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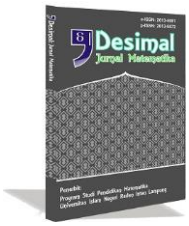

Implementation of wahdah method on the mathematics learning

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ABSTRACT

The problem in this research is the low student learning outcomes that are thought to be due to the use of teaching methods, where teachers still dominate the teaching and learning process. Sampling was done by using the cluster random sampling technique. The research instrument used was a test consisting of 5 items in the form of a description. The data analysis technique used the t-test because the population research data were normally distributed and homogeneous. The difference in the average of mathematics learning outcomes of students between the experimental class and the control class is shown by the results and the average of mathematics learning outcomes of students in the experimental class is 77.93 higher than the average mathematics learning outcomes of students in the control class 55.72 which means that there is the influence of the Wahdah method on mathematics learning outcomes of 22.21.

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INTRODUCTION

Learning methods are ways of presenting learning materials to students to achieve the goals that have been set. Learning methods can affect students in receiving and mastering lessons. The accuracy of the selection of learning methods can help students to understand and master the material to be studied so that the teaching and learning process can run effectively and work well. In addition, it is necessary to pay attention to problem-solving abilities, where problem-solving abilities are soft skills needed in the problem-solving process in learning mathematics to achieve the expected goals (Faelasofi et al., 2020). On the other hand, one of the goals of success in the learning process is the achievement of optimal learning outcomes.

Learning outcomes are the final achievement of the teaching and learning process carried out. Learning outcomes are influenced by two factors, namely internal and external factors. Internal factors are factors that exist in the body which include physical, psychological, and fatigue. While external factors are factors that exist around students' lives that occur outside the body which include family, school, and community (Slameto, 2010). Problems that are always encountered in

learning mathematics are learning that is considered difficult, requires good concentration and accuracy, and the need for understanding the material being taught. In addition, the selection and use of inappropriate teaching methods will result in a sub-optimal impact on student learning outcomes, this sub-optimal will be a factor causing low learning outcomes (Harsono et al., 2009).

One of the causes of non-optimal learning outcomes is the selection of learning methods. The method can be expressed as a tool in the implementation of the learning process in conveying the subject matter (Maesaroh, 2013). The method can make it easier for educators to convey the subject matter properly. However, it depends on the ability of educators to apply the method (Hidayat et al., 2020). Learning methods are one of the external factors that can affect student learning outcomes. In this case, educators also have an important role in implementing the learning process to improve the quality of learning in the classroom (Yasin et al., 2020). The selection and application of appropriate learning methods are expected to be one of the factors that can improve student learning outcomes. In addition, learning methods can be applied properly when educators have creativity in applying these learning methods (Hidayat et al., 2020).

The acquisition of learning outcomes that have not been optimal can be seen in the data on student learning outcomes for mid-semester examinations in class VII where only 1.37% of students achieve the KKM, where the KKM value for mathematics is 68. As can be seen in Table 1 below.

Table 1. The Data of Odd Mid Semester Examination Results in Class VII

No.	Score	Total	%	Criteria
1	68≤ x ≤100	2	1.37%	Complete
2	0≤ x ≤68	143	98.62%	Incomplete
	Total	145	100%	

Source: The Data of Odd Mid Semester Examination Results in Class VII

From Table 1, it is known that there are 143 students or about 98.62% of mathematics learning outcomes are still low who get a score less than the KKM (Minimum Completeness Criteria) which is 68. The low mathematics learning outcomes are thought to be due to the use of teaching methods, where the teacher still dominates the learning process which results in students being less able to understand the material provided by the teacher which ultimately affects the mathematics learning outcomes. Therefore, in an effort to improve student learning outcomes, researchers apply one of the methods used in memorizing the Qur'an into mathematics learning, namely the Wahdah method.

The Wahdah method is a method used in memorizing one by one the verses (Al Quran) to be memorized. In an effort to achieve initial memorization, each verse can be read ten times, or more so that this process is able to form a shadow pattern (Qomariana & Adkha, 2019). The Wahdah method is a method of memorizing the Qur'an with one verse at a time, each verse being read ten times or twenty times or more to form a pattern in the shadow or repeat it with the aim of perfecting a skill permanently. In this research, the context of the activities concept carried out in the Wahdah method will be applied in learning mathematics.

