

**THE IMPROVEMENT OF PARTICIPATIONS AND MATHEMATICS
LEARNING ACHIEVEMENT BY LEARNING TOGETHER MODEL (LT)
WITH EVERYONE IS A TEACHER HERE STRATEGY (ETH) ON
GRADE VIII C OF SMP AL-ISLAM 1 SURAKARTA 2013/2014
ACADEMIC YEAR**

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ABSTRACT
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WITH EVERYONE IS A TEACHER HERE STRATEGY (ETH) ON
GRADE VIII C OF SMP AL-ISLAM 1 SURAKARTA 2013/2014
ACADEMIC YEAR**

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The purposes of this research to improve the students participations and mathematics learning achievement by learning together model with everyone is a teacher here strategy. This study is an action research or classroom action research (CAR). Recipient of the action is the student of grade VIII C of SMP AL-ISLAM 1 SURAKARTA consist of 16 boys and 19 girls and subject of the action's giver is math's teacher who collaborate with researcher. The methods used to collect data are done by 2 methods, principal method which is consist of observation and test methode. Then, auxiliary methode which is consist of documentation and field record sheet. The technique of data analysis consists of data reduction, data display and conclusion. The results of the research showing the improvement in participation dan mathematics learning achievement by learning together model with everyone is a teacher here strategy. It can be showed from the increasing of the idicators : (1) giving the opinions for problem solving 48,6 %, before the action 28,6% and the last action 62,9%, (2) doing tasks assigned by the teacher 91,5%, before the action 14,3% and the last action 100 %, (3) having responsibility as a group member 51,5 %, before the action 45,8 % and the last action 74,3%, (4) increasing the mathematics learning achievement ≥ 65 45,8%, before the action 40% and the last action 65,8%. From these results it can be concluded that learning together model with everyone is a teacher here strategy can improve the participation and matematics learning achievement.

Keywords : participation, mathematics learning achievemet, learning together model, everyone is a teacher here

INTRODUCTION

Participation has an important role in determining the success of student achievement, according to (Tukiran Taniredja 2011: 89) when students actively participate in the learning process and it is not the only aspect of accomplishments are achieved, but there are other aspects which acquired the affective aspects and social aspects. Student activities include mental activities (think of an answer, ponder, imagine, feel) and physical activity (exercise, answering questions, writing, write, do chores, and so on).

Based on the observation conducted by researchers at class VIII C SMP AL-ISLAM 1 Surakarta, found some problems of the student's low participation as follows: 1) giving opinion for problem solving 28,6 %, 2) doing task assigned by the teacher 14,3 %, 3) having responsibility as a group member 45,8 %. These low student participation in the learning, also influence in math student learning achievement . It can be seen from the results of the mid semester grade of VIII C class, only 40% of the total students who are able to reach the minimum completeness criteria limit value (KKM).

From these problems, the researchers was able to analyze the role of the teacher in creating learning situations that involve the participation of the students is very important. One of the learning strategy that can be applied to anticipate problems that arise in the classroom VIII C SMP Al-Islam 1 Surakarta is Learning Together (LT) model with Everyone Is A Teacher Here (ETH) strategy.

The steps of learning together models with Everyone Is A Teacher Here strategies: (1) The teacher divides the students in the form of groups of 4-5 childrens heterogeneously, (2) The teacher does presentation about the subject matter of the volume and surface area of a prism and the pyramid, as well as giving examples of questions from the material being taught, (3) To understand about the concept, by giving task group. The teacher gives index cards to each group, (4) Each groups are asked to write a question about the matter of the volume and surface area of the prism and pyramid on the index cards, (5) The teacher asks the index cards written by each group, and then shuffling index cards

randomly, then distributed in each group, (6) The teacher invites students to read and answer the question obtained, after that the teacher asks another student to respond and complete the answers that have been showed. Continue as long as there are still questions remaining, (7) Students play a game of academic and the friends of the group should not help each other. The individual match aims to determine the level of student in mastery of something in a way by are given problem that can be resolved by applying the concepts previously owned, (8) The results of the next game scores are summed, (9) After that the teacher gives awards to groups which get the best achievement or who have fulfilled certain criteria.

