

**APPLICATION INQUIRY METHOD WITH THE USE OF STUDENT
WORK SHEET TO INCREASE LEARNING ACTIVENESS**

(CAR Class VII H SMP Al-Islam1 Surakarta in Academic Year 2012/2013)

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APPLICATION INQUIRY METHOD WITH THE USE OF STUDENT WORK SHEET TO INCREASE LEARNING ACTIVENESS

(CAR Class VII H SMP Al-Islam1 Surakarta in Academic Year 2012/2013)

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Abstract

The purpose of this research is to improve students' learning activeness . This research is a collaborative classroom action resume is the subject is student class VII H SMP Al - Islam 1 Surakarta , which amounts to 36 students. Data were collected through observation, field notes and documentation. The data analysis with a qualitative descriptive data flow method. Results of the study, there is an increasing is in student activity that can be seen from : 1) the active students ask 80 % , 2) active students to answer questions from teachers 69 % , 3) students who dared to present their answers in front of the class 52 % , 4) and students data dared to respond to other students 72 % . The conclusion of this study is that the adoption of Inquiry method with the use of student worksheet can increase the activity of mathematic learning.

Keywords : Inquiry , Activeness.

INTRODUCTION

Activeness of learning is essentially a reflection of the effort to learn. The better a student's learning effort, the better the learning achievements earned. Achievement of student achievement is influenced by various factors, both

internal factors and external factors. Internal factors such as health, intelligence, attention, interests, talents, motives, maturity, readiness, and fatigue, while external factors such as educators or teachers, teaching methods, curriculum, play friends, and family.

Regardless of internal or external factors that cause high or low learning achievement obtained, in this case the role of teachers as a party should be able to directly provide good performance, the results can be shown by the high academic achievement of the learners. Acquisition of learning achievement in education is obtained through a series of learning activities that can be organized through formal education.

Based on observations made in class VII H SMP Al-Islam 1 Surakarta, students have varying levels of activity due to the selection of the learning model is less precise models of lecture learning. The varying level of activity can be seen from several indicators, namely: 27.78% active student asked, students actively answer questions from guru 25%, students present their answers in front of the class dared to 8.33%, and the brave students respond to what students say 22.22%.

Based on the background of the problem then the problem can be formulated two general formulation of the problem, namely: can the activity of class VII H SMP Al-Islam 1 Surakarta in mathematics increase after learning by using learning models Inquiry?.

Of these problems, the teacher should be able to choose and apply the learning model is able to stimulate students to be active in learning mathematics more leverage. Alternatives that can be done to overcome this problem is by getting students actively involved in the learning process. Inquiry learning model is a method of stimulating students to think, analyze a problem so as to find a solution. (Made Wena, 2011: 223).

From the above problems, the researchers were motivated to conduct research on the application of learning models Inquiry as one of the efforts to increase the activity of learning mathematics. Because the purpose of this research

study, which consists of: general purpose, namely to increase the activity of students' mathematics learning. Specific objectives for improving mathematics learning activity in class VII H SMP Al-Islam 1 Surakarta academic year 2012/2013 through the learning strategies Inquiry

RESEARCH METHOD

This research is a qualitative research design with the design of Classroom Action Research (CAR) with that kind of participatory collaborative participation among the principal subjects of Mathematics teachers, and researchers. According to Burham elfanany. (20013:21) CAR is the availability of teachers to reflect on, reflect, reflecting, or evaluating himself that ability as a teacher is expected to further professional enough, self-improvement is expected from the increase can affect the quality of their students, both in the aspect of reasoning; skills, knowledge of social relationships and other aspects that benefit both students to become adults.

