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# Effect of recitation method on mathematical reasoning ability and student self confidence

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**Abstract:** Mathematics is one of the basic sciences that has an important role in the world of education. In general, the purpose of learning mathematics is to help students prepare themselves to be able to face changing circumstances in life and in an ever-evolving world, through practicing acting on the basis of logical, rational and critical thinking and preparing students to be able to use mathematics and a mathematical mindset. in everyday life and in studying various sciences. The aims of this study were (1) to determine the effect of the use of the recitation method on the mathematical reasoning abilities of grade VI elementary school students; (2) to determine the effect of using the recitation method on the self-confidence of VI elementary students. The method that researchers used in this study was quasi-experimental (*quasi-experimental*). Sampling in this study using purposive sampling technique*, while for* data analysis researchers used the normality test, homogeneity test, correlation analysis, simple linear regression analysis and t test. The results showed that there is an effect of the recitation method on students' mathematical reasoning abilities of 19.7% and the average value of mathematical reasoning abilities in the experimental class is better than the average value of mathematical reasoning abilities in the control class. There is an effect of the recitation method on students' self-confidence of 51.2%.

**Keywords:** Recitation, Mathematical Reasoning and Self Confidence.

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## INTRODUCTION

Based on the purpose of National Education, namely to educate the nation, it is only natural that education becomes a tool for educating the nation. The goals of our national education which come from the various cultural roots of the Indonesian people are contained in the Law on the National Education System, namely Law No. 20 of 2003. In the National Education System Law no. 20 of 2003, it is stated: "national education aims to develop the potential of students to become human beings who believe in and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become citizens of a democratic country, and responsible''. (Sisdiknas, 2003). In line with these national education goals, it can be said that mathematics is one of the most important subjects because mathematics lessons have the goal of creating students to think logically, rationally, critically, scientifically and broadly so that they can achieve the expected goals (Soekadijo, 2005).

Mathematics is one of the basic sciences that has an important role in the world of education. In general, the purpose of learning mathematics is to help students prepare themselves to be able to face changing circumstances in life and in an ever-evolving world, through practicing acting on the basis of logical, rational and critical thinking and preparing students to be able to use mathematics and a mathematical mindset in everyday life and in studying various sciences. Tinggih (Suherman, 2009:119) suggests that the word mathematics means "knowledge obtained by reasoning". This is meant not to mean that other knowledge is obtained not through reasoning, but in mathematics it places more emphasis on activities in the world of ratios (reasoning), whereas in other sciences it places more emphasis on the results of observations or experiments in addition to reasoning.

According to (Soekadijo, 2005) reasoning is a form of thought. Meanwhile, (Hardjosatoto and Asdi, 2009) define reasoning as the process of the human mind trying to arrive at a new explanation from something or other information that is already known and the new information must be a continuation of something or some of the original information (Soekadijo, 2005: 3). Ruseffendi (Suherman, 2008: 20) argues that mathematics is formed as a result of human thought related to ideas, processes and reasoning. Reasoning is a thinking process that is done in a way to draw conclusions. Mathematical reasoning is important for knowing and doing math. The ability to reason enables students to solve problems in everyday life and increases self-confidence by thinking mathematically. Even according to (Krulick and Sadiq 2004: 127) explains reasoning (way of thought or reasoning) as: a thinking process that tries to relate known facts or evidence to a conclusion. According to (Lestari & Andinny, 2020) mathematics learning that can develop reasoning skills is mathematics learning that provides flexibility of thinking to students so that it can provide quality learning.

Therefore, mastery of mathematics at school can be a provision for students to improve students' mathematical reasoning abilities. Based on the results of observations, in fact there are still many students who are unable to use logical reasoning power to solve a mathematical problem so that many students are less interested in teaching mathematics. According to Ellis and Hunt (Suherman, 2009: 57) argued that. Some form of reasoning is usually part of problem solving itself. Therefore the researcher can conclude that students have difficulty solving problem solving problems because these students have low reasoning abilities.

Learning activities should be oriented towards how students become aware, how students become able and skilled at doing something, and live together and work together, which in the end it is hoped that students will understand their identity which is in accordance with national education goals and one of the four pillars of education according to UNESCO. namely learning to be.

The existence of self-concept, self-confidence (self-efficacy) which is manifested in the mindset and actions of curiosity, honesty, willingness to accept opinions, skepticism,

openness, independence, and making good decisions is a reflection of a scientific attitude that so far should be developed through the educational process mathematics at school and outside of school.

The concept of self-confidence refers to the beliefs possessed by individuals or students to be able to complete a certain specific task and beliefs about the results that will be obtained later. (Rifa'i & Lestari, 2017) there are six aspects that indicate a person has self-confidence, namely belief in their abilities, optimistic, objective, responsible, rational, and realistic. Quite a lot of research shows that self-confidence influences academic motivation, learning and learning achievement (Pajares, 2005), even success in various fields such as economics, computers, athletics, engineering, and health.

Based on this it can be said that self-confidence is an important factor to be studied related to aspects of individual identity. Regarding academic achievement and one's success to date, almost everyone believes that in order to achieve academic achievement or high academic achievement, intelligence is needed/Intelligence Quotient (IQ) which is a symbol of one's success in the future.

Self-confidence is a skill that can be trained and taught to get better, while a person's intellectual intelligence cannot be improved (Bandura, 2006). For this reason, students need to be trained and taught how to develop their self-confidence by providing learning experiences through learning. So far, the learning carried out by the teacher still tends to be dominated by the teacher (direct learning), where students only accept and use the principles or concepts that have been taught as solutions in problem solving. Students in solving problems, will follow the rules of solving these problems. The problems presented are well structured so that the concepts that will be used to solve these problems are clearly visible. Thus, in direct learning students do not feel challenged to find solutions to the problems presented. This will have an impact on the lack of maximum reasoning abilities and self-confidence of students.

Based on the results of observations made at one of the Elementary Schools, it turned out that there were still many Grade VI students who had low reasoning abilities. This is shown from the observation of a total of 36 students, 11 students (30.55%) were able to present mathematical statements, 8 students (22.22%) were able to draw conclusions, 7 students were able to draw conclusions (19.45 %). The learning outcomes of students who meet the minimum completeness criteria (KKM) are also still low. Of the 36 students, only 10 students (27.78%) scored ≥ 70.

