PENERAPAN STRATEGI POSTER SESSION MELALUI PENDEKATAN NUMERED HEAD TOGETHER UNTUK MENINGKATKAN KEMAMPUAN KOMUNIKASI MATEMATIKA

(PTK Pembelajaran Matematika Siswa Kelas VII SMP AL-ISLAM I Surakarta Tahun Ajaran 2013/2014)

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Naskahartikeltersebut, layakdandapadatdisetujuiantukdipublikasikan.

Demikianpersetujuandibuat, semogadapatdipergunakanseperlunya.

Surakarta, 20 September 2013

Pembimbing

Idris Harta, MA, Ph.D.
THE APPLICATION OF POSTER SESSION STRATEGIES THROUGH THE NUMERED HEAD TOGETHER APPROACH TO IMPROVE MATHEMATICS COMMUNICATION SKILLS

( Action Reseach of Mathematics learning for Students in the Grade VII. Junior High School Al Islam 1 Surakarta the Academic year of 2013 / 2014 )

By

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ABSTRAK

The objective of this research is to improve the student mathematics communication skills of class VII G in junior high school of Al Islam 1 of Surakarta in learning mathematics by applying poster session strategy applying NHT. This research belongs to class action research. The subjects in this study are the teacher, as the main subject schoolmistress as the subject of an accomplice in planning, collecting data, and students class VII G consisting of 36 students as the subject of the beneficiary of the action. A method of collecting data uses observation, a record of the ground, the test and documentation. The analysis of data in the study is done with a method of grooves, covering the reduction of data, presentation of data, and the withdrawal of the conclusion. The results of the research show the increase in the ability of communication of mathematics student. It can be seen from the ability of students in : 1) the ability asking questions before the act given is 16.66 %, and after the act, the ability reaches 72.22 %. 2) the ability answer to the question before the act given is 19.44 %, and after the act, the ability reaches 66.66 %. 3) the ability convey the idea before the act given is 22.22 %, and after the act, the ability reaches 61.11 %. and 4) the ability conducted a presentation in front of the class before the act given is 8,33 %, and after the act, the ability reaches 55,55 %. The level of completion of the student with KKM = 65 before the act is surrounding 19.44 % and after serve the act becom 69.44 %. Conclusion of this research is a poster by the application of poster session strategies through the NHT approach can increase the skill of mathematics communication of student.

Keywords: poster session, numered head together, mathematical communication skills
INTRODUCTION

Communication is the most important part in education, because communication in learning mathematics means of exchange of opinions and information. This is in accordance with the opinion of syaiful hadi (2011) we states that the ability to communicate ideas, thought, or opinion is very important as well as the need of students to learn mathematics because mathematics is a communication tools that is very strong, detail, and does not make student confused.

Based on the results of observations about communication of mathematics in of learning process especially for students in the class VII G Junior High School of Al Islam 1 Surakarta, researchers are very concerned on hear complaints from the teachers who said that communication among student now is still low, including: 1) the ability of students in asking questions, 2) the ability of students in giving response to a question and 3) the ability of students in sharing an idea or opinion. 4) students ability in conducting a presentation in front of the class, although the students is motivated and guiding students in conveying a message or ideas in learning mathematics.

The observation of mathematical communication skill at Junior High School Al Islam 1 Surakarta especially in the class VII G, which has consist of 36 student consisting of 22 female students and 14 male students shows there is the problem in learning mathematics in the classroom among other: 1) the ability of students in asking questions of 16.66 %, 2) the ability of students in response to a question of 19.44 %, 3) the courage of students in declaring an idea or opinion as
much as 22.22 %, 4) students ability in conducting a presentation of 8.33 %, and about 19.44 %, students who reached KKM = 65. So that it can be concluded that students achievement is low.

If the issue is not immediately overcomed, study result of the students and teachers will be low and it be agress with syaiful and aswan (2010: 2) who state that the result of teacher failure in managing class, in the difficulty of reaching the goal of teaching.

According to wahab (2008: 30) a problem of communication in the class is hard because of complicated teacher must have communicate with a variety of a beneficiary of a mutual different from one against another. Hence, researchers are regard to find strategy and the model of learning to enhance mathematics communications. Of various kinds of strategy and methods of learning, explain communication was an important consideration in choosing strategy teaching. Further, teaching in grade is one of a problems of communication that is difficult. Hariyanto and suyono (2011: 21) express that strategy of learning is strongly associated with the methods learning. Hence, then strategy in combining with the methods of learning will be able to help improving achievement.

