

## RELATIONSHIP BETWEEN LEARNING FACILITIES, LEARNING INTENSITY, AND SELF-CONFIDENCE WITH STUDENTS 'MATHEMATICS RESULTS OF CLASS VII MTs MUHAMMADIYAH KARANGKAJEN

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### ABSTRACT

Low student learning outcomes are associated with many factors. Learning facilities, learning intensity, and self-confidence are some of the factors associated with learning outcomes. This study aims to determine whether or not a positive and significant relationship between learning facilities, learning intensity, and self-confidence results from learning mathematics students of class VII MTs Muhammadiyah Karangkajen Yogyakarta Semester Even In Academic Year 2016/2017. The population in this research was the students of VII grade in MTs Muhammadiyah Karangkajen Yogyakarta semester even in the academic year 2016/2017, consisted of class VIIA, VIIB, VIIC, VIID, VIIE totaling 145 students. Trial class and sample class were taken by random sampling technique. They obtained trial class from VIIA and sample class from VII C. The writer uses a questionnaire method to collect the data of learning facilities, learning intensity learning, and self-confidence and test method to get the results of learning mathematics. The research instrument: validity test, different power test, and reliability test. Test requirement analysis includes a test of normality, linearity test, and the test of independence. The writer uses product-moment correlation analysis and multiple linear regression analysis to analyze the data. The results showed that there was a positive and significant relationship between learning facilities, learning intensity, and self-confidence with the results of learning mathematics students class VII of MTs Muhammadiyah Karangkajen Yogyakarta semester even in academic year 2016/2017. It is showed by  $F_{\text{count}} > F_{\text{table}}$  is  $3.1689 > 3.07$  with  $R = 0.4864$  and  $(R^2) = 0.2365$  with  $\hat{Y} = 12.2389 + 0.1665X_1 + 0.0569X_2 + 0.3184X_3$  with Relative Contribution  $X_1=26.5\%$ , Relative Contribution  $X_2=1.5\%$  and Relative Contribution  $X_3=72.0\%$ , Effective Contribution  $X_1=6.3\%$ , Effective Contribution  $X_2=0.3\%$  and Effective Contribution  $X_3=17.0\%$ .

**Keywords:** Learning Facilities, Learning Intensity, Self-Confidence, The Results of Learning Mathematics.

### INTRODUCTION

Education is a human effort to broaden the horizons of knowledge in shaping values, attitudes, and behavior. Training carried out conscientiously will increase one's intelligence. Education is done through learning in schools/madrasah. One of the subjects taught in schools/madrasah is mathematics learning. Therefore, mathematics learning is learning that shapes students' personalities to be able to apply the results of learning mathematics in students' daily lives. According to Slameto (2010: 54-72), two factors can influence learning success. The first factor is an internal factor, which is a factor that originates in students, including physical factors such as health, disability, and psychological factors, including intelligence (ability to think), attention, interest in learning, talent, student learning, self-confidence, motivation, etc. The second factor is the external factor, which is a factor that originates from outside the students, including family factors such as the way parents educate, the atmosphere of the house, and the attention of parents—school factors such as teaching methods, school discipline, peers, etc.

Based on the observations of researchers when apprenticed at the school. Constraints encountered during teaching practice in class VII MTs Muhammadiyah Karangkajen Yogyakarta, namely student facilities, were still lacking when learning activities began.

In the Big Indonesian Dictionary, "Facilities are all things that can facilitate and facilitate the implementation of activities, which can facilitate activities in the form of facilities and infrastructure."

According to Slameto (2010: 68), "working on excellent and complete learning tools is necessary so that teachers can teach well so students can receive lessons well and can learn well too. "

Based on the results of interviews with the author of a mathematics teacher at school, Mrs. Vika Rosana Alpha, S.Pd. Student learning intensity is also still less visible than some students do not repeat the lessons that have been received at school, because of the lack of power of learning so students cannot work and cannot understand math problems correctly and adequately. Learning mathematics is not only enough once or twice, but students must learn it repeatedly or as often as possible to get optimal learning results. By, therefore, students need to increase the intensity of their learning.