The research was carried out in several stages , which can be detailed in three research activities , namely : planning action , action , action and completion . Action planning done by researchers doing early dialogue with the math teacher research partners to discuss the improvement of teacher competence on math materials , identification of problems and their causes , and solutions planning problem is an increase in student activity using the Inquiry learning model . Implementation of the actions carried out by the researcher as an observer on the observation and monitoring of the learning process is observed and concluded the data during the learning process takes place . The data include teachers , students , and classroom situations . Then , the researchers together with the math teacher reflection means looking at the results of actions taken as a reference to take further action as a result of research and evaluation efforts to determine the level of success and achievement measures include site planning , observation and monitoring , and reflection on any implementation of the action . Completion of actions carried out by researchers analyze data and prepare reports . Then , the

researchers together with the math teacher made a conclusion that the action has been implemented . The research results in the form of an increase in the activity of learning mathematics students .

Collecting data in this study was done by using observation , field notes , documentation , and test methods . Observations are observations made by the researcher directly , accurately , and conscientious about the phenomena occurring in the study . Observations made with the guidelines specified observation . The observation is based on indicators of student activity , ie active student asked , students actively answering questions , students brave presentation to the class , and students dared to respond to other students' opinions . Documentation is the documents that can be obtained by looking at the books , archives or records relating to schools in the form of data list the student's name , a list of values , and photos on any action . Field notes used in this study to record the important events during the learning process of mathematics takes place . And the test method that is by giving a description about a matter to obtain data on students' mathematics learning outcomes at each end of the action.

The validity of the data in this study conducted with continuous observation and triangulation. Triangulation is a technique of checking the validity of the data by comparing something else outside of the data. The triangulation used in this study is the triangulation method by comparing the information or data obtained by using the method of observation, observation tests, and triangulation of data sources, the data checking test observations, the observation and documentation of results.

Data analysis techniques in the research done in 3 ways , namely : data collection process, data presentation, and data verification . The data collection process with researchers examine how all data from various sources before action . Then the researchers make a summary as a base to carry out data reduction of activity which has three elements , namely : selecting the data on the basis of relevance , collating data in units systems type or simplification , and

simplification of the system and transfer the focus from the basic to the field notes. Presentation of the data in the study conducted by researchers compile relevant data so that it can be concluded that accurate information and has a particular meaning . By way of displaying the data and make the relationship between the variables , the researchers understand what is happening and what needs to be followed to achieve the research objectives . Verify the data in the study done by draw conclusions gradually to acquire a high degree of confidence . Data verification is done on each cycle of action and ultimately verifying the data are combined into a conclusion .

RESULTS AND DISCUSSION

This research started with the initial observation to establish which issues will be taken as the focus of research and determine the indicators that will be achieved in the liveliness of students' mathematics learning. Indicators of activity, namely: active student asked, students actively answering questions, students dare to present answers to the class, and students dared to respond to other students' opinions

Results of preliminary observations in class VII H SMP Al-Islam 1 Surakarta, data showed that the level of student activity varies, and can be seen from several indicators of activity, 27.78% of students asked, students answer questions 25% of teachers, students who dare present their answers to the class of 8.33%, and students dared to respond to other students' opinions 22.22%.

In I cycle, Inquiry learning model has been implemented even though the teacher has not fully alert students to demonstrate its activity during the learning process takes place. However, the activity level of students has increased from the prior action. This increase can be seen from the indicators of activity, namely: students actively ask (52.78%), active students answer questions (41.66%), the students dared to present the answers in front of the class (19.44%), and students brave respond to the opinion of other students (38.88%).

In cycle II, the indicators of activity have increased from the previous cycle. This increase can be seen from the indicators of activity, namely: students actively asked (83%), active students answer questions (69.44%), the students dared to present the answers in front of the class (52.78%), and students dared to respond to the opinion other students (72.22%).

