The Effect of Active Learning Model of Quiz Team Type on the Learning Outcomes of Students

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Abstract

This study is a quasi-experimental study that aims to determine the existence of positive effects of active learning type quiz team of student learning outcomes with "The Only posttest Control Design". The population in this study were all students in class XI IPA. The samples was obtained by randomly. Class XI IPA 2 as a control class and class XI IPA 3 as a experiment class. The study consist of two variables, are the Active Learning Type Quiz Team as independent variables and learning outcomes as the dependent variable. The data obtained through test of learn result to the subject matter of colloidal systems were analyzed using descriptive statistics and inferential statistics. Descriptive analysis results showed the average value of the control class is 68 with a deviation standard of 12.44 while in the experimental class the average was 76.08 with a deviation standard is 11.12 with the thoroughness of 79.16% for the control class and 92% for experiments class. The results of hypothesis testing using t-test , obtained $t_{computation}$ = 2.41 and t_{table}= 2.019 at significance level α = 0.05 with df = k-3, where $t_{computation}$ > t_{table} which means H_0 rejected and H_1 accepted. This showed that there are positive effect of active learning types quiz team of student learning outcomes.

Key Words: *Active learning, Quiz team, Study results.*

INTRODUCTION

Chemistry is a branch of Natural Sciences (IPA), which has an important role in other sciences such as agriculture, health, fisheries and applied chemistry, therefore the quality of chemistry learning in schools must be improved. The fact shows that chemistry is still considered a difficult subject, so this can reduce students' interest in learning chemistry which can have an impact on the learning outcomes obtained by the students themselves.

Learning is basically an effort to direct students into the learning process so that they can obtain learning objectives in accordance with what is expected. Learning should pay attention to the individual conditions of students because they are the ones who will learn.

In the teaching and learning process the teacher is directly involved with the students, therefore, the teacher plays an important role in determining the learning achievement of the students. One of the teacher's abilities that are expected to improve student learning achievement is the ability to teach students. Therefore, the learning design should be able to actively involve students where in the learning process there will be interactions between students and teachers, as well as between students and students, as well as between students and subject matter (multi-interaction), so that the role of the teacher is not only conveying material with only one direction but especially to the function of a teacher as a manager of the learning process in the classroom who is required to be more creative in activating students when participating in the teaching and learning process.

There are many learning methods that can be used in the teaching and learning process, including the lecture method, question and answer, assignments and others. In order to achieve satisfactory results, appropriate learning methods are needed, namely methods that can activate students in learning. Learning methods that can activate students include active debate, the power of two, everyone is a teacher here and quiz team.

Based on the active learning method, the quiz team method is a learning method that can increase students' creativity in learning, namely through finding out and doing activities which include expressing ideas, designing, making comparisons, measuring, looking for reasons, showing similarities and differences and making conclusions about a symptom. By increasing the creativity of these students, students will try to increase their intellectual potential by trying to find something as the answer through the process of tracking data and information.

From the results of observations on chemistry learning at SMA Muhammadiyah Kalosi, Kab. Enrekang, learning activities and student learning outcomes are still low. The low learning outcomes are indicated by the lack of student learning activities. This is because chemistry learning is still taking place in a teacher centered manner, namely passive learning because it is teacher centered, so students are not eager to develop their thinking power. The results of the researcher's discussion with the chemistry teacher who teaches in class XI IPA SMA Muhammadiyah Kalosi, Kab. Enrekang obtained the results that: 1) student learning outcomes are still low, which can be seen from the achievement of individual mastery and classical mastery in learning as expected. This is reinforced by data in the form of evaluation results on colloidal subject matter, it is still difficult to reach the school completeness standard, which is 60 and almost 60% of students get scores below the completeness standard, 2) not many students are ready or prepared before learning begins even though the subject matter to be taught at the next meeting it was known, and 3) student activity in the learning process was still low.

Colloidal material is one of the main materials in chemistry subjects whose

presentation is in the form of readings or descriptions so that the material can be presented in group discussions, therefore, the quiz team type active learning model is considered suitable to be applied to colloid system material.

Based on the description that has been put forward, the researcher is interested in applying the active learning model of the quiz team type. Therefore, the authors are motivated to conduct research with the title "The effect of the quiz team type active learning learning model on the learning outcomes of class XI science students at SMA Muhammadiyah Kalosi Kab. Enrekang (study on the subject matter of colloidal systems)".