One learning model that can be used to accommodate students in developing their potential, such as reasoning abilities and self-confidence, includes the recitation method. The recitation method (assignment) is a teaching method carried out by the teacher by giving special assignments to students to do something outside of class hours (Alipandie, 2004: 91). By using this method, it is hoped that students will be able to understand the material provided by the teacher and the learning process is not only carried out in the school environment but can be carried out in any place, be it in tourism or others (Habibulloh & Nuruddin, 2021). As research conducted by (Rahayu, 2007) the effect of the recitation method using student worksheets on mathematics learning outcomes in terms of students' initial abilities. From the results of the research, it was found that there were significant differences in the learning achievement in the field of Mathematics between students who were given the treatment of learning using a combination of recitation methods and students who were not treated with this learning method.

In addition, this recitation method is used with the aim that students have more solid learning outcomes, because students carry out exercises while doing assignments, so that students' experiences in learning something can be more integrated. This happens because students explore different situations or experiences, when experiencing new problems. Besides that, to acquire knowledge by carrying out tasks will broaden and enrich the knowledge and reasoning abilities of students at school.

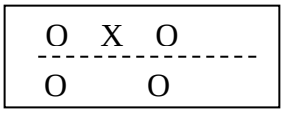


**FIGURE 1.** *Design the static - group pretest - posttest*

By carrying out assignments, students are actively learning and motivated to learn even better, foster initiative and have high confidence in the results obtained from the task. The assignments given or that must be done by students are expected to be able to awaken and increase students' self-confidence to always take advantage of their free time to do things that support their learning, by filling in useful and constructive activities. Assignments become one of the considerations for teachers in providing assessments of students. Thus the task also has a contribution in the final assessment of student learning outcomes. The results of assignments done by students outside of class hours will be accounted for. Accountability for the tasks given is in the form of explaining subject matter, discussing questions and class discussions so as to increase the willingness and desire of students to want to relearn the lessons they have learned before. By themselves students have tried to deepen their understanding of the subject matter.Based on the description of the background of the problem above, this study aims to determine the effect of using the Recitation Method on the reasoning abilities and self-confidence of elementary students.

## METHODS

### Research Design

This research is a quantitative study using an experimental research design with quasi-experimental methods. The selection of subjects is not grouped randomly, but is accepted as is [22]. The consideration for selecting a quasi-experimental is because the existing classes have been preformed through an entrance test selection, so that random grouping is no longer carried out. The quasi-experimental research design used was *the static group pretest-posttest design* with the following design pattern. Classification: X : Recitation Method Learning; O : Mathematical Reasoning Ability Test which is used as a pretest and posttest; ------ : Dotted line indicates that the selection of subjects is not random. This design involves two classes, namely 1) the experimental class by giving treatment, namely recitation learning; 2) control class with direct learning.

### Participant

The population in this study were all students of class VI SD. The sample selection was carried out by *purposive sampling*. In this study, two classes will be selected, namely one class as the experimental class and one control class.

### Material

The instruments in this study consisted of two types of instruments, namely test instruments in the form of essay test questions that aim to measure mathematical reasoning abilities and self-confidence. Before being used for the pretest and posttest, the mathematical reasoning questions were tested and analyzed for validity, reliability, discriminatory power and level of difficulty. Research data processing using *gain test* and *independent sample t-test*.

## Procedure

Data collection was carried out during observations of teaching and learning activities for 3 meetings and then calculated to determine whether students' learning activities using the recitation learning method were included in the good criteria or not. In this research, students' mathematical reasoning abilities and self-confidence were examined, which were tested on a scale. After completing the observation of the implementation of activities at the school, the researcher carried out the results of the normality test, the results of the homogeneity test, the correlation test, the linearity test, the simple linear regression test, the coefficient of determination test, which then produced some data based on the results of the questionnaire which was distributed to students to be able to find out about students' sense of self-confidence and activeness in applying the recitation method in mathematics learning.

## Data Analysis

Data analysis in this study used a pseudo-experimental method, where and the selection of subjects were not randomly grouped but accepted as they were. In research using this pseudo-experiment using instruments, namely pretest and post test which aims to measure students' reasoning ability and self-confidence. The instrument is held pretest to determine the initial ability of students regarding the learning delivered by the teacher. the results of the students' mathematical reasoning abilities in the experimental class and the control class. From the figure it can be seen that the value of the control class is higher than the value of the experimental class. Posttest data is given with the intention of whether the students have understood and understood the material just given by the teacher. The benefit of holding this post test is to get an overview of the abilities achieved after the end of the lesson delivery. The results of this post test are compared with the results of the pre test that has been carried out so that it will be known how far the effect or influence of the teaching has been carried out, the posttest result value data on students'.

## RESULTS

The pretest data is given before the teaching activities are given. The benefit of holding a pre-test is to find out students' initial abilities regarding the lesson being delivered. By knowing the initial abilities of these students, the teacher will be able to determine how the lesson will be delivered later. The data is presented in the form of table 1. Based on table 1, it was obtained that the pretest value for the experimental class had a range of 32.5 with the highest value of 80 and the lowest value of 47.5, the average value obtained was 62.43. While the data obtained based on the pretest value of the control class has a range of 30 with the highest value of 52.50 and the lowest value of 82.50, the average value obtained is 66.46.

**TABLE 1.** *Pretest reasoning classexperiment and control results*

| Mark | Pretes Experiment | Pretest Control |
|---|---|---|
| Lowest | 47.50 | 52.50 |
| Highest | 80.00 | 82.50 |
| **Average** | **62,44** | **66.46** |

**TABLE 2.** *Posttest Reasoning Results of Experimental and Control Classes*

| Mark | Pretes Experiment | Pretest Control |
|---|---|---|
| Lowest | 65.00 | 57.50 |
| Highest | 95.00 | 87.50 |
| **Average** | **78,26** | **74,17** |

The picture above shows the results of the students' mathematical reasoning abilities in the experimental class and the control class. It can be seen that the value of the control class is higher than the value of the experimental class. Posttest data is given with the intention of whether the students have understood and understood the material just given by the teacher. The benefit of holding this post test is to get an overview of the abilities achieved after the end of the lesson delivery. The results of this post test are compared with the results of the pre test that has been carried out so that it will be known how far the effect or influence of the teaching has been carried out, the posttest result value data on students' reasoning abilities can be seen in table 2 below. Based on table 2, it is obtained that the posttest value for the experimental class has a range of 30 with the highest value of 95.0 and the lowest value of 65.00, the average value obtained is 78.26. While the data obtained based on the posttest value of the control class has a range of 30.00 with the highest value of 87.50 and the lowest value of 57.50, the average value obtained is 74.17. Here it is presented in the form of the following image.