The application of the Wahdah method in learning mathematics is the

first time it has been done. The application of the Wahdah method is usually carried out on the method of memorizing verses of the Qur'an. This is in line with several research results which state that the implementation of the Wahdah method is carried out by adjusting the character and suitability of the memorizer by doing it slowly and little by little when memorizing verses of the Qur'an (Khoirudin et al., 2021). Furthermore, the results of another research, the implementation of the Wahdah method in memorizing the Qur'an at the Wahid Hasyim Qur'an Science High School was carried out by each student by remembering each piece of the verse which was divided into several parts to then be paired into a unified Qur'anic verse and accompanied by repetition (Afifah, 2019). So that with the same mechanism of the Wahdah method in memorizing verses of the Qur'an, the same thing will be done in learning mathematics. The process that occurs in the Wahdah method in learning mathematics is that the same activities are carried out repeatedly, it is expected to strengthen students' skills and activeness in understanding the mathematics learning material being taught so as to create a conducive and fun atmosphere which in turn can improve student mathematics learning outcomes. Therefore, what distinguishes this research from other research related to the application of the Wahdah method, in this research the process of applying the Wahdah method is carried out, where usually the Wahdah method is carried out in the process of memorizing the verses of the Qur'an, this time it will be applied in mathematics learning by carrying out the repetition concept of material and giving questions, gradually and repeatedly.

In addition to the application of the Wahdah method in mathematics learning, the lecture method will be applied. The lecture method is a very popular teaching method and is usually done by educators in the learning process (Amaliah et al., 2014).

The purpose of this research is to determine the difference in the average of mathematics learning outcomes between mathematics learning using the Wahdah method and using the lecture method and to find out the average of mathematics learning outcomes using the Wahdah method are better than the average of mathematics learning outcomes using the lecture method.

METHOD

This research is a quantitative research type that uses an experimental method approach. The experimental method is a research method used to find the effect of certain treatments on others under controlled conditions. In this research, researchers want to know the difference between the influence of the Wahdah method on learning outcomes and the lecture method on learning outcomes.

This research was conducted at SMP Negeri 5 Pringsewu in class VII and was carried out in the even semester of the 2019/2020 academic year**.**

The population in this research were all seventh-grade students of SMP Negeri 5 Pringsewu. The samples in this research were two classes, namely class VIIC, and VIID. The sampling method in this research used cluster random sampling because the population was divided into classes that had the same characteristics.

The research instrument is in the form of math test questions on social arithmetic material with a total of 5 items of data acquisition as data on mathematics learning outcomes. Before being tested, the data was tested first, through the stages of validity testing, reliability testing, level of difficulty, and discriminating power. The data on mathematics learning outcomes will then be carried out with statistical tests namely, the t-test with the assumption

that the data is normally distributed and the data is homogeneous, fulfilled. The learning application design in this research can be seen in the following flowchart.