The research was conducted in SMP AL-ISLAM 1 Surakarta of grade VIII C years 2013/2014, with totaling of 35 students. This study was conducted from March 2014 Researchers preparation, execution and analysis of the data with math's teacher. The subjects are students as the subject of a class action and the receiver of the math's teacher of SMP AL-Islam 1 Surakarta as giver of.

METHOD

This research is Classroom Action Research (CAR) or Classroom Action Research. CAR is the process of assessment of learning problems in the classroom through self-reflection and attempts to solve it by doing various actions planned in real situations and analysis any effect of such action (Wina Sanjaya, 2013: 149).

This research is a class act where as to enhance the participation and achievement of learning mathematics. Principal, classroom teachers and researchers involved since: (1) the initial dialogue, (2) action planning, (3) action, observation and monitoring (4) reflection and evaluation.

In this research, the data collection methods used by two methods of data collection, the principal method and auxiliary methods. The principal method consists of observation and test methods. Methods of test contains questions that are used to measure the improvement of learning achievement. In addition, auxiliary method, consist of field notes and documentation. Field notes model

were used in this study are observations made by researchers and students of VIII C AL - ISLAM 1 Surakarta. While the documentation in this study can be obtained by looking at the books, archives, lesson plans with learning together models with the everyone is a teacher here strategy, or records relating to junior high school data AL-ISLAM 1 Surakarta and identification as student's name, a list of values by looking at the existing documentation in the school as well as photos during the process of research and curriculum.

The technique to checks the validity of data in this study carried out by continuous observation and triangulation. Triangulation is a technique that utilizes data validity by checking something else out data for checking purposes or as a comparison to the data (Moleong, 2004: 330). Triangulation used is triangulation and investigator triangulation method. Triangulasi investigators performed by utilizing other observers to check the degree of confidence in the data. Other observers in this study is teacher math of VIII C SMP Al-Islam 1 Surakarta in order to assist in the collection of data, while the technique of triangulation method is to exploit the use of multiple data collection methods such as observation, interviews, tests, field notes and documentation of results.

RESULT AND DISCUSSION

The beginning dialog by the researcher and math teacher was held on 5 April 2014 in VIII C Al- Islam1 Surakarta's class. Based on the observation and this dialog has done, an agreement that are : 1) the repairment to increase the participation and math learnig achievement is needed, 2) identificate some problem which is as constraint factors to increase the participation and math learning achievement, 3) determine alternative learning model as a repairment solution to increase the participation and math learning achievement by learning together model with everyone is a teacher strategy. Based on the observation has done in VIIC class, found some problem in low pariccipation and math learning achievement. It can be seen : 1) giving the opinions for problem solving 28,6%, (2) doing tasks assigned by the teacher 14,3%, (3) having responsibility as a group

member 45,8 %, (4) increasing the mathematics learning achievement ≥ 65 is 40%.

In this research, agreed that the use of 2 cycles. Each cycle consists of 2 meetings. Planning a class action cycle I held on Monday, May 19, 2014 at SMP Al-Islam 1 Surakarta. And implementation cycle I done 2 meetings on the day Saturday, May 24, 2014 to 3-4 (08:20 to 09:40) and on Sunday, May 25, 2014 to 1-2 (07:40 to 08:20) in class VIII C SMP Al 1-Islam Surakarta. The students who attended the first meeting and the second are 35 students. At the time of the learning process takes place, forming a group requires considerable time, because the students do not listen to the instructions of the teacher. When discussing process, there were some students who speaks and crowded themselves. Most of the students still dare to respond their idea. Then, where students are asked to find the problems of the material takes more than 10 minutes.

After the cycle I done and observed, the researcher and math teacher made reflection about the level of achievement of the objectives of the act. The four of indicators were assessed, just 1 of the indicators can be achieved in cycle I. As the indicators giving opinion for problem solving, students still do not dare to express an opinion in the percentage of the group. The percentage of students in giving opinions rise from 28.6% to 48.6%, but it has not met achievement target 60%. In the step of presentation, teacher choosed some grups of the students to present the result of their discussion, while the other groups who do not presentation in front of the class are asked to give their opinion. In this sassion, is used to see of indicators giving opinion for problem solving and having responsibility as a member of group. In the indicator of giving opinion for problem solving is asessed based on the giving opinion, question, or respons from the student to the group who do the persentation in front of the class. Then, the indicator of having responsibilty as a group member is asessed based on the giving opinion, question or respons from the students of the group who do presentation their result in front of the class. The result of the the discussin of the students can be seen at the figure 1.

