learning and no less important is the involvement of students in learning. Another factor supporting the achievement of optimal learning outcomes in this study is the use of the number head together learning model, which emphasizes the learning process in the discussion process that trains students to collaborate, share experiences and knowledge gained, and trains students to express opinions and listen to the opinions of others or learn to accept differences of opinion.

When the three factors supporting the success of the learning process are the teacher and students and the learning model is synergized, it can provide maximum learning outcomes. Based on the results of research and discussion, it can be concluded that the application of the number head together learning model in social studies learning material social problems in fourth grade elementary school students can make students active and synergize with teachers as facilitators and managers of

learning so as to enable the achievement of optimal student learning outcomes.

## V. CONCLUSION

The application of the number head together learning model in social studies learning material social problems in fourth grade elementary school students can make students active and synergize with teachers as facilitators and managers of learning so as to enable the achievement of optimal student learning outcomes.

## ACKNOWLEDGMENT

Thank you to Universitas Negeri Manado for giving me the task to research and publish the results of this research. thank you conveyed to the principal of Inpres 4/82 Walian elementary school and teachers and students who have helped a lot in the research process so that researchers can complete this research. thank you to the Universitas Negeri Malang which hosted the FIP-JIP event and became a committee in publishing this scientific work.

## REFERENCES

- [1] Alfonso, R. J., Firth, G. R., and Neville, R. F. 1981. *Instructional Supervision: A Behavioral System*. Boston: Allyn and Bacon, Inc.
- [2] Ingold T. Earth, sky, wind, and weather. *Journal of the Royal Anthropological Institute*. 2007, 13, 19-38.
- [3] Hilgartner S, Bosk CL. The rise and fall of social problems: A public arenas model. *American journal of Sociology*. 1988, 94(1), 53-78.
- [4] Spector M, Kitsuse JI. *Constructing social problems*. Routledge; 2017 Jul 5.
- [5] Sapriya. *Social Studies Education*. (In Indonesian) (Bandung: PT Remaja Rosdakarya, 2011).
- [6] Rahmawati, Nurina Kurniasari. Implementasi Teams Games Tournaments dan Number Head Together ditinjau dari Kemampuan Penalaran Matematis. *Al-Jabar: Jurnal Pendidikan Matematika*, 2017, 8(2): 121-134.
- [7] Sudjana, Nana. *Assessment of Teaching and Learning Outcomes*. Bandung: Remaja Rosda Karya, 2001.
- [8] Yulianingsih, L. T., & Sobandi A. Kinerja mengajar guru sebagai faktor determinan prestasi belajar siswa. *Jurnal Pendidikan Manajemen Perkantoran*. 2017, 2(2): 49-56.
- [9] Smith KA, Sheppard SD, Johnson DW, Johnson RT. Pedagogies of engagement: Classroom-based practices. *Journal of engineering education*. 2005 Jan;94(1):87-101.
- [10] Smith KA, Sheppard SD, Johnson DW, Johnson RT. Pedagogies of engagement: Classroom-based practices. *Journal of engineering education*. 2005 Jan;94(1):87-101.
- [11] Tuerah RM. Analysis of Teacher Performance on Learning Management in Primary School. In 9th International Conference for Science Educators and Teachers (ICSET 2017) 2017 Sep 13. Atlantis Press.