The picture above shows the results of the students' mathematical reasoning abilities in the experimental class and the control class. From the picture it can be seen that there is a change in the value of students' mathematical reasoning abilities from the results of the pre-test and post-test. The post-test value is greater than the pre-test value so that it can be said that there is an increase in students' mathematical reasoning abilities in the experimental class and the control class

Based on the results of the mathematical reasoning abilities above, the results of the mathematical reasoning ability tests in the control class and experimental class are as follows. Based on table 3 the maximum values obtained from the *pretest results* in the control class and the experimental class, namely 80.0 and 85.0 with an average value of 66.11 and 75.63, while the maximum values obtained from the *posttest results* in the control class and the experimental class, namely 77.5 and 95.0 with an average value of 62.71 and 78.61. The values obtained based on indicators of mathematical reasoning ability are as follows.

**TABLE 3.** *Mathematical reasoning ability test results*

| | **N** | **Minimum** | **Maximum** | **Means** | **std. Deviation** |
|---|---|---|---|---|---|
| Pretes_Kontrol | 36 | 55.00 | 80.00 | 66.1111 | 7.10745 |
| Pretest_Experiment | 36 | 62.50 | 85.00 | 75.6250 | 5.48944 |
| Postes_Kontrol | 36 | 47.50 | 77.50 | 62.7083 | 7.86890 |
| Postes_Experiments | 36 | 65.00 | 95.00 | 78.6111 | 7.71002 |
| Valid N (listwise) | 36 | | | | |

**TABLE 4.** *Mathematical reasoning ability test results based on indicators*

| | **Control Class *Pretest*** | | | | **Experiment Class *Pretest*** | | | |
|---|---|---|---|---|---|---|---|---|
| **Indicator** | **1** | **2** | **3** | **4** | **1** | **2** | **3** | **4** |
| **Minimum Score** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| **Max Score** | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| **Average** | 2.50 | 2.66 | 2.83 | 2.72 | 2.37 | 2.52 | 2.74 | 2,42 |
| **Standard Deviation** | 0.59 | 0.64 | 0.63 | 0.69 | 0.66 | 0.68 | 0.87 | 0.60 |
| **Percentage** | 63% | 66% | 71% | 68% | 59% | 63% | 68% | 60% |

Information:
Indicator 1 : Submitting conjectures
Indicator 2 : Estimating answers and solution processes
Indicator 3 : Draw conclusions

Indicator 4 : Checking the validity of an argument

In addition to the results of the *pretest* and *posttest scores*, gain values or scores for improving mathematical reasoning abilities were also obtained. The following is the result of the gain value.

## Data on the Observation Activity Results of the Application of the Recitation Method

All aspects observed by *the observer* during the teaching and learning activities during the three meetings were then calculated in order to find out the students' activities while studying using the recitation learning method included in the criteria of being good or not. This assessment is very useful for teachers to improve learning activities at the next meeting. The following is the result of observing student activity during learning using the recitation learning method. Based on the table above, the results of student activity at the first meeting obtained the largest percentage in the Less category at 70%, the Enough category at 43.33% and the good category at 6.67%. At the second meeting there was an increase in student activity with the largest percentage in the Enough category at 73.33%, the good category at 26.67% and the Less category at 20.00%. At the third meeting there was also an increase in student activity with the largest percentage in the good category at 76.66%, the Enough category at 36.67% and the Less category at 6.67%.

**TABLE 5.** *Student activity results data*

| Percentage | Meeting 1 | Meeting 2 | Meeting 3 |
|---|---|---|---|
| Good | 6.67% | 26.67% | 76.66% |
| Enough | 43.33% | 73.33% | 36.67% |
| Not enough | 70.00% | 20.00% | 6.67% |

**TABLE 6.** *Results of filling in student self-confidence scale*

| | N | Minimum | Maximum | Means | std. Deviation |
|---|---|---|---|---|---|
| Belief_Scale | 36 | 32.50 | 91.25 | 70.2083 | 14.21927 |
| Valid N (listwise) | 36 | | | | |

**TABLE 7.** *The results of filling in the student's self-confidence scale for each indicators*

| Indicator | Earned Score | Percentage | Criteria |
|---|---|---|---|
| Students believe they can understand difficult material | 385 | 66.84% | Good |
| Students believe they can overcome obstacles in the level of difficulty of the tasks they face | 300 | 69.44% | Good |
| Students believe they can achieve high achievements. | 216 | 75.00% | Good |
| Students believe they have the ability in a variety of tasks. | 413 | 71.70% | Good |
| Students believe bad experience will not hinder the achievement of success | 302 | 69.91% | Good |
| Students believe they can do assignments in various situations and conditions. | 305 | 70.60% | Good |
| Students believe they can complete the task completely. | 95 | 65.97% | Good |
| Average | | 64.08% | Good |

## Student Self Confidence Results

The student self-confidence scale contains statements to assess student independence. Filling in the student independence scale was carried out in the experimental class using the recitation learning method. The following is the result of filling in the student's self-confidence scale. Table 6 shows that the minimum and maximum scores obtained from filling in the student's self-confidence scale are 32.50 and 91.25 with an average of 70.21.

Apart from the results of filling in the student's overall self-confidence scale, the results of filling in the student's self-confidence scale were also obtained based on each indicator that the researcher took in this study, namely as follows.

**Effect of Recitation Learning Method on Mathematical Reasoning Ability**

The results of the analysis in the experimental class to determine the effect of the recitation learning method on students' mathematical reasoning abilities will be presented as follows.

**Normality test**

Data normality testing was carried out to find out the data obtained from observations of student activities in the recitation learning method and the *posttest scores* of mathematical reasoning abilities in the experimental class came from populations that were normally distributed or not. The hypothesis in the normality test is as follows.

$H_0$ : data comes from a normally distributed population.

$H_1$ : data comes from a non-normally distributed population.

