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THE INDEPENDENCE AND ACTIVENESS (KEMANTI) – BASED ACTIVE LEARNING STRATEGY TO IMPROVE COOPERATION AND LEARNING OUTCOMES

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ABSTRACT

This research was aimed to find out the improvement of cooperation and student learning outcomes by implementing active learning strategies based on the independence and activeness (KEMANTI). The design of this research adopted Classroom Action Research. The learning strategy of KEMANTI was applied in SMK Muhammadiyah 1 Salam Magelang. Learning strategy will be done in SMK Muhammadiyah 1 Salam Magelang which carried out in two research cycles. While the research subjects are TKR B class which amounted to 35 students. The stages of research resulted in the improvement of student cooperation can be seen from each aspect of cooperation which includes aspect of giving idea or opinion up 30%; accepting the opinion of others up 50%, carrying out the tasks given by the group up 30%, the nature of helping others up 40%, and the last aspect is concern for the difficulties of fellow group members up 50%. Improvement of student learning outcomes is shown by the value of effect size 3.2. The difference in learning outcomes uses t Test which shows that t tab is 4.9 in cycle I and t tab is 16,9 in cycle II. Test Results t post-test cycles I and II t hit> t tab is 15.00> 2.0. The conclusion of the t test results is that there is a difference from pre-test and post-test in cycle I and cycle II after being given an active learning strategy of KEMANTI.

Keywords: Active Learning Strategy, Cooperation, Learning Outcomes

INTRODUCTION

Education is a conscious and well-planned effort to create an atmosphere of learning and learning process so that learners actively develop their potential to have spiritual, religious, self-control, personality, intelligence, noble character, and skill which are needed by their nation and state.

Efforts to improve the quality of education through the approach of school empowerment in managing the institution, has been done by Ministry of Education for a long time. According to Budi Raharjo (2003: 3), various efforts have been made to improve the quality of national education, especially.

Primary and secondary education at levels and units of education in learning such as facility improvement, teacher competence and school management. Therefore, planning is needed as an effort to improve the quality of national education.

As quoted by Winarno (2003: 6) that the success of an activity is determined by the planning. In this regard, it is necessary for educators in planning, organizing, implementing and assessing the learning process and making it more directed.

Based on observations conducted in SMK Muhammadiyah I Salam, the implementation of automotive learning still uses a monotonous method. At the time of teaching and learning activities students are less active and lack the willingness to learn that they seem to be drowsy, chatting with friends or even on their mobile phone. Theoretical learning is considered to be only a rote lesson that makes them unwilling to pay attention, since they assume there are manuals/modules so that they can read.

In addition, in the learning process the teacher gives a little introduction about the material to be taught, then the teacher assigns the task to the students to be done in groups. At the time of discussion the task was seen only a few students who do it, the other students just chatting and even lying down.

From the above problems it can be concluded that students need interesting learning methods and involves a lot of their activities. Winarno (2003: 5) states teachers should be able to use appropriate methods and media that bring students directly to think. The use of learning methods that are not in accordance with the material can cause students to become bored and difficult to understand the material. In addition, the atmosphere of learning in the classroom is full of competition and isolation of students, attitudes and negative relationships will form and shut down the spirit of students.

Teachers as educators should be able to choose and sort from the many methods that exist about the many interests of students and able to provide convenience for students to understand a material, so that later learning outcomes obtained by students can be better. It is a need to provide a learning

process which able to overcome the learning problem that is by application of active learning which relies on the independence and activeness (KEMANTI).

KEMANTI's active learning strategy is a method of learning students as members of small groups with different levels of ability to complete tasks. Group members should work together and help each other to understand the subject matter. In learning KEMANTI active learning is said to be unfinished if one of the friends in the group has not mastered the subject matter so that students together think more deeply about what is learned together.

Graff (2005: 7), states that "some engineering educator use active learning as a synonym of concepts like" problem based learning "or" learning by doing ". Some automotive teachers use active learning whose concepts are similar to learning by problem or learning by doing. The above statement is supported by Ken Petres (2008: 566) namely: "Active learning is operationally defined and is differentiated from passive learning. Positive reasons why active outgoing for non-active learnings are discussed. Active learning is promoted ".

Student active learning is essentially a concept in developing the activity of teaching and learning process done both by teachers and students. Thus, in student active learning it is clear that there are active teachers teaching and so do the active students. This concept is based on child centered curriculum theory (Child Centered Curriculum). Its application is based on an emphasized learning theory the importance of learning through the process of experiencing to gain understanding or insight (Gestalt Theory).

