

THE IMPROVEMENT OF STUDENT'S CREATIVE THINKING ON THE THEME OF HEAT AND ITS TRANFER THROUGH THE PEER TEACHING METHOD AT ELEMENTARY SCHOOL OF PABERASAN I SUMENEP

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Abstract

This research has several objectives. First, applying peer-to-peer teaching methods to improve students' creative thinking on the theme of heat and its transfer, sub-themes of temperature and heat in class V at Elementary School of Paberasan I. Second, improving students' creative thinking through peer-teaching methods, the theme of heat and its transfer, sub-themes of temperature and heat in class V at Elementary School of Paberasan I. In the first cycle, the Indonesian language subjects obtained 58%, 50% for IPA, and 66% for SBdP, increased in the second cycle to 83% for Indonesian, 75% for IPA, and 92% for SBdP. In the first cycle of creative thinking, students get 57% which is included in the creative enough category, and increases in the second cycle which gets 82% included in the creative category.

Keywords – Peer Teaching Method; Creative Thinking; Elementary School

1. Introduction

The implementation of the 2013 curriculum can encourage active and creative students to observe, ask questions, discuss, and combine (imagine) things/events that have been achieved or obtained after getting material in the learning process. In learning, a person can choose whether to make changes to what he does. From these changes, a person can grow from what he has done. One of them is creativity.

The curriculum is born from the creativity and diversity of traditional knowledge and cultural expressions that are not owned by their nation and other nations in the world (Ridwan & Wahdian, 2017). According to (M Ridwan, 2016) a nation can be said to be great if the nation has a good and strong character that comes from the values of the local wisdom of its people. The value of education (Curriculum 2013) and local wisdom must be the spirit of perfection and necessary for the development of education in Indonesia. The power of combining education and implementing the values of local wisdom in educational institutions is a breath of fresh air but creates the power of a wise and civilized future education (Ridwan, nd). Education and local wisdom can be started from the dimension of Education that educates morals and religion as in Madura Syi'ir (poems) which must be actualized in educating the character of students (Ridwan, 2018b).

According to Armadi (2017; 2021), the characteristics of the scientific approach to learning materials are based on facts or phenomena that can be explained with certain logic or reasoning; teacher explanations, student responses, and teacher-student educative interactions. In line with these results, integrated learning based on local culture is also important (Armadi, 2018).

Starting from the learning process that took place in class V of Elementary School of Paberasan I, in general, students were not involved in the question and answer activities, and students could not explain the skills or activities in the learning presented by the teacher. Based on observations and results of interviews with Class V teachers at SDN Paberasan I regarding students' creative thinking that is still lacking. The problems related to students' Creative Thinking are the first by the students themselves. When students explain the material is still not in accordance with what is asked by the teacher. Because there are still many students who cannot convey ideas or develop

material that has been conveyed by the teacher or by other students. This is true what was stated by the fifth-grade teacher. This research has a background of not less than 500 words and contains problems to be investigated, of course in an effort to improve creative thinking in students. In this case, it will also explain the explanation of special methods or strategies by applying the methods that will be given and of course contextually. Meanwhile, the other students only listened and did not provide opinions or ideas that could make the class atmosphere active and creative.

Based on the problems above, the writer tries to overcome these problems by implementing different applications than before. The author tries to apply the peer teaching method on the theme of heat and its transfer, sub-themes of temperature and heat as an effort. With this Peer Teaching learning method, it is hoped that the learning process activities are no longer teacher-centered, so that students are more trained in expressing opinions and students are also learning. Therefore, it is hoped that there will be an interaction between students, and students will be more active in carrying out the learning process. It is also mentioned in Muhammad (2011: 37) that teaching is about learning tips in the form of guidance, support, direction, direction, and motivation for students to learn effectively and efficiently. Peer tutors are students who are assigned or assigned to help friends who have learning difficulties because the relationship between friends is often closer than the relationship between teachers and students. Most importantly, they encourage their friends to do their best to achieve this goal. (Miftahul Huda, 2015: 34).