According to the Big Indonesian Dictionary, Intensity is a state (level), intensity (strength, greatness, enthusiasm, and so on). The intensity of learning is a state of excellence in students' efforts, especially in learning mathematics. According to Slameto (2010: 85-86), Repeating is a significant influence on learning because with the repetition (review), "material that is not so well mastered and easily forgotten" will remain embedded in one's brain.

Based on observations, students' confidence when hanging out tends to be high, but when faced with subjects, especially mathematics down. The faith of some students is still low. For example, when mathematics lessons, students feel unable to solve mathematical problems or problems even though they have not tried to work on them. Students become unsure of the answers and become unenthusiastic.

According to Hakim (2005: 6), self-confidence is a person's belief in all aspects of their strengths, and this belief makes them feel able to achieve various goals in their lives.

Based on information from a grade VII mathematics teacher at Muhammadiyah Karangkajen MTs Yogyakarta on October 20, 2016, that student mathematics learning outcomes are still low. This is indicated by the Middle Semester Deuteronomy scores obtained by students of class VII at MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year in mathematics studies:

**Table 1.** Middle Deuteronomy Grade VII Grade of MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year

Class	VII A	VII B	VII C	VII D	VII E
Average	35,6	36,2	34,2	35,1	34,5
Max	60,0	52,5	55,0	52,5	57,5
Min	25,0	27,5	17,5	12,5	17,5
< CCM	30	30	27	28	30
≥ CCM	-	-	-	-	-
CCM	71,00				

The purpose of this study is to determine whether or not there are:

1. The presence or absence of a relationship between learning facilities and mathematics learning outcomes of Grade VII students of MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year.
2. The presence or absence of a relationship between the intensity of learning and mathematics learning outcomes of students of class VII MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year.
3. The presence or absence of a relationship between students' self-confidence and mathematics learning outcomes of Grade VII MTs Muhammadiyah Karangkajen Yogyakarta Even Semester Academic Year 2016/2017.
4. The presence or absence of a relationship between learning facilities and the intensity of learning with mathematics learning outcomes for students of class VII MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year.
5. The presence or absence of a relationship between learning facilities and students' self-confidence and mathematics learning outcomes of Grade VII students of MTs Muhammadiyah Karangkajen Yogyakarta Even Semester Academic Year 2016/2017.

6. The presence or absence of a relationship between the intensity of learning and self-confidence of students with mathematics learning outcomes of students of class VII MTs Muhammadiyah Karangkajen Yogyakarta Even Semester Academic Year 2016/2017.
7. The presence or absence of a relationship between learning facilities, the intensity of learning, and students' self-confidence with mathematics learning outcomes of students of class VII MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year.

## RESEARCH METHOD

This research is classified as quantitative research. The place of research was conducted at MTs Muhammadiyah Karangkajen Yogyakarta. Simultaneously, the analysis was carried out in the even Semester of the 2016/2017 school year. The population in this study were all students of VII MTs Muhammadiyah Karangkajen Yogyakarta Even Semester 2016/2017 Academic Year, which consisted of five classes, namely VIIA, VIIB, VIIC, VIID, and VIIE with a total number of students of 145 students.

In this study, there are two variables, namely the independent variable (independent) and the dependent variable (dependent). The independent variable (independent) consists of learning facilities ( $X_1$ ), learning intensity ( $X_2$ ), and self-confidence ( $X_3$ ), while the dependent variable (dependent) is the learning outcomes of mathematics ( $Y$ ). Data collection techniques used questionnaires and test methods. In this study, the questionnaire method was used to obtain data on learning facilities, learning intensity, and self-confidence. The test method was used to collect data about students' mathematics learning outcomes in class VII MTs Muhammadiyah Karangkajen Yogyakarta. The questionnaire test uses the content validity test by reviewers. For numerical ability test questions and learning outcomes according to Arikunto, Suharsimi (2013) product-moment correlation techniques, for the questionnaire instrument reliability test according to Arikunto, Suharsimi (2012) uses the alpha Cronbach formula, while the reliability test instrument of numerical ability and learning outcomes in Arikunto, Suharsimi (2012) using the KR-20 method. After the data is collected, an analysis prerequisite test that must be met includes the normality test, independent test, and linearity test. Data analysis uses product-moment correlation analysis and multiple linear regression analysis.