As postulated by Paulson and Faust "Active learning is, in short, anything that the student does in classroom other than merely passively listening to an instructor lecture. This includes everything from listening practices, where to apply, and how to manage them (DianStarke).

The above statement can be interpreted that active learning is a learning that involves all students doing active learning activities not just listen passively a lecture from the teacher. Active learning involves all forms of listening activities that help the student to absorb what they hear, as practice materials responding to lecture materials, students practicing in heterogeneous groups where students apply important and useful discovery experiences to deal with real situations on issues new. The result are supported by Apriyani and Idris (2013) in their explain that active responbility, trust in a team by 58,82%. While according to Ratnawati and Setuju (2016) that work in team, analyctical ability, oral communication, willingness to learn can be increased by active learning.

Ari Samadhi (2009: 47), said that there are many learning strategies that can be applied to improve students' activity and

independence from simple start up to those that do not require long and complicated preparation and can be done relatively easily to complicated ones that require long preparation and the implementation is quite complicated. Some of the learning strategies are: (a) Think-Pair-Share, (b) Collaborative Learning Group, (c) Student-led Review Session, (d) Student Debate, (e) Exam questions writing, (f) Class Research Symposium, (g) Analyze Case Studies.

Application of active learning KEMANTI adopt Think Pair Share learning strategy that is expected to be appropriate to be applied in learning process because it enables the students to have a discussion and share information about things they have learned. As a result, for those who already understand can help students who have not understood about the material in order to build the personality of helping and concerning with the problems of others.

KEMANTI active learning method has 3 procedures that are explicitly defined as; Thinking, Pairing, and Sharing. The advantages of this method is to provide opportunities for students to think more, answer and help each other that can be applied as a solution to learning problems such as: (1) the thinking procedure as an engages students to think, (2) pairing procedure solves the lack of cooperation among students in learning and (3) sharing procedure encourages student activeness in giving opinion and give idea in group.

METHOD RESULT

This study applied Classroom Action Research (CAR). The design (model) proposed by Kemmis and Mc.Taggart can be seen as follows:

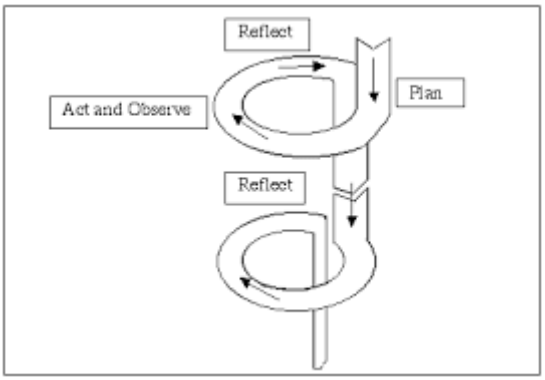

Figure 1. Cycle of Classroom Action Research. Stephen Kemmis, Robin McTaggart (1988)

Notes:

1. Planning
2. Action
3. Observation
4. Reflection
5. Planning Revision
6. Action
7. Observation
8. Reflection

This research was conducted at SMK Muhammadiyah I Salam in Magelang Regency, Central Java. The action plan undertaken is as follows: (1) Action Planning. In this phase, the researcher undertook the following activities:

a. Preparing instructional instrument consisting of *Lesson Plan*, *Student Worksheet*, *Material Information Sheet* and Manual Handbook step 1 and step 2.

b. Preparing an observation sheet to assess student cooperation in learning activities.
c. Preparing for pre-test and post-test questions.
d. Preparing a student's questionnaire for student responses and responses in the learning process.

(2) Action and Observation. At the implementation stage of the action, the researcher implemented the learning scenario that has been compiled, that was the learning process with active learning KEMANTI, while the researcher as an observer observed and assessed student's activity during learning process by using prepared observation sheet.

(3) Reflection. Records of student activities in the learning process of fuel gasoline system by using active learning strategy KEMANTI obtained from the results of further observations discussed with teachers, researchers and observers, to know how far the actions are carried out in accordance to expectations and to discuss the constraints faced during implementation of learning. It is possible to find new solutions to overcome obstacles or problems encountered during the learning cycle and to be implemented in the next cycle.

$$P = \frac{f}{N} \times 100$$

The research instrument developed in this research uses several instruments, namely: (1) Student cooperation assessment observation sheet containing several statements about the student's activity in cooperation; (2) Questions for pre-test and post-test to measure students' learning success using the KEMANTI learning strategy; (3) Student's questionnaire responses to support the observation sheet in measuring their response to the learning process; and (4) Interviews which is to know the response or feedback to the action during the learning process.