**TABLE 8.** *Student activity normality test results and posttest grades of experimental class reasoning ability*

| | Kolmogorov-Smirnov [a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistics | df | Sig. | Statistics | df | Sig. |
| Activity | .147 | 36 | 084 | .952 | 36 | .119 |
| Posttest | .121 | 36 | .200 * | .964 | 36 | .283 |

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

Based on table 8 for the data normality test, a significant value was obtained for the experimental class activity value of 0.084 and a significant value for the experimental class post-test value of 0.200. From the calculation of the normality test, the significant value of the test is more than the significant level taken, namely 0.05, then H0 is accepted or it can be said that the student activity data and post-test data in the experimental class come from populations that are normally distributed.

**TABLE 9.** *pretest value normality test results*

| | Kolmogorov-Smirnov [a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistics | df | Sig. | Statistics | df | Sig. |
| Pretest_Control | .139 | 36 | .078 | .958 | 36 | .185 |
| Pretest_Experiment | .152 | 36 | 053 | .965 | 36 | .305 |

a. Lilliefors Significance Correction

**TABLE 10.** *Normality test results for control class posttest value*

| | Kolmogorov-Smirnov [a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistics | df | Sig. | Statistics | df | Sig. |
| Postes_Kontrol | .154 | 36 | .060 | .949 | 36 | 099 |

a. Lilliefors Significance Correction

Based on table 9, it was obtained that the significant value of the pretest value for the control class was 0.078 and the significant value for the pretest value for the

experimental class was 0.053. From the calculation of the normality test, the significant value obtained is more than the significant level taken, then H0 $_{is}$ accepted or it can be said that the pretest value data obtained comes from a normally distributed population.

Based on table 10, it was obtained that the significant value of the control class *posttest* was 0.060. From the calculation of the normality test, the significant value obtained is more than the significant level taken, then H0 $_{is}$ accepted or it can be said that the *posttest value data* from the control class comes from a normally distributed population.

**TABLE 11.** *Normality test results of student's self-confidence scale*

| | **Kolmogorov-Smirnov [a]** | | | **Shapiro-Wilk** | | |
|---|---|---|---|---|---|---|
| | Statistics | df | Sig. | Statistics | df | Sig. |
| Activity | .147 | 36 | 084 | .952 | 36 | .119 |
| Self confidence | .231 | 36 | .100 | .905 | 36 | 005 |

a. Lilliefors Significance Correction

Based on table 11 for the data normality test, a significant value was obtained from the student's self-confidence scale score of 0.100. From the calculation of the normality test, the significant value obtained is more than the significant level taken, namely 0.05, then H $_0$ is accepted or it can be said that the student activity data and the student self-confidence scale data in the experimental class come from populations that are normally distributed.

## Homogeneity Test

The homogeneity test was carried out to find out whether the *pretest* and *posttest values* obtained from the control class and the experimental class had the same variance or not. The homogeneity test results can be seen in the table 12. Based on the table above, it can be seen that the level of significance or the mean probability value with the Levene Test is above 0.05 (pretest questions of 0.070 > 0.05 and posttest questions of 0.745 > 0.05). This means that the pretest data has a homogeneous variance.

**TABLE 12.** *Calculation results of pretest and posttest value homognity tests*

| | | **Levene Statistics** | **df1** | **df2** | **Sig.** |
|---|---|---|---|---|---|
| Pretest | Based on Means | 5,715 | 1 | 70 | .070 |
| | Based on Median | 5,750 | 1 | 70 | .069 |
| | Based on Median and with adjusted df | 5,750 | 1 | 69,858 | .069 |
| | Based on trimmed mean | 5,676 | 1 | 70 | .070 |

**TABLE 13.** *Continuan of tabel 12 calculation results of pretest and posttest value homognity tests*

| | | | | | |
|---|---|---|---|---|---|
| Posttest | Based on Means | .106 | 1 | 70 | .745 |
| | Based on Median | 089 | 1 | 70 | .767 |
| | Based on Median and with adjusted df | 089 | 1 | 69,472 | .767 |
| | Based on trimmed mean | .120 | 1 | 70 | .730 |

## T-test

Based on the results of the normality test and homogeneity test, it was found that the data were normally distributed and had a homogeneous variance, so that the average similarity

test could be continued using the two independent sample test (Independent Sample T-Test) with the aim of knowing whether there was a difference *in* the average mean between the test results in the experimental class and the control class with a significance level of 0.05. The hypothesis in the two-mean similarity test is as follows:

$H_0$ : There is no significant difference between the mathematical reasoning of students who use the recitation method and students who use conventional methods.

$H_1$ : Mathematical reasoning for students who use the application of the recitation method is better than mathematical reasoning for students who use conventional learning methods.

The provisions of the test criteria are if the probability value (sign.) is greater than the significance level of 0.05 then HO is rejected and if the probability value is greater than the significance level of 0.05 then HO is accepted.

**TABLE 14.** *Independent sample t test results pretest value*

| | | | Pretest Value | |
|---|---|---|---|---|
| | | | **Equal variances assumed** | **Equal variances not assumed** |
| Levene's Test for Equality of Variances | F | | .981 | |
| | Sig. | | .325 | |
| t-test for Equality of Means | Q | | 2.114 | 2.114 |
| | Df | | 70 | 69,369 |
| | Sig. (2-tailed) | | 038 | 038 |
| | Mean Differences | | 1611 | 1611 |
| | std. Error Difference | | .762 | .762 |
| | 95% Confidence Interval of the Difference | Lower | 091 | 091 |
| | | Upper | 3.131 | 3.131 |

Based on the calculation of the *independent sample t test* in table 14, a significant value *of equal variances not assumed* is 0.038. This significant value is less than the significant level taken, so H0 is rejected, so it can be said that there is a difference in the average mathematical problem solving abilities of the control class and the experimental class.

**TABLE 15**. *Independent sample t test results posttest value*

| | | | Posttest Value | |
|---|---|---|---|---|
| | | | **Equal variances assumed** | **Equal variances not assumed** |
| Alevene's Test for Equality of | F | | .157 | |
| | Sig. | | .693 | |
| t-test for Equality of Means | Q | | -2,193 | -2,193 |
| | Df | | 70 | 69,779 |
| | Sig. (2-tailed) | | 032 | 032 |
| | Mean Diferences | | -1,639 | -1,639 |
| | Std. Error Diference | | .747 | .747 |
| | 95% Confidence Interval Of the Difference | Lower | -3,129 | -3,129 |
| | | Upper | -.148 | -.148 |

Based on the calculation of the *independent sample t test* in table 15, a significant value *of equal variances not assumed* is 0.038. This significant value is less than the significant level taken, so H0 is rejected, so it can be said that there is a difference in the

average mathematical problem solving abilities of the control class and the experimental class.

