THE INFLUENCE OF AIR (AUDITORY INTELLECTUAL REPETITION) LEARNING MODEL FOR THE MATHEMATICS LEARNING OUTCOMES

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ABSTRACT

The concept is a crucial thing in learning activities, but the importance is not only in the concept itself, but it depends on how students can understand the concept. The lack of a student's ability to use the concepts for problem-solving causes low student learning outcomes. The purpose of this research to determine the effect of the AIR learning model (Auditory Intellectual Repetition) toward the student learning outcomes in the SMP Negeri 1 Yogyakarta, especially in class VIII and in Even Semester in Academic Year of 2016/2017. The population in this research was the students of class VIII A, VIII B, and VIII C SMP Negeri 1 Yogyakarta in 2016/2017, the total amounted to 103 students. Samples were taken by two classes using the Random Sampling technique for the class, and obtained class VIII B as control class and class VIII C as experiment class. Data collecting techniques used are interview and test methods. The instrument testing uses validity test, normality test, and different power test. The data analysis technique used for the prerequisite test is the normality test with Chi-Square and homogeneity test with the Barlett test formula. As for the hypothesis test using the t-test. The results of this research show that, at a significance level 5%, obtained the conclusion that (1) there is an influence between the results of learning mathematics students using the AIR learning model and students using the STAD learning model. It shows by using the result $t_{cont} = 2,6608$ and $t_{table} = 1,9979$ thus $t_{cont} > t_{table}$ (2) learning by the AIR model can create the result of the learning better than learning by using STAD model. It shows by the result $t_{cont} = 2,6608$ and $t_{table} = 1,6691$ thus $t_{cont} > t_{table}$.

Keywords: influence, learning outcomes, AIR (Auditory Intellectually Repetition)

INTRODUCTION

Studying is an obligation for every individual without exception, starting from the small to the death of the Menjeput. Even in one of the Koran content of Surah Al-Mujis (58), 11 explains that God will only elevate degrees and positions for the demanding people. The content of the verse also illustrates the importance of science for humans. The science is closely related to education. Education, in addition to seeking knowledge, is also useful to increase quality resources that can compete in all areas, especially in education. In mathematics, education has a crucial role because mathematics is a foundation of science and a helper for other sciences, especially in the development of science. According to Sholeh, Moh (2014:92), some factors that cause learning is less successful. One of them is the low participation of students in the learning process. This is because the learning model applied is not appropriate, so Renewal efforts in the learning model.

A teacher in the teaching and learning process is expected to determine the target of the learning outcomes to be achieved, to realize the target, teachers can design the teaching and choose the learning model. Choosing the right learning model with the characteristics of a dining class will be expected to change the students positively. Students will become active, unsaturated, creative, and innovative thinking that will make the students ' spirit learn to grow, which implicates the student's learning outcomes. Based on the interviews with SMP Negeri 1 Yogyakarta, There are still several students who are under the minimal completeness criteria (CCM). The learning model has not sufficiently improved student learning outcomes when the learning process of teachers has been implementing learning with the Student Teams Achievement Division (STAD) model. Also, based on the results of the interviews, several factors cause a lack of student learning outcomes. Students are still

less aware of the concept of the material being studied so that students often have difficulty working on more complex questions. Then based on the results of the interviews with students, students often forget about learning materials that have been learned before.

The concept is crucial, but it does not lie in the concept itself, but it lies in how the students can understand the concept. The importance of understanding concepts in the learning process dramatically affects attitudes, decisions, and ways of solving problems. Mathematics Learning without mastery and planting of concepts will produce temporary knowledge. It is not very good when faced with new problems encountered, even a great difficulty. So the knowledge gained is quickly forgotten. Therefore, students must have a concrete experience in learning to build the meaning of a learning process. In addition to the concept of understanding, students ' deterioration in their opinions is instrumental in the development of their insights so that they can be a critical and responsive person to the problem. The learning Model used by teachers must be able to permeate the mental realm, emotions, and minds of students to be able to ask in class.