To address the problem, the teacher has to choose strategy and methods of learning which is proper for stimulating students to increase the mathematical communication. Strategy and methods of instruction can increase the capability of communication math is a poster session through numered head together. According to harris et al. (1990) posters session is active in learning strategy proposing thought through a picture or a poster dealing with the mathematics
matter. This strategy makes students to be more active in searching information about a topic that is being discussed in learning at that time and students will be improvident about concepts and finally will be more students communicative.

**Numered Head Together (NHT)** is a learning method which gives the opportunity to students to share the ideas and the consideration of the most appropriate answer and encourage students to enhance their cooperation in carrying out the spirit of learning as well as mutual personal responsibility with regards to the Friends Group (Isjoni, 2007: 78). Communication is not only speaking in delivering of material in a classroom alone but communication is also very important in learning as active learning it agrees with Wahab (2008: 31) who says the classroom communication is intimately connected with learning including: setting strategy, executing tactics, studying students and changing the destination according to the needs of student learning.

The existence of these problems, the researchers want to do research about the implementation of Poster Session strategy through the approach of NHT. The application of strategies in learning methods is expected to enhance students mathematical communication skills so that in the end there is increasing in student learning achievement.

The purpose of this study: (1) the general objective of this research is to improve the communication skills of mathematics, (2) the specific purpose of this research is to improve the communication skills of Mathematics by applying Poster Session strategy through the NHT approach for grade VII G Junior High School Al Islam I Surakarta in the year of 2013/2014.
RESEARCH METHODS

This research belongs to classroom action research (AR). According to Sutama (2011: 134) action research is research that is both reflective, depart from real problems then be acted upon the act of a real action that is well-planned and unmeasured.

This research was conducted at the Junior High School Al Islam I Surakarta for seven months from March to September including three rounds. The subject of this research is the student of grade VII G Junior High School Al Islam I of Surakarta. With the number of students 36 students consisting of 14 female students and 22 male students.

In taking data on this research the researcher use, 1) observation: to know the ability to communicate students by applying session poster strategy through approach nht, 2) note the pitch: to note important events that appears at during the learning process, 3) test to determine the level attainment study result of the students, and 4) documentation obtain data schools, presensi students, boards students and photos at the time of the learning process as research.

Data analysis technique used is the method of flow consisting of: 1) data collection, 2) representation of data, and 3) withdrawal of the conclusion. This research uses the triangulation of data sources and investigators.

DISCUSSION AND RESULT

Learning that is conducted thoroughly the action of the round I to round III with the application Poster Session strategy through the approach to improve communication capability NHT mathematics content rectangle
The data improvement of mathematics communication skills

<table>
<thead>
<tr>
<th>The indicator of the ability of communication students</th>
<th>before treatment</th>
<th>Round I</th>
<th>Round II</th>
<th>Round III</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. students ability in asking questions</td>
<td>6 students</td>
<td>9 students</td>
<td>16 students</td>
<td>26 students</td>
</tr>
<tr>
<td></td>
<td>(16,66%)</td>
<td>(25,00%)</td>
<td>(44,44%)</td>
<td>(72,22%)</td>
</tr>
<tr>
<td>b. students ability in answering a question</td>
<td>7 students</td>
<td>11 students</td>
<td>17 students</td>
<td>24 students</td>
</tr>
<tr>
<td></td>
<td>(19,44%)</td>
<td>(30,55%)</td>
<td>(47,22%)</td>
<td>(61,11%)</td>
</tr>
<tr>
<td>c. students ability in conveying ideas</td>
<td>8 students</td>
<td>10 students</td>
<td>15 students</td>
<td>22 students</td>
</tr>
<tr>
<td></td>
<td>(22,22%)</td>
<td>(27,77%)</td>
<td>(41,66%)</td>
<td>(66,66%)</td>
</tr>
<tr>
<td>d. students' ability in the present in front of the class</td>
<td>3 students</td>
<td>8 students</td>
<td>13 students</td>
<td>20 students</td>
</tr>
<tr>
<td></td>
<td>(8,33%)</td>
<td>(22,22%)</td>
<td>(36,11%)</td>
<td>(55,55%)</td>
</tr>
</tbody>
</table>

The graphics of capabilities improvement of communication from before treatment until after treatment of round III can be described as follows:

The Increasing graphic mathematical communication skills
The graph above shows the increase is ranging from prior actions until after the action with application of Poster Session strategy through the approach of NHT. Communication ability on from round I to the Round III has increased. Indicator of the ability to ask questions increases to 26 students (72,22%). In answering the question, ability indicators increases to 24 students (66,66%). The indicator of ability to convey the idea increases to 22 students (61,11%). Indicators of ability in doing presentations in front of the class increased to 20 students (55,55%)

At the round I, it is given less role of teacher in applying Poster Session strategy through the NHT approach, however the learning runs smoothly. Teachers in cultivating students' self confidence are tend to be less, It can be seen from the interest and confidence of students in solving problem and presenting in front of the class. This is apparent from the students who are still ashamed to come forward in the future. The improvement that is carried in the first round is between other teacher gives clearer direction on about the steps of session strategy with the posters nht, It can maximize in clarifying and understanding steps strategy with the posters nht and so students can apply clearly, and increase the confidence of the kids that students can easily accept the study and apply in discussion.

Evaluation and reflection on class action in round I give a positive impact of class action in round II. On the round II activities with the application of learning Poster Session strategy through the NHT approach show the improvement of mathematical communication ability of students. Students become accustomed to and capable of applying Poster Session strategies through the NHT approach properly, as well as more active student learning process. This is proven by the number of students who dare to ask, answer questions, express ideas, and willing to work on problems that are given by the other groups.

Evaluation and reflection on class action round II give a positive impact of class action in Round III. On the Round III, learning activities with the application of Poster Session strategy through the NHT approach shows significant improvement of mathematical communication ability of students.
After conducted research by the application of session strategy with the posters nht, the researcher obtains the result that there is an increase of the capability of communication mathematics student. The increasing ability of communication students mathematics can not be separated from the absence of the application of session strategy with the posters nht applied in grade VII G smp al islam 1 surakarta.

It is in line with harris et al. (1990) who state that posters session is active in learning strategy proposing thought through a picture or a poster dealing with matter math. It is the same with isjoni (2007: 78) who adduces numbered head of together is a method of learning which provide opportunities for students to mutually share ideas and consideration answer the most appropriate and get students to increase morale the partnership morale in carrying out of learning and mutual responsibility his pertaining to friends his group. It is very possible because in their experiences with the application of session strategy with the posters nht students are trained to answer a real problem that is concerned with daily life.

CONCLUSION

Based on the results of research the act of class performed in collaborative between researchers and teachers it can be concluded that with application of session strategy with the posters nht, it can increase the capability of communication students. The strategy conclusion can be seen from several indicators as follows:

1. Students ability in asking questions. This indicator is observed from many students who want to ask questions at the discussion the result of discussion on each group. As it is the result of discussion of other group which are not clear. So there is spoken communication among students in this indicator.

The data shows that the students can ask questions of beginning prior action
and round i increase by 8.34 %, from round i and round ii increase by 19.44 %, while from round ii and iii increase by 27.78 %

2. Student's Courage in suggesting ideas or opinions. These indicators are observed by the number of students who would like to present the opinion. Through the optimization of Poster Session strategy students are required to present his ideas in the learning process. Courage in presenting the opinions of students can be seen directly at the time another group of students presented the results of its discussions. The Data obtained shows that the students who bravely state ideas or opinions from the beginning before action and round I increase by 5.55%, from round I and round II increase by 13.89%, while from round II and III increase by 19.45%.

3. The ability of students in answering the question. This indicator is observed from students who would like to answer the question by made other group of persons and to work on the problem created by his group and the way learners practice the test rounds, i.e. whether the students are able to respond to and resolve the problem appropriately. The Data obtained showes that the students who are able to answer questions from the start before the action and round I increase by 11.11%, from round I and round II increase by 16.67%, while from round II and III increase 19.44%

4. Students ability in doing presentations in front of the class. These indicators can be seen from the number of students who would like to present the results of a summary or its discussion to the next class. The Data obtained shows that the students who are able to do a presentation to the class from scratch before
action and round I increase by 13.89%, from round I and round II increase by 13.89%, while from round II and III increase 19.44%.

BIBLIOGRAPHY


Sutama. 2010. Penelitian Tindakan (Teori dan Praktek dalam PTK, PTS, dan PTBK. Semarang: Citra Mandiri Utama