## RESULTS AND DISCUSSION

In this section, further discussion of the results of the research analyzed in correlation. This research found that:

1. The first hypothesis test result is that there is a positive and significant relationship between learning facilities and student mathematics learning outcomes. The better the learning facilities at school, the better the mathematics learning outcomes of students. In this study, a simple correlation coefficient ( $r$ ) of 0.3428 was obtained. So the determinant coefficient obtained ( $r^2$ ) of 0.1175 can be explained that 11.75% of learning outcomes are influenced by learning facilities while other factors influence the rest. There is a variation in mathematics learning outcomes ( $Y$ ) explained by learning facilities ( $X_1$ ) through a direct line  $\hat{Y} = 40.14 + 0.3127 X_1$ , with a regression coefficient of 0.3127. This means that each increase of one unit  $X_1$  results in 0.3127 increase in  $Y$ .
2. The second hypothesis test result is that there is a positive and significant relationship between learning intensity and mathematics learning outcomes. In other words, the higher the intensity of student learning, the higher the learning outcomes. In this study, a simple correlation coefficient ( $r$ ) of 0.0607 was obtained. The obtained determinant coefficient ( $r^2$ ) of 0.0037 can be explained that an interest influences 0.37% of learning outcomes in learning, while other factors influence the rest. There is a variation in mathematics learning outcomes ( $Y$ ), which is explained by the intensity of learning ( $X_2$ ) through a linear line  $\hat{Y} = 74.08 + 0.0580X_2$ , with a coefficient of regression direction of 0.0580. This means that every increase of one unit  $X_2$  results in 0.0580 increase in  $Y$ .
3. The third hypothesis test result is that there is a positive and significant relationship between students' self-confidence and mathematics learning outcomes. In other words, the higher the

confidence of students so that the learning outcomes will be better. In this study, a correlation coefficient ( $r$ ) of 0.4535 was obtained. So obtained ( $r^2$ ) of 0.2057, which can explain that 20.57% of learning outcomes are influenced by self-confidence while other factors influence the rest. There is a variation in mathematics learning outcomes (Y) explained by confidence ( $X_3$ ) through a linear line  $\hat{Y} = 37,30 + 0,3844X_3$  with a coefficient of regression direction of 0.3844. This means that every increase of one unit  $X_3$  results in 0.3844 increase in Y.

4. The fourth hypothesis test result is that there is a positive and significant relationship between learning facilities and learning intensity with student mathematics learning outcomes. In other words, the better the learning facilities at school, and the higher the concentration of student learning, the better the results of student mathematics learning. From the multiple correlation analysis, the multiple correlation coefficient ( $R$ )-value is 0.3479. This study also obtained a coefficient of determination ( $R^2$ ) of 0.1210, meaning 12.1% of learning outcomes are influenced by learning facilities and learning intensity, while other factors influence the rest. There are variations in mathematics learning outcomes (Y) that can be explained by learning facilities ( $X_1$ ) and learning intensity ( $X_2$ ) through linear lines  $\hat{Y} = 35.5456 + 0.3124 X_1 + 0.0567X_2$ . This means that an increase in one unit ( $X_1$ ) results in a 0,3124 increase in Y, and an increase in one group ( $X_2$ ) results in 0.0567 increase in Y. The relative contribution of  $X_1$  by 97.0% and  $X_2$  by 3.0% and the useful gift of  $X_1$  by 11.7% and  $X_2$  by 0.4%.
5. The fifth hypothesis test result is that there is a positive and significant relationship between learning facilities and trust, along with student mathematics learning outcomes. In other words, the better the learning facilities and the higher the confidence given, the better the students' mathematics learning outcomes. From the multiple correlation analysis, the multiple correlation coefficient ( $R$ ) value is 0.4827. This study also obtained a coefficient of determination ( $R^2$ ) of 0.2330, meaning 23.3% of learning outcomes are influenced by learning facilities, and other factors influence the confidence of the rest. There are variations in mathematics learning outcomes (Y) that can be explained by learning facilities ( $X_1$ ) and self-confidence ( $X_3$ ) through linear lines  $\hat{Y} = 26,1245 + 0,1667X_1 + 0,3184 X_3$ . This means an increase of one unit ( $X_1$ ) resulted in a 0,1667 increase in Y, and an increase in one group ( $X_3$ ) resulted in a 0,3184 increase in Y. As for the relative contribution of  $X_1$  by 26.9% and  $X_3$  by 73.1% and useful participation of  $X_1$  by 6, 3%, and  $X_3$  of 17.0%.
6. The sixth hypothesis test result is that there is a positive and significant relationship between learning intensity and trust and student mathematics learning outcomes. In other words, the higher the concentration of learning and the confidence given, the better the results of students' mathematics learning.
7. From the double correlation analysis is obtained a binary correlation coefficient value ( $R$ ) of 0.4575. This study also received a coefficient of determination ( $R^2$ ) of 0, 2093 means 20,93% of the results are influenced by the intensity of learning and confidence dirt while other factors influence the rest. There are variations of math (Y) learning results that can be explained by learning concentration ( $X_2$ ) and confidence ( $X_3$ ) through linear  $\hat{Y} = 32,6256 + 0,0575X_2 + 0,3843X_3$ . This means the increment of one unit ( $X_2$ ) resulting in a 0.0575 increase in Y, and the increment of one unit ( $X_3$ ) resulted in 0.3843 increase in Y. The relative donations of  $X_2$  of 1.7% and  $X_3$  by 98,3% as well as useful contributions  $X_2$  of 0.3% and  $X_3$  of 20.6%.
8. The seventh hypothesis test result is a positive and significant relationship between learning facilities, learning intensity, and the confidence of students' mathematical learning outcomes. In other words, the better learning facilities in the school, the more level of learning, and the confidence of students, the better results of learning mathematics students. From the double correlation analysis is obtained a binary correlation coefficient value ( $R$ ) of 0.4864. In this research also obtained a coefficient of determination ( $R^2$ ) of 0, 2365 means 23.65% of learning outcomes are influenced by learning facilities, learning intensity, and confidence while the rest by other factors