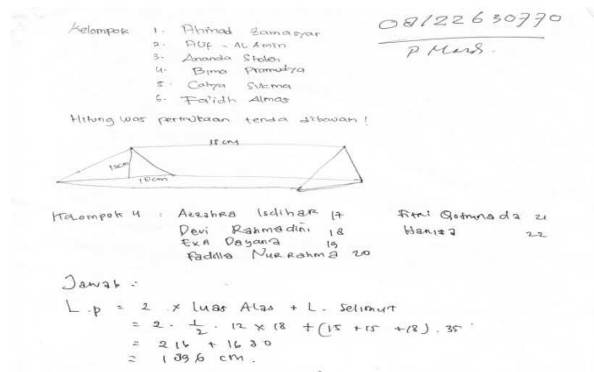


Figure 1 The Result of Discussion to Find a Question about the Surface of Prism in Daily Life Cycle I

Based on the figure1 above, the group 1 can find a question about the surface of prism uncorrectly. It can be seen from the wrong size to a tent, the tall is 15 cm, the length is 35 cm and the wide is 18 cm. And the answer of the 4 group is wrong too. And this is the dialogue of the presentation of group 4:

Muh.Yanuar: tolong jelaskan kembali jawaban yang didapat, apakah itu sudah benar ?

Hanifa (kelompok 4): tentu saja jawaban kami benar.

Wildan: apakah ada tenda dengan ukuran,18cm, 12cm dan 15cm?

Devi (kelompok 4): itu bukan kesalahan dari kami kami hanya mengerjakan soal yang kami dapat.

Azzahra (kelompok 4): untuk lebih jelasnya mungkin bisa ditanyakan pada kelompok 1 yang telah membuat soal.

Bima: lebih baik tenda diganti dengan satuan m.

Vika: setuju, sebaiknya diganti dengan satuan m.

Fitri (kelompok 4): Kami akan mengganti dengan satuan meter.

Alif: Apakah satuan dari untuk luas permukaan kelompok anda sudah benar ?

Eka (kelompok 4): maaf kami salah memberikan satuan.

Fitri (kelompok 4): satuan yang benar adalah m².

Fa'idh: setuju dengan pembenaran satuan yang diganti.

The answer of group 4 is a form of the having responsibility as a group member, while the giving opinion, question, or respons from the audience is a form of giving opinion as a group member's indicator. Furthermore, the indicator having responsibility as a member of the group also has not met the expected target achievement, but the percentage increased from 45.8% to 51.5%. In that sassion, the student are capable and brave to give their opinion, question, or respons, although the percentage of each the indicators unreached in the first cycle.

Then the indicator doing assignment by the teacher can reach the percentage of targets, from 14.3% to 91.5%. While the indicator presatsi increase learning (KKM test scores ≥ 65) also increased from 40% to 45.8%, although not reaching the expected percentage. In the first cycle, the sudent can not understand about the the material given. It acan be seen at the figure 2.

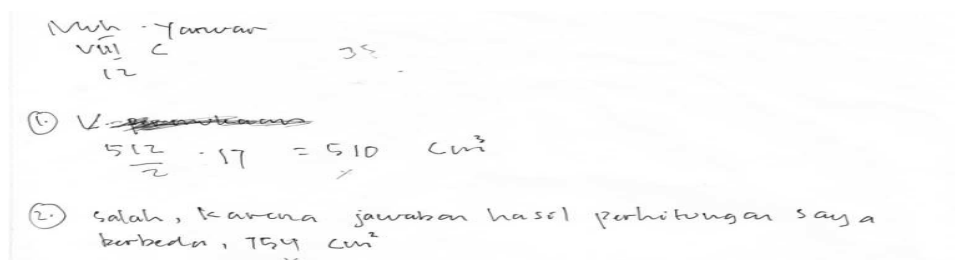


Figure 2 The Result of Test can not Reach KKM

Based on the figure 2 above, the student solve the question uncorrectly. The solve's steps and the result of the answer are wrong too.