## Correlation Test

The correlation test was carried out to determine the closeness of the relationship between student activity scores and *posttest scores* in the experimental class. The hypothesis in the correlation test is as follows.

$H_0$ : *r = 0* (there is no relationship between student activity in the recitation learning method with students' mathematical reasoning abilities).

$H_1$ : *r ≠ 0* (there is a relationship between student activity in the recitation learning method with students' mathematical reasoning abilities).

**TABLE 16**. *Correlation test results of student activity score and posstest score of experiment class mathematical reasoning ability*

| | | **Activity** | **Posttesm Experiments** |
|---|---|---|---|
| Activity | Pearson Correlation | 1 | .901 ** |
| | Sig. (2-tailed) | | .000 |
| | N | 36 | 36 |
| Posttest Experiment Reasoning ability | Pearson Correlation | .901 ** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 36 | 36 |

**. Correlation is significant at the 0.01 level (2-tailed).

Based on table 16 for the correlation test, a significant value was obtained for the correlation test between the student activity scores and the experimental class' post-test score of 0.00. From these calculations, the significant value obtained is less than the significant level taken, so $H0_{is}$ rejected or it can be said that the student activity score and the *posttest score* of the experimental class' mathematical reasoning abilities have a close relationship.

## Linearity Test

The linearity test was carried out to determine the value of student activity and the *posttest value* of the experimental class' mathematical reasoning abilities had equations with a significantly linear pattern or not. The hypothesis in the linearity test is as follows.

$H_0$ : linear patterned regression model.

$H_1$ : non-linear patterned regression model.

The following are the results of the linearity test of student activity values in the recitation learning method and the *posttest scores* of mathematical reasoning abilities in the experimental class.

**TABLE 17.** *Linearity test results for activity values and posttest class experimental values*

| **Model** | | | **Sum of Squares** | **df** | **MeanSquare** | **F** | **Sig.** |
|---|---|---|---|---|---|---|---|
| posttest_ Experiment * Activity | Between Groups | (Combined) | 343,106 | 10 | 34,311 | 30,062 | .020 |
| | | Linearity | 301,368 | 1 | 301,368 | 264,049 | 040 |
| | | Deviation from Linearity | 41,738 | 9 | 4,638 | 4,063 | .503 |
| | Within Groups | | 28,533 | 25 | 1,141 | | |
| | Total | | 371,639 | 35 | | | |

Based on table 17. for the linearity test, a significant *deviation from linearity value was obtained* for the linearity test for student activity scores and the experimental class post-test score of 0.003. From these calculations, the significant value for the linearity test is more than the significant level taken, so H0 is accepted or it can be said that student activity in the recitation learning method with students' mathematical reasoning abilities has a linear equation.

**Simple Linear Regression Test**

A simple linear regression test was carried out to determine whether there was an influence or not from the student activity scores on the experimental class's posttest scores. The hypothesis in the simple linear regression test is as follows.

$H_0$ : $r = 0$ (there is no effect of the recitation learning method on students' mathematical reasoning abilities).

$H_1$ : $r \neq 0$ (there is an effect of the recitation learning method on students' mathematical reasoning abilities).

The following are the results of a simple linear regression test.

**TABLE 18.** *Simple Linear regression test results of student activity values and experimental class posttest scores*

| Model | | Sum of Squares | Df | MeanSquare | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 321,303 | 1 | 321,303 | 145,814 | .000 [a] |
| | Residual | 74,919 | 34 | 2,204 | | |
| | Total | 396,222 | 35 | | | |

a. Predictors: (Constant), Postes_Experiments

b. Dependent Variable: Activity

Based on table 18 for the simple linear regression test, the value of student activity and the *posttest value* of the experimental class obtained a significant *regression value* of 0.000. From these calculations, the significant value obtained is less than the significant level taken, so $H0_{is}$ rejected or it can be said that there is an influence of the recitation learning method on students' mathematical reasoning abilities. Then, to determine the significance of the effect of the regression coefficients can be seen in the following *Coefficients Table.* The regression equation is obtained $\hat{Y} = -6{,}886 + 0{,}930X$, by comparing t count on the X coefficient or regression coefficient and t table, it is obtained t count 12.075 > t table 2.028 meaning that the regression coefficient has a significant effect.

**TABLE 19.** *Test coefficients*

| | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| **Model** | | B | std. Error | Betas | **t** | **Sig.** |
| 1 | (Constant) | -6,886 | 2,423 | | -2,842 | 008 |
| | Postes_reasoning ability | .930 | 077 | 901 | 12075 | .000 |

a. Dependent Variable: Activity

**Determination Coefficient Test**

The coefficient of determination test (R *Square*) was carried out to determine the influence of student activity scores on the *posttest scores* of the experimental class or how much

student activity in the recitation learning method affected students' mathematical reasoning abilities. The following is the result of the coefficient of determination test.

**TABLE 20.** *Test Results for the Coefficient of Derermination of Student Activity Score and Posttest Score Experimen Class*

| Model | R | R Square | Adjusted R Square | std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .901 [a] | .811 | .805 | 1,484 |

a. Predictors: (Constant), Postes_Experiments

Based on table 20 for the test of the coefficient of determination of the value of student activity and the *posttest value* of the experimental class, the R *Square value* is 0.811 or 81.1%. Thus, it can be concluded that student activity in the recitation learning method has an effect of 81.1% on students' mathematical reasoning abilities.

**The Effect of Recitation Learning Methods on Students' Self-Confidence**

The results of research in the experimental class to determine the effect of the recitation learning method on students' self-confidence will be presented as follows,

**Normality test**

The data normality test was carried out to find out the data obtained from the results of observing student activities in the recitation learning method and the results of filling out the self-confidence scale of students in the experimental class came from populations that were normally distributed or not. Based on the results of the data normality test in Table 10 and Table 12, it was found that the data came from a normally distributed population.