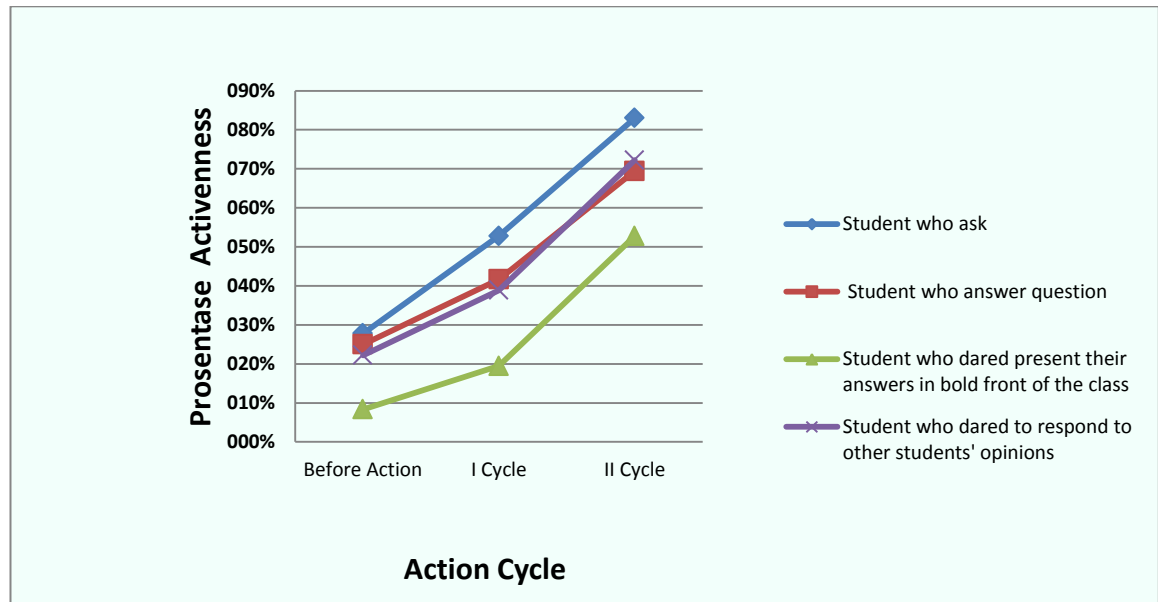
Table 4.1

Data of Improving Student Activeness

Student Activeness	Student who ask	Student who answer question	Student who dared present their answers in bold front of the class	Student who dared to respond to other students' opinions
Before Action	10students (27.78%)	9 students (25%)	3 students (8,33%)	8students (22.22%)
I Cycle	19students (52.78%)	15students (41.66%)	7 students (19,44%)	14students (38.88%)
II Cycle	30students (83%)	25students (69,44%)	19 students (52.78%)	29students (72.22%)

Graph 4.1

Graph of Improving Student Activeness



Based on table 4.1 and graph 4.1 it can be concluded that the application of the model can improve the activity of Inquiry learning and mathematics learning outcomes of students of SMP Al-Islam 1 Suarakarta. It can be seen from the increase in the indicators of activity, namely: students ask, answer student questions, the students dared to present the answer in front of the class, the students dared to respond to other students' opinions.

Based on the observations that have been made by researchers in the first cycle of action, it can be concluded that the activity of which is used as an indicator of the focus of research has increased, although there are two indicators of activity that has not been achieved. Activity of students in cycle I, students begin to show indicators of its activity, which students to possess awareness to ask if experiencing difficulty in learning either ask other students or ask the teacher, some students answering questions from students in the class as well as the presentation of teacher after reflecting on learning, students dare to present the

answer in front of the class after a discussion with his partner, and some students dared to respond to other students' opinions if you have a different opinion.

Based on the observations that have been made by researchers in the first cycle of action, it can be concluded that the activity of which is used as an indicator of the focus of research has increased, although there are two indicators of activity that has not been achieved. In the first cycle, students begin to show indicators of its activity, which students have the awareness to ask if you have difficulty in learning better to ask other students or ask the teacher, some students actively answering questions from students that the presentation in front of the class and the teacher after reflecting on learning, students dare to present the answer in front of the class after a discussion with his partner, and some students dared to respond to other students' opinions if you have a different opinion.