After some reflection, researcher and math teacher providing solutions, (1) in terms of indicators giving opinions for problem solving, the teacher must be more motivate and provide guidance to the students in order the student want to give their opinion, so that students are inspired and interest to give their opinion. (2) the indicator of doing assignment by the teacher, the teacher can control the situation of the classroom well, students can hear instructions from the teacher to do, (3) the indicator of having responsibility as a group member, the role of teacher must be increase in motivating and providing direction, (4) and the improvement the math learning achievement indicators, teachers should give

review session the material that has been taught yesterday. By review the last material, students will be expected to understand the material being studied.

In the first cycle was found problem in the allocation of time. In the focus group sessions to find the question about material, take more than the allocated time. The solution offered to these problem the teacher and the researchers decided that task group can be done at home. Expected from such solutions, may be able to save time so that the plan can be done as planned.

The second cycle plan executed after action the first cycle completed on Monday, May 26th, 2014 at SMP Al-Islam 1 Surakarta. Judging from the results of observation and reflection of the cycle I need for improvement and the result is needed as guideline to the next action in cycle II.

Class action performed of the second cycle takes time of 2 meeting on Saturday, May 31, 2014 to 3-4 (08:20 to 09:40) and on Sunday, June 1, 2014 to 1-2 (07:00 to 08:20) with the material surface area and volume of a prism in class VIII C 1 SMP Al-Islam Surakarta. The total students who attended the first meeting and the second are 35 students.

In the second cycle, the group still remains as the first cycle so it does not need to be divided into groups again. The formation of the group does not take a long time, because the students are already familiar with the model and applied learning strategies. Student activity in indicators giving opinion for problem solving and having responsibility as a group member also increased, because the teacher is able to motivate and provide direction to students dared to express opinions. Teachers has also been able to condition students, so that students noise reduced. In addition, because of the focus group sessions to find for a question has been prepared in homes, and it makes activities more appropriate with allocation time. After the execution and observation of classroom action cycle II done, researchers and teachers jointly reflect to the level of achievement objectives. And in the cycle 2, the question, answer, or opinion in the presentation is increasing and more variation than the first cycle. It can be seen at the figure 3.

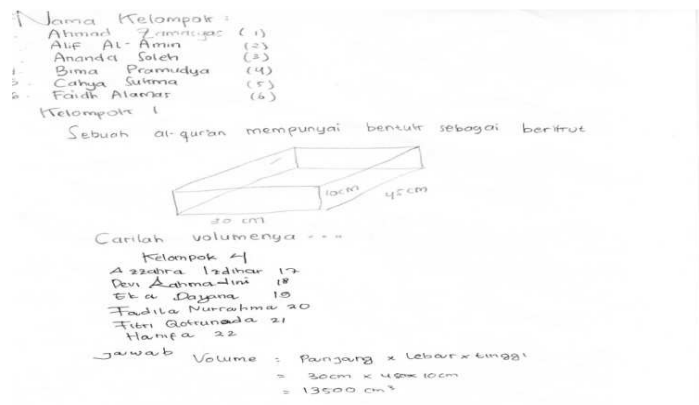


Figure 3 The Result of Discussion to Find a Question about the Surface of Prism in Daily Life Cycle II

From the figure 3 above, group 1 can find question about the volume of prism in daily life correctly. And the solve answer of the group 4 is correctly too. The dialog of the persentatition of group 4:

Safina: Apakah ruangan tersebut berbentuk balok ? dan apakah balok bagian adri prisma tegak, jelaskan ?

Cahya (kelompok1): iya balok merupakan prisma tegak.

Muh. Yanuar: Mengapa balok merupakan prisma tegak ?

Bima (kelompok 1) : karena balok mempunyai rusuk yang tegak lurus dengan alasnya.

Naufal: apakah tabung juga termasuk prisma tegak ?

Fa'idh (kelompok 1) : tentu saja karena rusuknya juga tegak lurus terhadap alasnya.