Referring to the problem, it is done by a study that can improve student learning outcomes. One of the solutions that can be used is to implement the AIR learning model (Auditory Intellectually Repetition). According to Ngalimun (2012:168), the AIR learning Model is similar to SAVI and VAK. The difference is only in the reps, which means repetition of a deepening, expansion, stability by the way students are trained through the awarding of assignments or quizzes. The AIR learning Model emphasizes three aspects: 1) Auditory (learning through hearing). According to Dave Meier (2002:95), Our minds auditory us stronger than we realize. The ears continuously capture and store auditory information, even without us being aware of it. Moreover, when we make our voices speak some essential areas, our brains become active. 2) Intellectually (learn by building meanings). According to Dave Meier (2002:99), Intellectuals demonstrate what learners do in their minds internally when they use intelligence to ponder an experience and create the relationship, meaning, plan, and value of The experience. The intellectual aspects of learning will be trained if the teacher invites students to engage in activities such as solving problems, analyzing experiences, working on creative planning, giving birth to creative ideas, searching and filtering information, Formulating questions. This suggests that intellectually is the creator of meaning in thinking. 3) Repetition (repetition). According to Djamarah Bahri Syaiful (2011:111), one effort to help students to receive and understand the subject matter quickly is by the repetition of the key repeatedly, so that Helps students quickly absorb lesson materials. Even more and more public understanding in the child's brain is durable and not easily forgotten in teacher learning to make repetition for students ' memory preparedness by giving assignments or quizzes.

The problem in this study is: 1) There is a difference in the influence between learning using the AIR model (Auditory Intellectually Repetition) with learning using the Student Teams Achievement Division (STAD) model on learning outcomes Grade VIII students SMP Negeri 1 Yogyakarta school year 2016/2017? 2) What are the results of mathematics learning using the AIR learning model (Auditory Intellectually Repetition) better than the learning outcomes of the study using the Learning model of STAD (Student Teams Achievement Division) in-class students? VIII even semester, SMP Negeri 1 Yogyakarta school year 2016/2017?.

The purpose of this research is to: 1) to find out difference influences between mathematics learning using the AIR model (Auditory Intellectually Repetition) with learning to use the Student Teams Achievement Division (STAD) model for the results Learn Math grade VIII students SMP Negeri 1 Yogyakarta school year 2016/2017, 2) know the outcomes of better math learning between learning using the AIR learning model (Auditory Intellectually Repetition) with learning Using the Student Teams Achievement Division (STAD) model in grade VIII students in even semester, SMP Negeri 1 Yogyakarta school year 2016/2017.

METHODS

This type of research is experimental research. Experimental research is a study conducted by learning what is happening. In other words, in experimental research, there is the treatment of researchers and can be measured the impact. The design in this study used a True Experimental Design form with the type randomized Pretest-Postest Control Group Design. This study population is a grade VIII student, VIII B, VIII C SMP Negeri 1 Yogyakarta school year 2016/2017. A sampling of this study with the Random Sampling technique of the class. After the draw of the population was obtained from class VIII B as Control class and class VIII C as experimental class amounting to 69 students.

The variables used in this study were the AIR learning models provided on the experimental classes and the STAD learning model in the control class. In this study, the data collection techniques used were interviews and tests. Interviews on the research used to acquire information about the student learning variables and the factors influencing the outcome of learning by the assessor are teachers of class VIII math subjects. In contrast, the tests used in This research is a test of learning outcomes. This test is performed after the students get the subject matter.

The instrument used in this study was a math problem of class VIII even semester in the wake of the chapter of the flat side of the prism and Limas. The problem used multiple-choice with four alternative answers is a, B, C, and D if the correct answer is one, and the wrong answer is worth 0, which consists of 15 items. Before the test was given to the sample class, the test was tested first in class VIII A SMPN 1 Yogyakarta. Test the instrument using the validity test of the product-moment technique, different power tests, and reliability tests with the KR-20 formula.

Test prerequisite analysis with normality test with Chi-squared formula, test homogeneity with Barlett test, and hypothesis test used test-T. Test-T conducted to find out: 1) There is a difference in the influence between learning using AIR model (Auditory Intellectually Repetition) with learning using the Student Teams Achievement Division (STAD) model for student learning two results Learning Mathematics using the AIR learning model (Auditory Intellectually Repetition) is better than the learning outcomes of the study by using the Student Teams Achievement Division (STAD) model.

RESULTS AND DISCUSSION

The summary of test results normality can be seen in table 1.