**Correlation Test**

The correlation test was carried out to determine the closeness of the relationship between student activity scores and student self-confidence values in the experimental class. The hypothesis in the correlation test is as follows.

$H_0$ : $r = 0$( there is no relationship between student activity in the recitation learning method and student self-confidence).

$H_1$ : $r \neq 0$( there is a relationship between student activity in the recitation learning method with students' self-confidence).

**TABLE 22.** *Correlation Test Results of Student Activity Values and Student's Self Confidence Value*

| Model | | Activity | Self confidence |
|---|---|---|---|
| Activity | Pearson Correlation | 1 | .732 * |
| | Sig. (2-tailed) | | 048 |
| | N | 36 | 36 |
| Self confidence | Pearson Correlation | .732 * | 1 |
| | Sig. (2-tailed) | 048 | |
| | N | 36 | 36 |

*. Correlation is significant at the 0.05 level (2-tailed).

Based on table 22 for the correlation test, a significant correlation value was obtained between the student's activity value and the student's self-confidence value of 0.048. From these calculations, the significant value obtained is less than the significant level taken, so H0 $_{is}$ rejected or it can be said that there is a relationship between student activity in the recitation learning method and student self-confidence.

**TABLE 23.** *Linearity Test Results of Student Activity Values and Student Self-Confidence Values*

| Model | | | Sum of Squares | df | MeanSquare | F | Sig. |
|---|---|---|---|---|---|---|---|
| Posttest_Experiment * Activity | Between Groups | (Combined) | 343,106 | 10 | 34,311 | 30,062 | .020 |
| | | Linearity | 301,368 | 1 | 301,368 | 264,049 | 040 |
| | | Deviation from Linearity | 41,738 | 9 | 4,638 | 4,063 | .503 |
| | Within Groups | | 28,533 | 25 | 1,141 | | |
| | Total | | 371,639 | 35 | | | |

Based on table 23 for the linearity test, a significant *deviation from linearity value was obtained* in the linearity test for student activity values and the student's self-confidence score was 0.503. From these calculations, the significant value of *the deviation from linearity of the* linearity test is more than the significant level taken, so $H_0$ is accepted or it can be said that student activity in the recitation learning method with student self-confidence has a linear equation.

## Simple Linear Regression Test

A simple linear regression test was carried out to determine whether there was an influence or not from the value of student activity on the value of student self-confidence. The hypothesis in the simple linear regression test is as follows.

$H_0$ : $b = 0$( there is no effect of the recitation learning method on students' self-confidence).

$H_1$ : $b \neq 0$( there is an influence of the recitation learning method on students' self-confidence).

The following are the results of a simple linear regression test.

**TABLE 24.** *Simple Linear Regression Test Results based of Student Activity Values and Student Self-Confidence Value*

| Model | | Sum of Squares | Df | MeanSquare | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 43,658 | 1 | 43,658 | 4,210 | .048 [a] |
| | residual | 352,564 | 34 | 10,370 | | |
| | Total | 396,222 | 35 | | | |

a. Predictors: (Constant), Self_Confidence

b. Dependent Variable: Activity

**TABLE 25.** *Confficients*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|---|
| | | B | std. Error | Betas | t | Sig. |
| 1 | (Constant) | -44,043 | 4,906 | | -8,977 | .000 |
| | Student activity | 3,283 | .160 | .962 | 20,543 | .000 |

a. Dependent Variable: Self-confidence

Based on table 24 for the simple linear regression test, the value of student activity and the value of student self-confidence obtained a significant *regression value* of 0.048. From these calculations, the significant value for the simple linear regression test is less than the significant level taken, so H0 is rejected or it can be said that there is an influence of the recitation learning method on students' self-confidence. Then, to determine the significance of the effect of the regression coefficients can be seen in the following

Coefficients Table. Coefficients table, the regression equation is obtained $\hat{Y} = -44.043 + 3.283X$, by comparing t count on the X coefficient or regression coefficient and t table, it is obtained t count 20,543 > t table 2.028, meaning that the regression coefficient has a significant effect.

**Determination Coefficient Test**

The coefficient of determination test (R *Square*) was carried out to determine the influence of student activity scores on student self-confidence scores or how much student activity in the recitation learning method affected student self-confidence. The following is the result of the test of the coefficient of determination of the value of student activity and the value of student self-confidence.

**TABLE 26.** *The Results for the Coefficient of dEtermination of Student Activity Values and Student Self-Congidence Values*

| Model | R | R Square | Adjusted R Square | std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .732 [a] | .536 | .184 | 3,220 |

a. Predictors: (Constant), Self_Confidence

*Square value* of 0.536 or 53.6% is obtained. So, it can be concluded that student activity in the recitation learning method has an effect of 53.6% on student self-confidence.

**Student Activity in Recitation Learning Method**

In the following, the results of activities in learning will be presented using the recitation learning method for three meetings.

**TABLE 27.** *Results of Student Activities in Learning Using the Recitation Learning Method*

| No | Meeting | Percentage of Student Activity | Criteria |
|---|---|---|---|
| 1. | 1st meeting | 48% | Enough |
| 2. | 2nd meeting | 60% | Enough |
| 3. | 3rd meeting | 74% | Enough |
| | **Average** | **51%** | **Enough** |

Based on table 25, it turns out that there is an increase in student activity from each meeting during learning using the recitation learning method with an average percentage for three meetings of 61% in the sufficient criterion.

**Student Activity Questionnaire Result Data**

Questionnaire distribution was carried out during the learning process. Questionnaire regarding self-confidence and student activity towards the application of the recitation method in learning mathematics. The results of distributing student self-confidence questionnaires are presented in table 28. Based on table 28 above, it can be seen that of all the seven indicators, the average value of the answers of students who stated Strongly Agree was 18.72%, Agree was 49.64%, Doubtful was 25.46%, and the remaining 6.18% stated Disagree, while those who stated Strongly Disagree did not exist. So it can be said that overall the student activity is good.