METHODOLOGY OF THE RESEARCH

This research is a true experimental design research which consists of two kinds of variables, namely the independent variable in the form of active learning type quiz team and learning with conventional methods as control variables. While the dependent variable is in the form of student chemistry learning outcomes after studying colloid system material.

The population in this study were all students of class XI SMA Muhammadiyah Kalosi in the academic year consisting of 3 classes, where sampling was carried out by probability sampling with a random class technique. Of the 3 classes XI IPA, the samples are class XI IPA 2 and XI IPA 3, where class XI IPA 2 is the control class and class XI IPA 3 is the experimental class. The form of the instrument in this study is multiple choice, totaling 25 numbers that have only been validated by content. This instrument was tested in the control class and the experimental class after the students were taught the colloid system material. In giving a score for the correct answer is given a score of 1 while for the wrong and unanswered answer is given a score of 0.

The design used in this research is Post-test Only Control Design. In this study, two classes were given different treatments, with a design as shown in Figure 1.

E	X_1	P_1
K	X_2	P_2

Figure 1. Research Design (Post-test Only Control Design)

Information:
E: Experiment Class
K : Control Class
X1: Active learning model type quiz team
X2: Conventional learning method
P1: Post-test Experiment
P2: Post-test Control

RESULTS AND DISCUSSION

1. Research Results

a. Data Normality Test

Based on the results of the analysis of the normality of the data using the Chi-Square test, for the experimental class the value obtained is the X2 count = 3.6475 and for the control class the X2 count = 2.8881, while the value at the significance level = 0.05 with dk = 3 is 7.81, so it can be concluded that the class data taught by the active learning method of quiz team type with the conventional method is normally distributed because X2 count < X2 table.

b. Variance Homogeneity Test

The results of the analysis of the homogeneity of variance testing using the F-test, obtained F count = 1.25, while F table $(\alpha)(35/30)$ = 1.99, therefore F count = 1.25 < F table = 1, 99, then the two sample classes come from a homogeneous population.

c. Hypothesis test

The results of hypothesis testing obtained t count = 2.41. At the significance level = 0.05, t table = 2.019 is obtained. Thus, t count > t table = 0.05 with dk 65, meaning that H1 is accepted and H0 is rejected. This means that there is a positive influence from active learning with the quiz team type on the

learning outcomes of class XI science students at SMA Muhammadiyah Kalosi Kab. Enrekang.

2. Discussion

Based on the results of data analysis using descriptive statistical analysis, it shows that the percentage of completeness of the experimental class taught using the quiz team type of active learning learning model is higher than that of the control class that is not taught using the active learning model of quiz team type on colloidal subject matter. The experimental class has higher learning outcomes compared to the control class, this is inseparable from the implementation of the learning carried out, where in the experimental class (using an active learning model of quiz team type) students are more active in the teaching and learning process because students who give quizzes must also know the answer and because of the academic competition so that students' attention is focused on the material and the learning process.

The class completeness of students who were taught using the quiz team type active learning learning model (experimental class) and students who were taught without using the quiz type active learning learning model (control class) were 92% and 79.16%, respectively, with the average score for the experimental class 76.08 and the average score for the control class is 68 with a maximum score of 100. Based on the individual Minimum Completeness Criteria (KKM) for chemistry subjects at SMA Muhammadiyah Kalosi Kab. Enrekang, in the experimental class there are 23 people who have completed learning and 2 people who have not finished studying, while in the control class 19 people have completed their studies and 5 people have not finished learning out of a total of 25 students for the experimental class and 24 people for the class. control.

To strengthen the results of descriptive statistical analysis, further analysis was carried out using inferential statistical analysis. The results of inferential statistical analysis using t-test, obtained the value of tcount = 2.41 and table at a significant level of 0.05 = 2.019. This shows that count is greater than table. Based on the statistical hypothesis testing criteria, it means that Ho is rejected and H1 is accepted. Thus it can be said that the use of active learning model type quiz teams has a positive effect on student learning outcomes in class XI IPA SMA Muhammadiyah Kalosi Kab. Enrekang on colloidal subject matter.

CONCLUSION

Based on the results of research and discussion, it can be concluded that there is a significant positive influence in active learning type quiz teams on the learning outcomes of class XI science students at SMA Muhammadiyah Kalosi Kab. Enrekang on colloidal system materials.

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