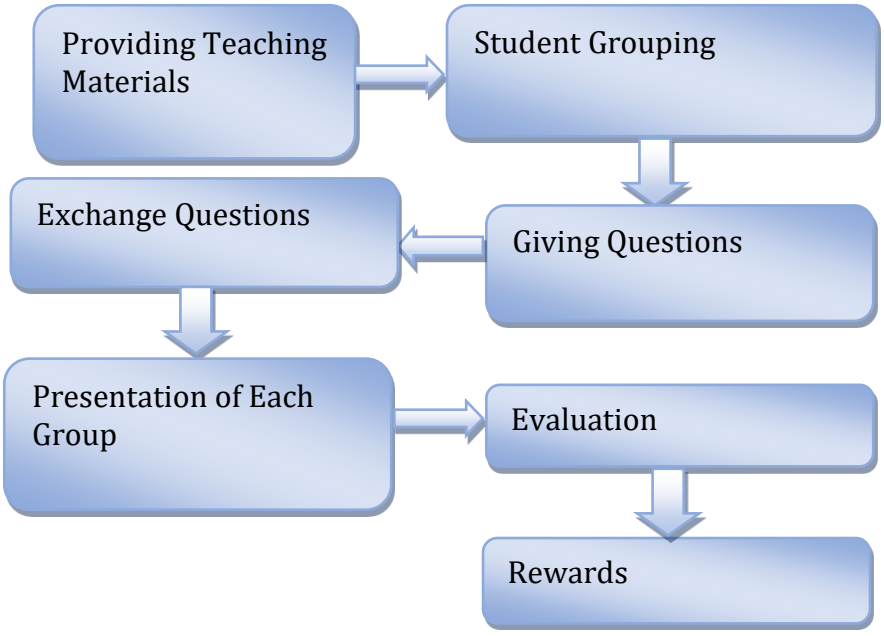

Figure 1. Wahdah Method Procedure

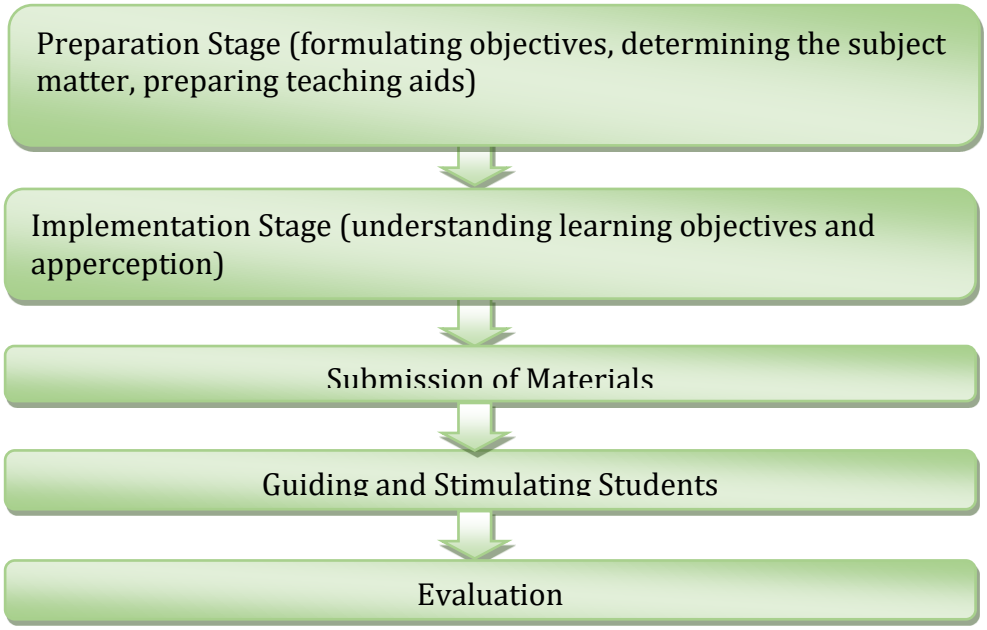

Figure 2. Prosedur metode ceramah

RESULTS AND DISCUSSION

Data on student learning outcomes in the experimental class and control class, the initial stage obtained the average score of mathematics learning outcomes in social arithmetic material in the experimental class (Wahdah method) of 77.93. While in the control class (Lecture method) the average score of mathematics learning outcomes was 55.72. Based on the two average scores, it can be seen that the achievement score in the experimental class is higher than the control class. Furthermore, data processing is continued with normality test with a significance level of 5%, presented in the Table 2.

Table 2. Normality Assumption Test Results

No.	χ^2_{hit}	χ^2_{tabel}	Conclusion
1	χ^2_{hitA} = 7.9891	11.07	H_0 is accepted = data is normally distributed
2	χ^2_{hitB} = 5.79	11.07	H_0 is accepted = data is normally distributed

After it is proven that the data is normally distributed, it is continued with the homogeneity test. The results of the homogeneity test are obtained $F_{calculate}$= 1.1894 and F_{table} with the significance level of 5% = 1.8834 so, $F_{calculate}$ is lower than F_{table}, then H_o is accepted. It means that the two samples have the same or homogeneous variance. After the two basic assumptions are met, namely all data are normally distributed and homogeneous, then the difference test is continued by using the t-test, from the results of the two-party t-test analysis at a 5% significance level, it is obtained that $t_{calculate} = 4.9798$ while $t_{table} = 2.0042$ based on the test criteria $t_{calculate}$ is higher than t_{table} so H_0 is rejected and H_I is accepted which means that there is a difference in the average of mathematics learning outcomes of students using the Wahdah method and with the average of mathematics learning outcomes of students using the lecture method. Then from a one-sided t-test with a 5% significance level, it is obtained that $t_{calculate} = 4.9798$ while $t_{table} = 1.6736$. Based on the test criteria $t_{calculate}$ is higher than t_{table} so H_0 is rejected and H_I is accepted which means that the average of mathematics learning outcomes of students using the Wahdah method are higher than the average of mathematics learning outcomes of students using the lecture method.

The difference in the average of learning outcomes is due to the fact that learning mathematics in social arithmetic using the Wahdah method makes students more active and can strengthen students' skills in understanding the material being studied which is done by repetition or repeatedly in working on the questions. The Wahdah method in the application of mathematics learning is done by repeatedly working on the questions until it reaches the indicators in the social arithmetic material.