**TABLE 28.** *Questionnaire Results: Student Activity*

| NO | INDICATOR | ANSWER CHOICES | | | | |
|---|---|---|---|---|---|---|
| | | SS | S | R | TS | STS |
| 1 | Students believe they can understand difficult material | 6.94% | 61.11% | 24.31% | 7.64% | 0.00% |
| 2 | Students believe they can overcome obstacles in the level of difficulty of the tasks they face | 20.37% | 47.22% | 22.22% | 10.19% | 0.00% |
| 3 | Students believe they can achieve high achievements. | 36.11% | 41.67% | 16.67% | 5.56% | 0.00% |
| 4 | Students believe they have the ability in a variety of tasks. | 19.44% | 52.08% | 24.31% | 4.17% | 0.00% |
| 5 | Students believe bad experience will not hinder the achievement of success | 14.81% | 52.78% | 29.63% | 2.78% | 0.00% |
| 6 | Students believe they can do assignments in various situations and conditions. | 16.67% | 53.70% | 25.00% | 4.63% | 0.00% |
| 7 | Students believe they can complete the task completely. | 16.67% | 38.89% | 36.11% | 8.33% | 0.00% |
| | **Amount** | **131.02 %** | **347.45 %** | **178.24 %** | **43.29 %** | **0.00%** |
| | **Average** | **18.72%** | **49.64%** | **25.46%** | **6.18%** | **0.00%** |

## DISCUSSION

### Effect of Recitation Method on Students' Mathematical Reasoning Ability

Based on the results of the correlation test, a significant value was obtained for the correlation test between the student activity scores and the experimental class' post-test score of 0.00. From these calculations, the significant value obtained is less than the significant level taken, so $H0_{is}$ rejected or it can be said that the student activity score and the *posttest score* of the experimental class' mathematical reasoning abilities have a close relationship.

The use of the recitation method in the learning process can support the smooth teaching and learning process and can improve students' mathematical reasoning. This statement is in accordance with Sudjana (2008), that the recitation method is expected to be able to provoke student activity in the teaching and learning process. This is because students are required to complete the tasks assigned by the teacher and must be accounted for. Therefore, it is expected to create educative interactions between teachers and students in the learning process.

The development of students' mathematical reasoning abilities is related to the learning approach applied. The development of reasoning abilities requires learning that is able to accommodate thinking processes, reasoning processes, students' critical attitudes and asking questions. One learning approach that can accommodate the above processes and activities is the recitation method approach. As stated by Sadiq (2004: 17) that the use of the recitation method provides opportunities for students to explore and investigate. By using the recitation method students can be trained and accustomed to being responsible for their own work and solving their own problems so that they can play a role in developing students' mathematical reasoning abilities.

Based on the results of activity regression analysis in the application of the recitation method to mathematical reasoning abilities, it shows that there is an influence of student activity in the application of the recitation method to students' mathematical reasoning abilities of 19.7%. In learning by using the recitation method the researcher gives assignments to students, which are then completed by students with the abilities

they have. Researchers only act as a facilitator who provides direction if there are difficulties. In the process, students are trained to reason, solve problems, learn independently. So the purpose of learning using the recitation method is to train students to reason in their learning process.

The use of recitation methods in learning mathematics can be a means to develop students' reasoning abilities. This method can be used because learning with this method uses problems related to everyday life so that students must be able to find ways to solve them with appropriate steps.

During the learning process, it is known that in general students have demonstrated their reasoning abilities such as making conjectures, manipulating mathematics, compiling evidence, checking the validity of a statement and drawing conclusions. These skills are some of the thinking skills which are the basis for starting the reasoning process. This means that in learning with the recitation method students have demonstrated their reasoning abilities. This is in accordance with research conducted by Nurtafita's research results (2011), that the application of the recitation method can improve students' mathematical reasoning abilities.

At the first meeting of learning mathematics using the recitation method the researcher found that the students were not familiar with the learning carried out by the researcher. This can be seen from the number of students who do not understand the tasks that the teacher has given to students so they do not understand what to do. However, researchers continue to supervise and guide students who experience congestion in completing their assignments.

Apart from being based on the results of the regression test, the effect of the recitation method on mathematical reasoning ability can be seen from the difference in the average value of reasoning ability in the experimental and control classes, where the experimental class is the class that uses the recitation method and the control class is the class that uses conventional learning. Based on the difference test, the average *posttest score* of students' mathematical reasoning abilities in the experimental class was better than the average *posttest score* in the control class.

The recitation method is a way of presenting lesson material by means of the teacher giving assignments to students. This method makes it easy for students to remember lessons so that students can do assignments so that they remember the material as well as solving problems related to the material presented. Basically this recitation is suitable for students who have low learning activity, so that students are used to working on questions so that over time students are active in participating in lessons.

**The Effect of the Recitation Method on Students' Self Confidence**

Based on the results of the analysis of student activity regression tests in the recitation learning method on student self-confidence, it shows that there is an effect of student activity in the recitation method on student self-confidence of 51.2%. In other words, student activity in learning by using the recitation method affects students' self-confidence. This can be seen from the activities of students who are quite good while participating in learning activities using the recitation method, they are used to doing assignments given by the teacher well, asking initiatives and looking for other references if there are difficulties in doing assignments.

The level of confidence that is owned by a student will affect every activity he does. Santrock (2007: 524) argues that students with high levels of self-confidence are more likely to diligently master learning tasks than students who have low levels of self-confidence. This is in line with the opinion of Ormrod (2008: 22) which states that when individuals have the same ability, they believe they can perform a task more likely to achieve success compared to individuals who are not sure they will be successful in that task.

According to Santrock (2007: 524). The beliefs that each individual has are different. Students with a low level of self-confidence will avoid many tasks, especially those that are challenging and difficult, while students who have a high level of self-confidence will diligently try to master the learning task. his self-confidence.

Based on the results of the percentage of students' self-confidence scores for each indicator, the percentage obtained can be seen that of all seven indicators, the average score of students' answers to self-confidence is that they strongly agree by 18.72%, which states that they agree by 49.64%. , which stated Doubtful by 25.46%, and the remaining 6.18% stated Disagree, while those who stated Strongly Disagree did not exist. So it can be said that overall students have good self-confidence in learning mathematics. This is in accordance with research conducted by Rahayu (2007) that the application of the recitation method can increase students' self-confidence.

The teaching and learning process using the recitation method can help students increase their confidence in learning mathematics. In practice, the recitation method emphasizes students to realize the need to learn responsibility in every assignment given by the teacher, both assignments at school and outside of school. One of the internal factors that play a role in the success of the mathematics learning process is the self-confidence of students. High self-confidence in learning can make it easier for students to understand learning material while increasing student activity in the learning process at school.