RESULT AND DISCUSSION

Data analysis in this research is done by reflecting the result of observation and the result of student learning during the learning process based on the cycle and the action done on every cycle. Data of student cooperation level in the form of score obtained by student according to criterion that is score 1, 2, 3 and 4, then tabulating value of whole aspect for each student, viewing its frequency and describing by percentage.

The formula used to calculate the percentage of cooperation and student questionnaire responses is:

P = Percentage of product success

f = Frequency

N = Number of students (Anas Sudijono (1996:40)

Increased student's learning outcomes are known by using effect size which is by calculating the mean difference of post-test value of each cycle. The characteristic is that if the average post-test has increased then there is an increase in learning outcomes achieved by students through the learning process well.

KEMANTI learning strategy is said to be successful if at the end of this research there is an improvement in student activity on score 4 (students are very good) from 5 aspects in the observation sheet of cooperation at least 51% of the total number of students. While the success of learning results seen from the increase of student learning outcomes up students reach KKM that is 7.10 minimum of 70% of the total number of students through the application of KEMANTI active learning.

Enhancement of Student's Cooperation

The improvement of several aspects of cooperation can be seen in the graph of each aspect. Comparison of aspects expressing ideas or opinions in cycle I and cycle II can be seen in Figure 2 as follows:

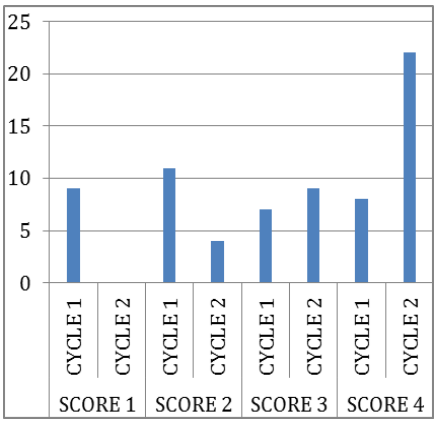

Figure 2. Comparison of aspects provides ideas or opinions between cycle I and cycle II

Notes:

Score 4 = Students behave very well

Score 3 = Students behave well

Score 2 = Students behave enough

Score 1 = Students behave less

Based on Figure 2, the increase occurred in cycle II of 30% in very good category, and 5.7% in good category. There was a decrease in the attitude of 20%. And there was no more students are less in expressing opinions.

Then, increased aspect of receiving the opinion between cycle I and cycle II is shown in Figure 3 below:

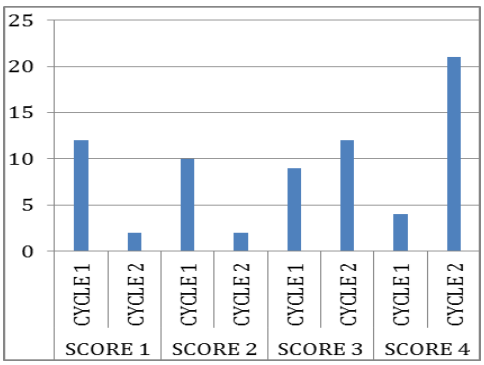

Figure 3. Comparison of aspects of receiving the opinions of others between cycle I and cycle II

Notes:

Score 4 = Students behave very well

Score 3 = Students behave well

Score 2 = Student enough

Score 1 = Students behave less

Based on Figure 3 the increase occurred in cycle II of 50% in very good category, and 5,57% in good category. There was a decrease in the attitude of 22.86%. And no more students are less receptive. Increasing aspects of carrying out the tasks assigned to the group can be seen in Figure 4 below:

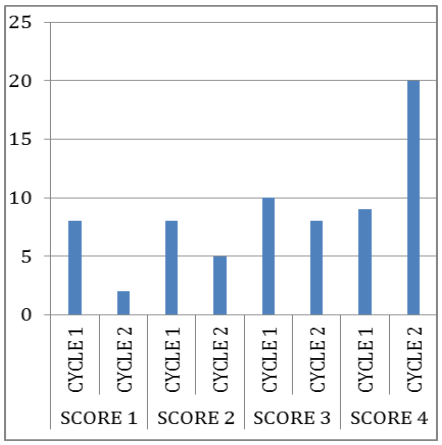

Figure 4. Comparison of aspects of assigning tasks assigned to groups between cycle I and cycle II