Nur Hayah: selain balok, bangun ruang termasuk dari prisma apa saja?

Ananda (kelompok 1): contoh lain adalah kubus.

Alif (kelompok 1) : namun jika rusuk-rusuknya miring itu bukan prisma tegak tapi prisma miring

In this second cycle, the student can more understand about the material. It can be increased the indicator of increasing the math learning achievement. It can be showed from the figure 4.

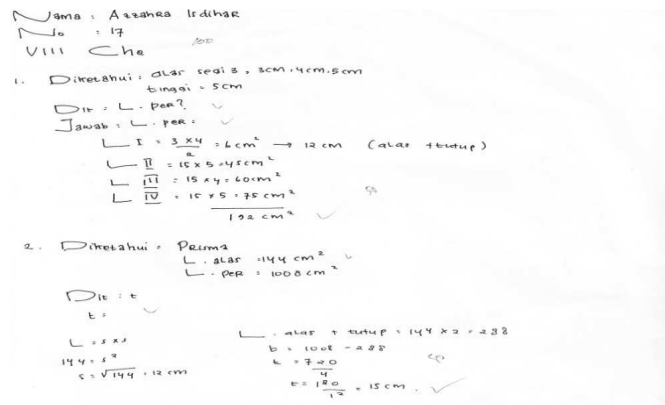


Figure 4 The Result of Discussion to Find a Question about the Surface of Prism in Daily Life Cycle II

From the figure 4 above, student can understand about the question given. It can be seen from the solve steps and the result answer are correct. In this second cycle all the indicators reach the expected percentage, as follows:

Table 1 The Improvement of Participation and Learning Mathematics Achievement

Indicators	Presentase (Total of the students)		
	Before	the Cycle I	Cycle II
Giving opinions for problem solving	28,6 % (10 students)	48,6 % (17 students)	62,9% (22 students)
Doing task assigned by the teacher	14,3 % (5 students)	91,5% (32 students)	100 % (35 students)
Having responsibility as a group member	45,8 % (16 students)	51,5 % (18 students)	74,3% (26 students)
Increasing the math learning achievement	40% (14 students)	45,8 % (16 students)	65,8 % (23 students)

The graphs of increased the participation and math learning achievement of students before and after a class action can be described as follows:

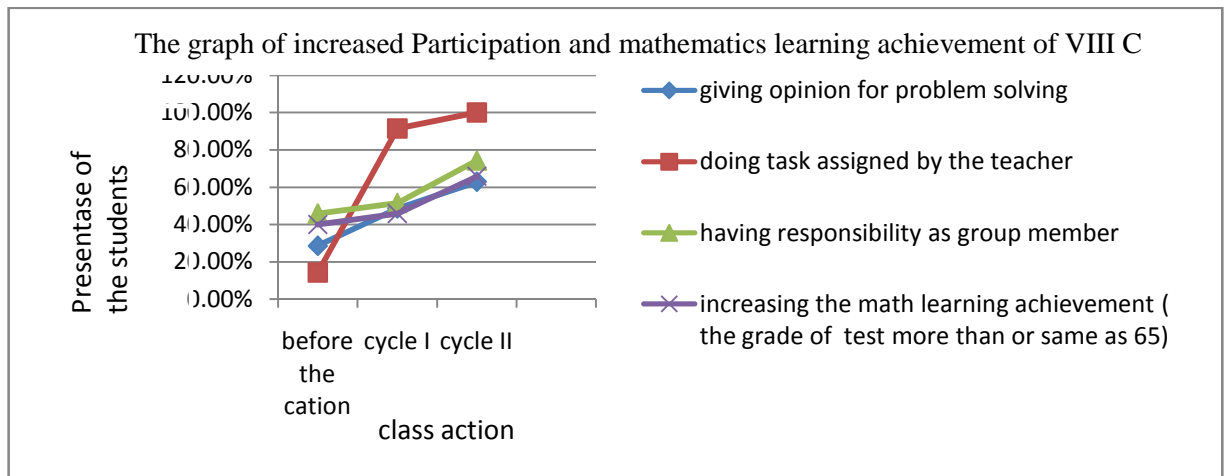


Figure 5 Graphs of Improvement of Participation and Math Learning Achievement of class VIII C

1) Giving opinions for problem solving

At the stage before the given action, in table 1 shows that student participation in giving opinions for problems solving ranging from 28.6%. Then after a given action in the first cycle occurred despite the increase in the participation rate although has not exceeded the target expected by researchers, 48.6%. And the second cycle there was an increase of 62.9% participation rate. Similarly, with the research results of Ani (2010) model of cooperative learning together can improve students to more actively in learning activities.