In the application of the Peer teaching Method, preparations must be made by the teacher so that it can run well and effectively. In addition, the Peer Teaching Method will be applied to the theme of always saving energy, the sub-themes of learning energy sources 1 and 2. The sub-themes of temperature and heat are Indonesian basic competencies, namely Summarizing explanatory texts (narratives) from printed or electronic media. Presenting explanatory (explanatory) text summaries from print or electronic media using standard vocabulary and effective sentences orally, in writing, and pictures. Natural Science (IPA) applies the concept of heat transfer in everyday life. Report heat transfer observations. Meanwhile, Cultural Arts and Crafts (SBdP) understands the scales. Sing songs in various scales with musical accompaniment. By applying the Peer Teaching Method to the subtopics of

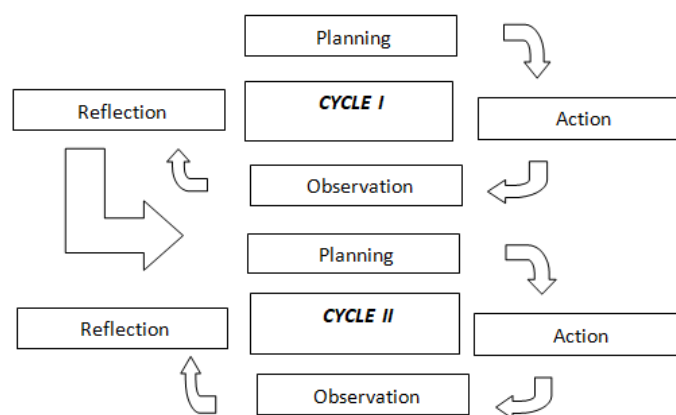
temperature and warmth, students can develop creative ideas while studying with the help of their friends, and students can work together to express their ideas. This makes the classroom atmosphere active, creative, and fun.

The purpose of the study was to apply the Peer Teaching Method in improving Students' Creative Thinking with the theme of heat and its transfer to the sub-themes of temperature and heat in class V at Elementary School of Paberasan I, and also Improving the Students' Creative Thinking through the Peer Teaching Method with the theme of heat and its transfer to the sub-themes of temperature and heat in class V at Elementary School of Paberasan I. The benefits of this research are expected to be able to make learning more effective, make it easier for students to understand what is being learned, the learning process is more active, creative, and fun so that it can improve Students' Creative Thinking. The output of this research is the publication of scientific articles in the form of accredited national journals ranked 1-6. To anticipate the extent of the problems discussed, the authors make the boundaries of the problem so that this research becomes more focused. This research is limited to the scope of how to apply the peer teaching method in Improving Creative Thinking to students of Elementary School of Paberasan I.

The term limitation contained in the formulation of the title of this research is the use of the peer teaching method in which students request that learning in class be better, as well as understanding and student activity in learning becomes better to achieve the intended indicators. On the other hand, Filsame (in Fauziah 2011: 100) Creative thinking is a thinking process that shows the qualities of dexterity, flexibility, and originality or originality, and detailing or elaboration. In creative thinking, students can be known if the indicators in Creative Thinking are implemented. However, in creative thinking, of course, there are indicators that not all students have. Therefore, implementing these indicators through learning does not go as expected, including improving students' creative thinking skills that occurred at Elementary School of Paberasan I, namely the lack of students' creative thinking skills.

2. Method

This type of research is using CAR (Classroom Action Research). Research Action Classroom (CAR) is an observation of activities learning inform of the actions that are investigated consciously and carried out together in the classroom (Arikunto 2014:3). This research is a classroom action research that refers to the model of Kemmis and Mc. Taggart (in Arikunto 2014:16) is based on planning, action or observation, and reflection. The researcher here acts as a teacher.



Picture 1. Kemmis and MC. Taggart Model Classroom Action Research.