Table 1. Test result normality value early ability

Class	$\chi^2{}_{count}$	$\chi^2{}_{table}$	df	Information
Experiment	0,8843	5,9915	2	Normal
Control	0,3390	7,8065	3	Normal

From the test of normality at a significant level 5% visible $\chi^2_{count} < \chi^2_{table}$, the data spreads obtained in each – each variable is a normal distribution.

The summary of the homogeneity results of the initial proficiency value can be seen in table 2.

Table 2. Results homogeneity of initial ability value

$\chi^2{}_{count}$	$\chi^2{}_{table}$	df	Information
0,9838	3,8145	1	Homogeneous

From a significant level of homogeneity Test 5%), It appears that $\chi^2_{count} < \chi^2_{table}$, this means that both classes have the same initial ability value.

The summary of the two-party hypothesis test results in table 3.

Table 3. Two-party hypothesis test results initial ability value

t_{count}	t_{table}	df	Information
1,6621	1,9979	67	H_0 accepted

From the two-party hypothesis test at a significant level of 5% and DF = 67, It can be seen that $t_{count} = 1,6621$ and $t_{table} = 1,9979$ so $t_{count} < t_{table}$ which means there is no difference between the initial

proficiency grade of the experiment class with the control class In grade VIII students SMP Negeri 1 Yogyakarta school year 2016/2017.

The summary of test results normality of learning outcomes in table 4.

Table 4. Test result normality value of learning outcomes

Class	$\chi^2{}_{count}$	$\chi^2{}_{table}$	df	Information
Experiment	2,5813	5,9915	2	Normal
Control	0,3390	7,8147	3	Normal

From the test of normality at a significant level 5% visible $\chi^2_{count} < \chi^2_{table}$, this means that the data spread obtained in each – each variable is a normal distribution.

The summary of the results of the initial homogeneity test is visible in table 5.

Table 5. Results of homogeneity of learning outcomes value

$\chi^2{}_{count}$	$\chi^2{}_{table}$	df	Information
0,7756	3,8145	1	Homogeneous

From a significant level of homogeneity Test 5%), It appears that $\chi^2_{count} < \chi^2_{table}$ means that both classes have the same value of learning outcomes.

The summary of the two-party hypothesis test results in table 6.

Table 6. Two-party hypothesis test results initial ability value

t_{count}	t_{table}	df	Information
2,6608	1,9979	67	H_0 rejected

From the two-party hypothesis test at a significant level of 5% and df = 67 It can be seen that $t_{count} = 2,6608$ and $t_{table} = 1,997$ so $t_{count} < t_{table}$ which means H_0 is rejected and concluded that there is an influence between learning using the AIR model (Auditory Intellectually Repetition) with a study using the Student Teams Achievement Division (STAD) on student learning outcomes.

The summary of one-party hypothesis test results can be seen in table 7.

Table 7. Fourth hypothesis test result

t_{count}	t_{table}	df	Information
2,6608	1,6691	67	H_0 rejected

From the two-party hypothesis test at a significant level of 5% and DF= 67, It can be seen that $t_{count} = 2,6608$ and $t_{table} = 1,6691$ until $t_{count} < t_{table}$, which means H_0 rejected and deduced student learning outcomes on learning with the AIR model better of learning with the STAD model.

CONCLUSION

Based on the analysis of the experimental data and its discussion, this activity concludes the following:

1. There is a difference in learning influence using the AIR model (Auditory Intellectually Repetition) with learning using the Student Teams Achievement Division (STAD) Model of learning results of grade VIII SMP Negeri 1 Yogyakarta school year 2016/ 2017. This is demonstrated with two-party tests with a value of $t_{count} = 2,6608$ and $t_{table}= 1,9979$. Because until $t_{count} < t_{table}$. Then the H₁ was accepted, and H₀ rejected. At a significant level 5% and DK = 67.

2. The results of mathematical learning between students in learning using the AIR model are better than those in the study using the Student Teams Achievement Division (STAD) in grade VIII students in junior high school. Negeri 1 Yogyakarta school year 2016/2017. This can be seen in the average total score of mathematical learning results in students whose studies use the larger AIR model is 87.25. In contrast, students who are in the study use the STAD model of 78.67 and $t_{count} = 2,6608 > t_{table} = 1.6691$ at a significant level of 5% with df = 67.

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