2) Doing task assigned by the teacher

In figure 5 it can be seen that there is an increase in the participation rate in indicators doing task assigned by the teacher. The shape of these indicators assessed from doing on the question of the game academic learning activities. Before the action presentase level of student participation in doing task assigned by the teacher was 14.3%. Then after the given action in the first cycle, increasing to meet the target by researchers at 91,5%. In the second cycle the increase in participation rates significantly increased to 100%. Similarly results of the research Suyadi

HM (2012), who concluded that the application of learning models together to have a positive effect on increasing student activity in learning.

3) Having responsibility as a group member

In table 1 can be explained that before the action is given by the student participation rate of 48.5%. Then after a given act, in the first cycle increased percentage of 51.5% despite not meet the expected targets researchers. And the second cycle, an increase of 74.3% is also consistent with .Similarly with research of Ani (2010) model of cooperative learning together can improve students to more actively in learning activities.

4) Increasing math learning achievement

Based on figure 5 shows that before the given action, students are able to achieve only about 40% KKM. Then after a given action in the first cycle has not been reached despite an increase in the percentage expected by the researchers is 48.5%. And the second cycle capable of achieving 65.8%. Similarly with result research of Ani (2010) concluded, with the application of learning together models able to improve student achievement. This is evident from only about 4 students who are not able to reach the KKM. This is also supported by research Suyadi HM (2012) conclude, the application of learning models together to have a positive impact in improving student achievement is marked by an increase in mastery learning students in each cycle, the first cycle (64.29%) and second cycle (92 , 85%)

CONCLUSION

This research is about the application of the class action by learning together model with everyone is a teacher here strategy in order to increase the participation and math achievement of VIIC second semester Al-Islam 1 Surakarta 2013/2014 academic year. The results were conducted by researchers and collaborate with teachers of mathematics can be summarized, the increase can be seen from the indicators as follows: (a) giving opinions for problem solving pbefore the action given 28.6% (10 students) , after the first cycle of action

contained 48.6% (17 students) and the second cycle 62.9% (22 students), (b) doing task assigned by the teacher 14.3% (5siswa), after the first cycle of action contained 91,5% (32 students) and on the second cycle of 100% (35 students), (c) having responsibility as a group member before the action 45.8% (16 students), after the first cycle 51.1% (18 students), and the second cycle 74.3% (26 students), (d) increasing the math learning achievement, before the action of 40% (14siswa), after the first action of 54.8% (16 students) , and the second cycle 65.8% (23 students).

BLIBIOGRAPHY

Moloeng, Lexy. (2004). *Metode Penelitian Kualitatif*. Bandung : Rosda

Rusman. (2010). *Model-Model Pembelajaran Mengembangkan Profesionalisme Guru*. Jakarta : Rajagrafindo Persaja.

Taniredja, Tukiran dkk. (2010). "Penelitian Tindakan Kelas". Alfabeta : Bandung.

Sanjaya, Wina. (2013). *Penelitian Pendidikan, Jenis , Metode dan Prosedur*. Jakarta : Kencana Prenada Media Group.

Setianingsih, Ani. (2010). "Upaya Peningkatan Prestasi Belajar Matematika Materi Pokok FPB dan KPK melalui *Learning Together* Siswa Kelas VI Sekolah Dasar". Jurnal Dinas Pendidikan Kota Surabaya, vol 6.

Suyadi.HM. (2012). " Meningkatkan Prestasi Belajar Matematika Melalui Metode Kooperatif Model *Learning Togheter* Pada Siswa Kelas VIII F SMP Negeri 21 Semarang Tahun Pelajaran 2011/2012". *Jurnal pendidikan dan pembelajaran* vol 6, no 2.