The subjects of this study were the subjects in this study were class teachers and fifth-grade students at the Elementary School of Paberasan I in the Even Semester of the 2019/2020 Academic Year, with a total of 12 students, consisting of (7) male and (5) female. While the data collection techniques needed in the research are practice questions, observations, and taking photos/videos or documentation. The test used in the study is a subjective test, which is in the form of an essay. This test is to measure students' creative thinking skills. Arranged according to the sub-themes of Temperature and Heat. Observations were made using instrument guidelines in students' creative thinking and describing the process in every fifth-grade student at Elementary School of Paberasan I. Documentation is part of one way of collecting important documents in research. The documentation in this study is in the form of lesson plans, observation instruments, and photos of activities. Then the research instrument in this research is using tests and Creative Thinking Observation Sheet Format. After everything is

collected and implemented, a study or review will be carried out that describes the changes in the actions taken. This is to find out how successful the method used in learning activities on the theme of temperature and heat is.

3. Result and Discussion

The explanation of the results of the actions in each cycle is the result of actions based on the existing problem formulation, at this stage, the researcher will explain briefly and the actions and processes during the actions that have been carried out from the initial observation stage. The entire action cycle consists of several stages, namely action planning, implementation or observation, and reflection. The following are the initial conditions from the results of observations that found a problem. Based on the reality in the field during the learning process on the theme of temperature and heat, there are still many students who tend to be silent, grade 5 students still have not provided their own opinions or explanations in the on-going learning process. In addition, in solving problems or discussions in class students still tend to be passive. This shows that students' creative thinking skills are still lacking and there is still room for improvement. In addition, many students are still below the SKM (Graduation Standard Minimum) and apply less innovative learning models, so that students are subtopics of heat and its transfer, temperature, and heat. In this way, researchers prepare everything to solve problems faced by creative thinking skills students'. The results of the implementation of the steps from Cycle I to Cycle II are as follows.

Cycle I Research Results The

The results of the cycle research initial consisted of several stages, namely: action planning, observation, and reflection. During the planning phase, the researcher determined how skills creative thinking in the fifth grade on the subtopics of temperature and heat could be improved using peer teaching methods. The researcher then made a Learning Implementation Plan (RPP). Researchers then prepare everything necessary for learning, including the learning medium for the course. Develop formats and scales observational to improve thinking skills you're creative.

The actions are carried out following the CAR procedures that have been previously prepared, namely the first stage is the planning stage. The lesson planning that has been made refers to the lesson plans that have been made previously. During the action activity, the researcher is also tasked with seeing changes in students' thinking and behavior in learning activities. Thus, the results of the action are obtained from the implementation or observation of students and the results of students' creative thinking skills are carried out by the students themselves after the lecture process takes place. After the implementation of the class action in cycle I was completed, a test was conducted using creative thinking questions with description test

questions adapted to the material on the temperature and heat subthemes in cycle I there was 10 description tests where the description test questions contained indicators of creative thinking skills including thinking fluent, detail thinking, flexibility thinking, original thinking. The results of the data in the first cycle of research above are used to make it easier to find the percentage of students' mastery in the sub-themes of temperature and heat.

The results of the first cycle some students still not can answer the questions correctly and achieve scores beyond their abilities thinking creative. Based on the results of the teacher's test in the first cycle, the level of completeness of Indonesian subjects was 58, Natural Science subject was 50%, SBdP (cultural arts and crafts) was 66%, this indicates that the index success has not reached 75%. In cycle I, the researcher also used the creative thinking observation sheet provided to observe the ability creative thinking of students individually. Only a few students can think creatively in the cycle I creative thinking skills. This is the result of the learning process carried out to improve creative thinking through an average of 57% of creative thinking sheets students'.