The learning process at the first meeting was repeated for 6 times in the process of exchanging questions, the repetition in question occurred in an exchange process between one group and another, which process at the first repetition of questions, students still had difficulty or were confused in determining what was known, asked, and how it is distributed. Likewise, in the second repetition of questions, not a few students have begun to be able to determine the concept as known, asked, so that on the third repetition of questions, students are increasingly starting to understand to determine the final result and how to conclude it. Then in the fourth repetition, students have seen well in solving the existing problem. Then in the fifth repetition of questions, it is carried out to further help students strengthen skills in problem-solving so that in the sixth

repetition students are able to achieve indicators of arithmetic questions regarding the percentage of profit, loss well.

The learning process at the second meeting, repetition occurred for 6 times, this is because in the first repetition the problems that occurred were almost the same as the first meeting where students were still confused in determining what was known, asked, and the formula used, then in the second repetition some students began to understand what is known, asked and the formula that must be used, but it is still difficult to determine the final result, or in the calculation process, then in the third repetition the students looked better in solving the problem than in the second repetition, where some students were able to determine the final result and its conclusions. However, not a few students were still confused in determining the results until finally the fourth repetition was carried out again to further strengthen some students in solving problems, as well as to help to train students who were still confused in determining the final result, then on the fifth repetition students began to understand how to solve the problem well, until the sixth repetition, students are able to reach indicators regarding single interest and discounts.

The learning process at the third meeting, the repetition that occurred is 6 times, it was done to strengthen students' memory, as well as train students in problem-solving because in the first repetition, not a few students were able to determine what was known, asked, the formula that must be used, it's just that students are still confused in the calculation process to determine the final result and its conclusions. Then in the second repetition of the question, some students have started to be able to determine the final result, but there were still students who have difficulty in dividing until the third repetition to help students understanding in solving the problem, students have started to look better than the previous repetition of the question because students have started to be able to count in the division process, but it seems that there were still some students who were confused in a conclusion, then on the fourth repetition, the students can finish the calculation process well, along with conclusions. Then the fifth repetition is carried out to strengthen students' skills in problem-solving so that in the sixth repetition students have been able to achieve indicators regarding the net, gross, and tare.

Based on the description above, it is clear that the mathematics learning outcomes of students who use the Wahdah method will be different and better when compared (Slameto, 2010) with the mathematics learning outcomes of students who use the lecture method because in the Wahdah method students are constantly practicing in solving the problem. The repeated process of understanding teaching materials helps students to understand the material being taught, this is in line with the process of applying the Wahdah method to memorizing the Qur'an verses, where the simple application of the Wahdah method is by memorizing the Qur'an verses one by one repeatedly. Repeating until completely memorized can help in memorizing the verses of the Qur'an on an ongoing basis while still paying attention to the stages of work in memory and the rules for memorizing the Qur'an (Sandi & Febrianto, 2020). Based on this concept, in the implementation of mathematics learning, students are asked to practice questions more often so that they will have a better understanding of concepts that have a positive influence on student learning success.

On the other hand, the application of the lecture method has not provided

significant results on student learning outcomes, this is in line with the research which states that the lecture method is a way to convey teaching material in the form of information orally from the teacher to students, where the lecture method can be part of the application of the direct learning model (Widyantini, 2012). The lecture method is considered easier to do and does not require a lot of equipment. But along with the times, the implementation of learning with the lecture method is considered boring and makes students passive in participating in learning (Amaliah et al., 2014). In addition, in the implementation of the lecture method, it is expected that educators have creativity and innovation and understand how to convey learning well. Certainly, it will be related to the ability of educators to convey teaching materials effectively and efficiently in order to achieve the expected learning processes and objectives (Suarni, 2017). Based on the results of the research obtained by implementing the Wahdah method in mathematics learning focused on social arithmetic material, it can be seen that the application of the Wahdah method, which is usually used and applied as a method of memorizing the Qur'an, can technically be done also in learning mathematics using the same concept, namely the iterative process in understanding teaching material helps students to be able to understand the material being taught with students being required to repeatedly and continuously practice in doing math problems, especially in social arithmetic.

CONCLUSIONS AND SUGGESTIONS

Based on the results of data analysis and hypothesis testing and discussion in this research, it can be concluded that the application of the Wahdah method in mathematics learning obtains better results than the application of the lecture method in mathematics learning. This is because the stimulus of the Wahdah method in mathematics learning is carried out repeatedly in the form of practice questions and assignments. This is shown from the average of student learning outcomes obtained through the Wahdah method of 77.93 while the average student learning outcomes through the lecture method is 55.72.

The suggestion based on the results of this research is the application of the Wahdah method in mathematics learning can be done and more developed as an effort to improve student learning outcomes and the quality of learning implementation in schools.

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