Nevertheless, the learning cycle I have not achieved fully. Teachers still looks difficult to limit the same student in the presentation asked the students in the classroom, teachers also have not been up to remind students to show other indicators of activity, namely: to answer questions and respond to other students' opinions. Students are forced to look still learning model is applied, and complained to the lack of rigor in selecting student teachers who have the opportunity to ask questions, answer questions, and provide feedback to students that presentation to the class, so that students have not been up motivated to answer questions and respond to opinions other students.

The results of I cycle of action-reflection as a reference for subsequent class action. Based on the results of the first cycle of action reflection, action second cycle gives better results than the action cycle I. It can be seen from the achievement of all the indicators of activity, such students are more motivated to ask questions, answer questions, present their answers in front of the class, and respond to other students' opinions. Classroom atmosphere is also more conducive than previously.

Research on the improvement of student activity has been carried out by several previous investigators, one of which is the research that has been conducted by Seny Ratnawati (2011) through Guided Inquiry Contextual Approach to declare an increase in student activity indicators used in this study, namely: courage students to ask questions, courage students to answer questions, and courage students to answer questions in front of the class.

Inquiry learning is a pedagogical approach that focuses on the processes and skills required to conduct research. It is a pedagogical approach that has been demonstrated to have positive learning outcomes. In this research, can evidence that the amount of inquiry taught in this case varies significantly by level, department, and class size. In general, inquiry increases by level (Vajoczki et.al. (2011:1))

Based on the results of research on influence on the Discovery Inquiry method

Mathematics learning outcomes fifth grade elementary school students A country Dabin I Cawas Klaten District of the academic year 2012/2013, the result of t test, know as big as 2.8015 and of 2.0105. This indicates a difference in learning outcomes and a significant positive Mathematics by Laela Lusi Palupi (2013)

Based on the results of the above description, the application can create an Inquiry learning model that is more conducive classroom atmosphere, so as to encourage students to be more active in the learning process in learning mathematics

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of research conducted class action collaboration between researchers and teachers of mathematics on May 7 to May 14, 2013 in class VII H 1 SMP Al Islam Surakarta This study is a class action regarding the implementation of Inquiry learning model in order to increase the activity of students' mathematics learning. The results of action research conducted by

researchers and collaborate with classroom math teacher VII H SMP Al-Islam 1 Surakarta is proven as the next:

1. Inquiry learning model can enhance the liveliness and mathematics learning outcomes of students. The steps Inquiry learning models, namely: 1) the teacher gives props and worksheets to the students, 2) the teacher asks the students to practice and answer the question; 3) the teacher asks the students to present the results of discussions with her partner in front of the class; 4) on review session, the teacher asks randomly and rapidly; 5) teachers give extra points to students who can answer; 6) teachers together with students to make inferences learning, then teachers provide individual evaluation questions to each student. After that, the teacher asks the students to collect the answer then the teacher gives homework information.
2. An increase in activity of students through Inquiry learning models, can be seen from the increase in the indicators of activity, ie: before the action of active students who ask 27.78% to 75%, before the act of students answering questions from the teacher 25% to 55.56%, students brave present their answers in front of the class before the action of 8.33% to 27.78%, and students dared to respond to other students' opinions before action 22.22% to 58.33%

Based on the results of a study conducted by researchers and collaborating with H seventh grade math teacher junior Al-Islam1 Surakarta in order to improve the activity and outcomes of learning mathematics through Inquiry learning model, the researchers gave the following suggestions: 1) Against the math teacher, should apply Inquiry learning model as an innovation in the learning of mathematics, as a model of cooperative learning can provide a greater influence on the improvement of student learning activeness. 2) On students, learning Inquiry In following are some suggestions to students, namely: Students should have awareness of the importance of asking the material is still considered

difficult, students should answer the questions from the teacher and from other students as evidence of the level of students' understanding of subject matter, students should be brave present their answers in front of the class, students must also dare to respond to other students' opinions if you have a different opinion. 3) To further research, of which there are limitations in this study, the researchers suggest further research should be able to conduct research with expanding other indicators that can improve the learning activity of students in the learning process, and to improve the quality of learning in education.

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