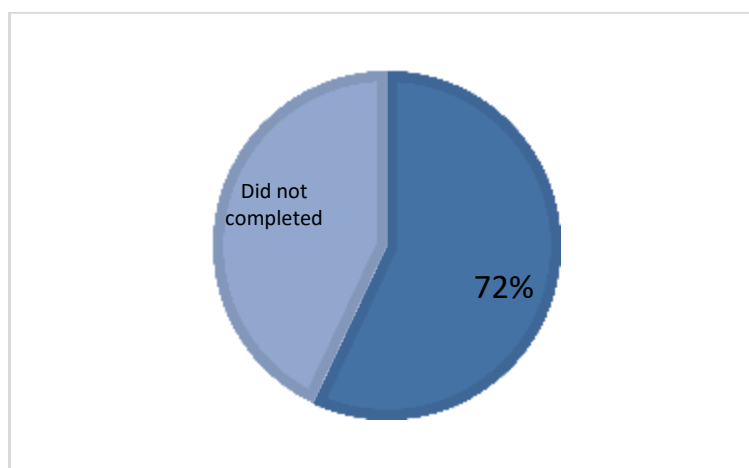


Figure 2. Observation of Creative Thinking Cycle I

It is known from the observations of students' creative thinking skills in cycle I only a few students can think creatively. This can be seen from the results of creative thinking skills through students' creative thinking sheets, which are 57%. The results of the first cycle, most of the students in the category of quite good in learning, this can be seen from the results of the observation of student activities in the first cycle of learning 1 which is 65% while learning 2 is 64% and still needs to be improved. (4) The results of observations of teacher activities also still obtained 68% in learning 1, while in learning 2 they got 62%, this was due to the failure of several activities carried out by teachers as already in the teacher's activity sheet.

If viewed based on the indicators that have been determined by the researcher, in this study there need to be improvements by continuing the research to the next cycle, especially looking at the average test results that have not reached 75% and Creative

Thinking observations which have not yet reached the criteria for completeness. So the researcher and the teacher agreed to make improvements by planning the second cycle to correct the deficiencies that occurred in the previous cycle to achieve the research objectives.

Cycle II Research Results The

The action in cycle II is to improve the previous cycle. Classroom action research is still the same, in a fifth-grade students at the Elementary School of Paberasan I. Researchers still act as implementers and teachers in the classroom where the research is carried out. The research planning stage of the second cycle was made based on the reference from the reflection of the first cycle which became the consideration for the actions carried out in the second cycle. Planning in the second cycle as a follow-up to the research carried out in the first cycle, all the shortcomings contained in the first cycle were repaired and addressed to improve the quality and ability of students' creative thinking. It can be seen that the results of the creative thinking test in cycle II have increased; this can be seen in the test results that achieve learning mastery in each subject increased from the previous cycle. The percentage of completeness in cycle II for each subject is Indonesian 83%, Natural Science 75%, and SBdP (cultural arts and crafts) 92%. During the second cycle, the researcher also observed the creative thinking skills of students individually by using the creative thinking observation sheet provided. The results of the percentage of students' creative thinking in cycle II are as follows:

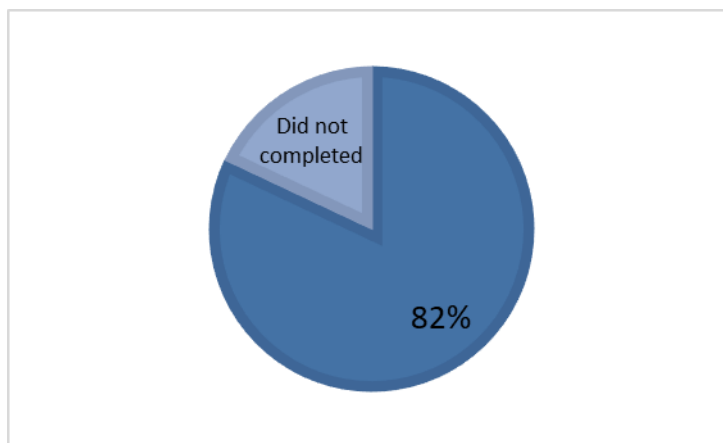


Figure 3. Observation of Creative Thinking Cycle II

It is known from the observation of students' creative thinking skills that were carried out in the second cycle of action; many students were able to think creatively. This can be seen from the data on creative thinking skills through students' creative thinking sheets which include several predetermined indicators, which is getting a percentage of 82%. In student activities, students are in the active category in learning, this can be seen from the average which reaches 75% and even exceeds the target. (4) The teacher's activities have increased from the previous cycle. This can be seen from the existing Teacher Activity Sheet.

From the overall results, it is known that there has been an increase and there are no more aspects of weaknesses that must be improved and even improved by teachers and students so that students' creative thinking skills have succeeded and achieved the target.

The following are the results of the recapitulation of creative thinking observations between the results of the first cycle of action research and the second cycle:

Table 1. Test Data for Cycle I and Cycle II

No.	STUDENT'S NAME	SIKLUS I	SIKLUS II
1	S-1	66%	74%
2	S-2	56%	84%
3	S-3	56%	76%
4	S-4	62%	78%
5	S-5	54%	80%
6	S-6	62%	88%
7	S-7	64%	80%
8	S-8	64%	80%
9	S-9	46%	78%
10	S-10	56%	90%
11	S-11	66%	76%
12	S-12	56%	78%
Average		57%	82%

It can be seen from the table above that students' creative thinking skills have increased in cycle II. From the data obtained by the researcher, there was an increase that occurred from cycle I to cycle II. It can be seen from the table above that the average percentage of the first cycle value is 57%. They did not get the maximum results they wanted, so the researchers continued to the next cycle. In this second cycle, the average score of students each time there was an increase and obtained an average score of 82%. As a result, there is no need for a follow-up cycle in this study because the research has been successful and effective in cycle II. Thus, the results of the application of the peer teaching method make the creative thinking skills of fifth graders at Elementary School of Paberasan I increase.

4. Conclusion

It can be concluded that the application of the peer teaching method in the sub-theme of Temperature and Heat class V was carried out in 2 cycles consisting of 2 lessons in each cycle, an increase in this can be seen from the percentage of completeness in the recapitulation of student tests in learning. During the first cycle to

the second cycle, it increased until it reached classical success. In the first cycle, Indonesian subjects obtained 58%, Natural Science (IPA) 50%, and Cultural Arts and Crafts (SBdP) 66%, increase in the second cycle to Indonesian subject 83%, Natural Science (IPA) 75%, and Cultural Arts and Crafts (SBdP) 92%. Meanwhile, students' creative thinking has also increased; this can be seen from the average creative thinking of students by applying the peer teaching method in cycle I to cycle II which has increased until it reaches the indicator of success. In the first cycle of creative thinking, students get 57% into the quite creative category, and increasing in the second cycle get 82% into the creative category. While in the student activity in the first cycle of learning 1 obtained 65% and learning 2 which is 64% included in the fairly good category and increased in the second cycle in learning 1 obtained 80% and learning 2 obtained 81% included in the good category. Furthermore, in the teacher activity, namely in the first cycle of learning 1 got 68% and learning 2 which is 62% included in the "good enough" category, increasing in the second cycle of learning 1 which is 80% and learning 2 got 79% included in the "good" category. Thus, it can be concluded that applying the peer teaching method can improve students' creative thinking skills.

Suggestions are given by several parties, namely, teachers are expected to apply peer teaching methods in the classroom to be able to improve students' creative thinking skills. Students are expected to be able to follow well-implemented, active, creative learning so that they can follow the directions of the teacher in order to achieve good learning goals. For researchers, they can apply the peer teaching method properly and pay attention to the suitability of the appropriate subject/material with the method used. For further researchers, it can be used as reference material for further research, taking into account all possible factors that influence learning by applying the peer teaching method.

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