Notes:

Score 4 = Students behave very well

Score 3 = Students behave well

Score 2 = Student behaves enough

Score 1 = Students behave less

Figure 4 shows an increase in students' excellent attitude in performing a given task by 30%. Improved aspects of the nature of helping fellow friends in group work can be seen in Figure 5 :

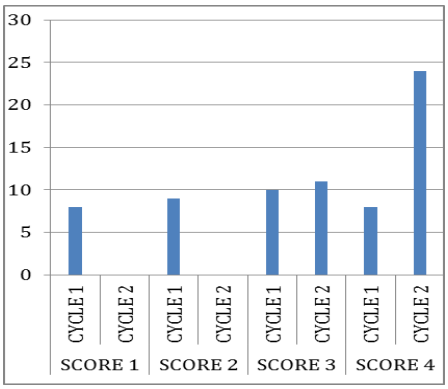

Figure 5. Comparison of aspects helps fellow friends in group work between cycle I and cycle I

Notes:

Score 4 = Students behave very well

Score 3 = Students behave well

Score 2 = Students are moderate enough

Score 1 = Students behave less

Based on Figure 5, it is seen that for the attitude of less willing to help all the members of the group there is a decrease means that students' excellent attitude to work together increased by 40% and good attitude by 2.86%. The increase for the latter aspect is concern for group difficulties, can be seen in Figure 6 below.

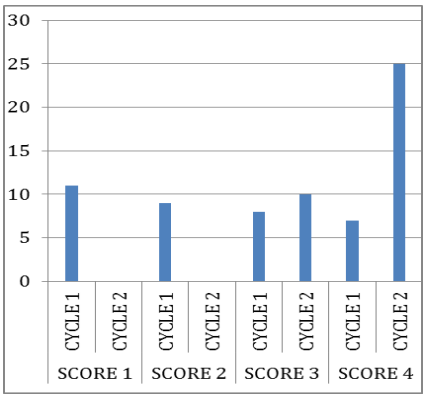

Figure 6. Comparison of awareness aspect to group difficulties between cycle I and cycle II

Notes:

Score 4 = Students behave very well

Score 3 = Students behave well

Score 2 = Students are moderate enough

Score 1 = Students behave less

Figure 6 shows an increase in the category of students' excellent attitude toward group difficulty that is 50% and 5.71% good category.

Increased Student Learning Outcomes

The improvement of student learning outcomes is marked by the difference between the mean post-test value of cycle I and the post-test value of cycle II can be seen in Table 1 as follows:

Table 1. Comparison of Post Cycle Values of Cycles I and Cycle II

Notes	Cycle 1 (*Post-test)*	Cycle II *(Post-test)*
Lowest Value	4	7
Highest Value	7	10
Average	5,28	8,48
Effect Size 3,2		
difference value between post test cycle I dan II		

Based on Table 1 it can be seen that the average value of post-test in cycle I increases in cycle II. Increased student learning outcomes of 3.2 were obtained from the difference between the mean value of post-test cycle I and the post-test average value of cycle II. More details can be seen in Figure 7:

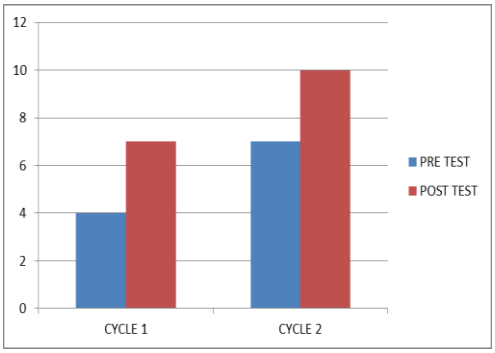

Figure 7. Comparison of pre test and post-test value of cycle I and cycle II

CONCLUSION

The conclusion that can be drawn from this research are: (1) Active learning process of KEMANTI can be applied to learning material of fuel system of class TKR B at SMK Muhammadiyah I Salam Magelang in regency and can improve cooperation and student's learning outcomes in 2 cycles. (2) Cooperation of students of grade TKR B during the learning process has increased, seen on 5 aspects of cooperation on the observation of cooperation.(3) Student's learning outcomes at the end of the research after doing the learning process by using active learning of KEMANTI on learning material fuel system of gas has increased.

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