that are not researched in this study. The variety of Learning Results Mathematics (Y) can be explained by learning facilities ( $X_1$ ), learning intensity ( $X_2$ ), and Confidence ( $X_3$ ) through the direct line  $\hat{Y} = 12,2389 + 0,1665X_1 + 0,0569X_2 + 0,3184X_3$ . This means the increment of one unit ( $X_1$ ) resulted in a 0.1665 increase in Y, one unit increments ( $X_2$ ) resulting in a 0.0569 increase in Y, and the increment of one unit ( $X_3$ ) resulted in a 0.3184 increase of Y. As for the relative donation of 26.5%,  $X_2$  of 1.5% And  $X_3$  of 72,0% as well as an effective donation of  $X_1$  of 6.3%,  $X_2$  of 0.3% and  $X_3$  of 17.0%.

9. Based on the research that has been conducted among the three variables that make the most significant contribution to the outcome of mathematics learning is the confidence of students.

## CONCLUSION

Based on the results of the research and discussion, as described in CHAPTER IV, the following research conclusions can be taken:

1. The positive and significant there is a relationship between the learning facilities with the results of mathematics learning students Grade VII MTs Muhammadiyah Karangkajen Yogyakarta, even Semester 2016/2017.
2. The positive and significant there is a relationship between the intensity of learning with the outcome of learning mathematics students grade VII MTs Muhammadiyah Karangkajen Yogyakarta, even Semester 2016/2017.
3. The positive and significant there is a relationship between students ' confidence with the outcome of learning mathematics students grade VII MTs Muhammadiyah Karangkajen Yogyakarta, even Semester 2016/2017.
4. The positive and significant relationship between the learning facilities and the intensity of learning with the mathematics results of students of class VII MTs Muhammadiyah Karangkajen Yogyakarta in the even Semester of the school year 2016/2017.
5. The positive and significant relationship between the learning facilities and the confidence with the results of learning Mathematics students grade VII MTs Muhammadiyah Karangkajen Yogyakarta in the even Semester of the school year 2016/2017.
6. The positive and significant relationship between the intensity of learning and the confidence with the outcome of learning mathematics students grade VII MTs Muhammadiyah Karangkajen Yogyakarta in the even Semester of the school year 2016/2017.
7. The positive and significant relationship between the learning facilities, the intensity of learning, and the confidence of students with the outcome of learning mathematics students grade VII MTs Muhammadiyah Karangkajen Yogyakarta in terms of the year 2016/2017.

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