The use of recitation methods in the learning process is more likely for students to believe that they can succeed in a task when they have succeeded in that task and other similar tasks in the past (Ormrod, 2008: 23). Even so, there may be differences in each student in seeing how far they consider previous failures and successes. Students will develop higher self-confidence when they successfully perform challenging tasks. If students have developed high self-confidence, of course the occasional failure will not reduce their optimistic attitude.

When students experience setbacks in the process of achieving success, students learn that they will achieve success if they try. Experienced failure will also provide useful information to improve performance in accordance with the statement as stated by Ormrod (2008: 24) they have developed resilient self-efficacy (self-efficacy, strong and resilient self-confidence).

Thus the use of the recitation method to increase students' self-confidence is appropriate, because with the use of the recitation method students have more confidence in their abilities to be accountable for their work, because students with high self-confidence tend to learn more and achieve more compared to individuals who have low self confidence. This is true even when the actual skill level is the same as Ormrod (2008: 22). Therefore, individuals who have the same ability, those who believe they can complete a task are more likely to complete the task successfully than those who are not sure they can achieve success.

**Student Activity on the Recitation Method**

Student activity is a social reaction carried out by students or students in response to influences or stimuli within themselves from repetition situations carried out by others, such as the teacher's repeated actions in the learning process or from social phenomena around their school. In this case the activity in question is the student's reaction and response to the ongoing learning process using the recitation method. student activity in applying the recitation method went well, this can be seen from the percentage of student activity questionnaires which always increase at each meeting. At the first meeting the students were not familiar with the recitation method, they were still confused about learning to use the recitation method. The second meeting students began to adapt learning by using the recitation method in learning, so that there was an increase in the percentage of student activity even though it was still in the sufficient criteria. This can be

seen from the increasing percentage of student activity with good criteria. This is in line with the statement put forward by Sudjana (2008) which states that the recitation method has a broader meaning and makes children active in learning both individually and in groups.

Student activity towards the recitation method in terms of several indicators measured through a questionnaire can be seen that from all ten statements, the average value of student activity answers is 29.44% which states Agree is 46.39%, and the rest 24.17% stated Disagree, while those who stated Strongly Disagree did not exist. So it can be said that overall students have good activity towards the application of the recitation method.

Student activity is an important interaction in learning activities, because with good student activities they can achieve their learning goals. Student activity in the recitation learning model is going well, this can be seen from the percentage of student activity which always increases at each meeting. At the first meeting the students were not familiar with the recitation learning model, they were still confused about learning using the recitation learning model. So it only gets a small percentage with sufficient criteria. In the second meeting students began to adapt to the recitation learning model, so that there was an increase in the percentage of student activity even though it was still in the sufficient criteria. Then, at the third meeting the students were getting used to the recitation learning model, they began to feel that the problem-based learning model played a role in helping to develop problem-solving skills. This can be seen from the increasing percentage of student activity with good criteria. Based on this description, the recitation learning model can increase student activity as indicated by an increase in the percentage of student activity at each meeting. This is in line with the opinion of Pangestuningsih (2013), which states that the use of recitation learning models can increase student activity which can be proven by increasing the percentage of student activity.

Most of the student activities are included in the sufficient and good criteria. It's just that there are a number of activities that are included in the unfavorable criteria, including student activities in presenting the results of discussions in front of the class and student activities in arguing about the problems presented. The lack of good activity is due to students' lack of familiarity with presentation activities, so they do not appear confident and even enthusiastic in presentation activities. In addition, they are also less used to expressing opinions, which causes them to be shy and don't dare to argue when given a problem. While the student activities that are quite prominent in the core activities of the recitation learning model are student activities in discussion, during the discussion activities students look enthusiastic about discussing and working together to exchange ideas to find solutions to the problems given. By discussing students gain new knowledge from the results of exchanging ideas with group members. This is in accordance with Vigotsky's learning theory, where this learning theory states that learning activities in social interaction with friends will help students gain new knowledge.

Low student activity is not necessarily a source of error in teaching material to students. The teacher's ability to deliver inadequate material can cause the class atmosphere to become less attractive and tend to be boring. Inappropriate learning methods can bring an unattractive atmosphere that makes students unhappy which results in decreased activity. It is undeniable that the right way of learning can improve learning outcomes. Therefore the teacher in the learning process must use a variety of approaches and methods so that students feel interested in learning mathematics and in the end they will have activities and interest in mathematics.

A good learning method is a method that is able to lead students to achieve educational goals. Most of the learning models used are conventional. In the conventional learning model students tend to be passive because learning takes place with a lecture system. Student learning activities tend to be silent, listen and record important things from the lesson (Paulina, 2002).

According to Susanto's statement (2008) said activity is a reaction, meaning acceptance or rejection, as well as indifference to what is conveyed by the communicator in his message. Activities can be divided into opinions (opinions) and attitudes, where opinions or opinions are open answers to a problem expressed in spoken words or written. Meanwhile, attitude is a closed reaction emotional and personal nature, is a tendency to react very positive or negative attitude toward certain people, objects, or situations.

## CONCLUSION

There is an effect of the recitation method on students' mathematical reasoning abilities of 19.7% and the average value of mathematical reasoning abilities in the experimental class is better than the average value of mathematical reasoning abilities in the control class. The highest indicator obtained is the indicator drawing conclusions with an average value of 2.74 while the lowest indicator is making conjectures with an average value of 2.37. There is an effect of the recitation method on students' self-confidence of 51.2%. This can be seen from the average student self-confidence questionnaire results of 64.08% with good criteria. The highest percentage in the student self-confidence questionnaire is in the indicator that students believe they can achieve high achievements at 75.00% and the lowest is in the indicator that students believe they can complete assignments thoroughly at 65.97%.

Based on the findings of the problems during the research, the researcher can provide the following suggestions. The allocation of time in the learning process should really be considered so that each stage of learning can be carried out optimally. Because the use of the recitation method requires more time allocation. For teachers who apply the recitation learning method, they must pay attention to students' abilities before applying the recitation method because it is very helpful in the teaching and learning process. For teachers who apply the recitation learning method, they are expected to choose teaching materials that support learning objectives or competencies that must be possessed by students according to the applicable curriculum. Teaching materials must be in accordance with the methods applied in the learning.

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