

THE INFLUENCE BETWEEN LEARNING MOTIVATION AND STUDENTS' ATTENTION TOWARD MATHEMATICS LEARNING OUTCOME IN THE OF VIII GRADE STUDENTS SMP MUHAMMADIYAH 7 YOGYAKARTA

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ABSTRACT

Student learning outcomes are determined by many factors. Allegedly students' learning motivation and attention are several factors that affect students learning outcomes. This study aimed to determine whether there is a positive and significant influence between learning motivation and students' attention toward mathematics learning outcomes in the first semester of VIII grade students SMP Muhammadiyah 7 Yogyakarta in the academic year of 2016/2017. The population in this research was the students of VIII grade in SMP Muhammadiyah 7 Yogyakarta in the academic year of 2016/2017, consisted of class VIII A, VIII B, VIII C, VIII D, VIII E, VIII F, VIII G totaling 234 students. Samples were taken from VIII B as the research sample class and with the random sampling technique. The writer uses a questionnaire method to collect the data of learning motivation, attention of students and the resulting learning of math. The research instrument: validity test, different power test, and reliability test. Test requirement analysis includes a test of normality, the test of independence, and a test of linearity. The writer uses product-moment correlation analysis and multiple linear regression analysis to analyze the data. The results showed that there was a significant and positive influence between learning motivation and the attention of students towards mathematics learning outcomes in students class VIII in even Semester of SMP Muhammadiyah 7 Yogyakarta in the academic year of 2016 / 2017. It is showed by $F_{count} > F_{table}$ is $4,2926 > 3,32$ with $R = 0,4717$ and $R^2 = 0,2225$ with $\hat{Y} = 8,4139 + 0,1684 X_1 + 0,6342 X_2$, with $SR X_1 = 15,8568 \%$, and $SR X_2 = 84,1432 \%$, $SE X_1 = 3,5282 \%$ and $SE X_2 = 18,7221 \%$.

Keywords: *Learning Motivation, Students' Attention, Mathematics Learning Outcome.*

INTRODUCTION

Education is a process in order to influence students to adjust themselves as best they can to their environment and thus will cause changes in themselves that enable them to function strongly in people's lives. In the learning process, elements of the learning process play an important role. The core of educational activities is teaching and learning activities. The success of students in participating in educational programs in schools is seen based on the results of their learning. Learning outcomes are the maximum benchmarks achieved by students after doing the learning process. Learning success is basically caused by many factors, namely internal factors, and external factors. Internal factors that have an impact on mathematics learning outcomes are motivation and external factors are the attention of students.

Based on observations and interviews with Mr. Assadurofiq, S.Pd. on October 3, 2016, at SMP Muhammadiyah 7 Yogyakarta there were still many students who thought mathematics was difficult, learning outcomes were still low due to low learning motivation, and students often did not focus due to lack of attention. The method used by the teacher during class is the lecture method and Speed Game which aims to foster motivation, attention, enthusiasm, enthusiasm, and a pleasant atmosphere for students so that the results of learning mathematics can get maximum results.

Based on data from the End of Semester Examination (UAS) value obtained from mathematics teachers in grade VII Yogyakarta 7 Muhammadiyah Junior High School, it is known that the number of students lacking the Minimum Mastery Criteria (KKM) is 219 students or more than 50% of 234 students have not yet achieved the KKM value. This shows that student mathematics learning outcomes are still low.

Lack of student learning motivation in mathematics is due to the way of teaching less interesting teachers so that students find it difficult to learn mathematics and the cause of students who often skip

classes during lessons due to invitations from their friends. (Wibowo, Randi. 2012). In addition, (Triana, Yachinta Puspita. 2012) stated that student attention can be shown in the activities carried out in learning. If students really pay attention, then students will follow learning activities well. The low learning achievement is caused by a lack of learning motivation. Lack of motivation will make students less willing to pay attention to the teacher in learning.

The two studies above show the variables of student motivation and attention affect the dependent variable. Thus, researchers are interested in conducting research that aims to determine whether there is an influence between learning motivation and student attention with the learning outcomes of eighth-grade students in the odd semester of SMP Muhammadiyah 7 Yogyakarta in the 2016/2017 school year.

THEORY

According to Hamalik, O (2005: 158) motivation is a change in one's personal (personal) energy that is characterized by the emergence of feelings and reactions to achieve goals. According to Dakir (1993: 14) The activeness of increasing awareness of all functions that are deployed in the concentration of goods or something both inside and outside us. Thus what is concerned will be absolutely clear to the individual. If an object is maintained it will be increasingly recognized and clearer the object is for the individual.

METHODS

The type of this research is quantitative research. This study uses two classes, sample classes, and test classes. This research was conducted at Muhammadiyah 7 Junior High School Yogyakarta. The time used for data collection in this study was from October 3 - November 11, 2016.

Based on the purpose of the study which is determining whether there is an influence of learning motivation and student attention on mathematics learning outcomes both individually and jointly, the design of this study is described as follows:

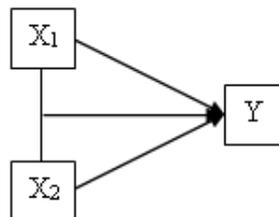


Figure 1. Research Design

Information :

X₁: learning motivation variable

X₂: student attention variable

Y: mathematics learning outcome variable

The total number of VIII grade students of SMP Muhammadiyah 7 Yogyakarta is 234 students consisting of 7 classes, namely VIII A, VIII B, VIII C, VIII D, VIII E, VIII F, and VIII G. In this study the sample was conducted by random sampling of class, which was chosen as the sample class is class VIII B, and the test class is class VIII D. Data collection techniques used were the questionnaire method and the test method. The questionnaire method used was a test in the form of a statement that was submitted related to student motivation and attention, while the test method was a test of mathematics learning outcomes with algebraic material and functions. The questionnaire questions instruments amounted to 26 questions supported by indicators of learning motivation and student attention variables. This instrument was prepared by the researcher in consultation with the validator lecturer. For the mathematical test achievement test items in the form of a description. The score obtained is the ability of students in mathematics learning outcomes. This test was prepared by researchers in consultation with the supervisor and subject-matter teachers. After the questionnaire and test, instruments are arranged then they are tested on the instrument trial class VIII D. After the test questions are tested, the test items are analyzed using the validity test using the product-moment correlation formula (Arikunto, S. 2012, p.87)

and reliability test using the Alpha formula (Arikunto, S. 2012, p.122). The analysis prerequisite test used normality test with Chi-Square test (Suparman, 2015, p.49), Chi-Square test for independent test (Khasanah, 2014, p.18) and linearity test using F test (Khasanah, U., 2014, p.24), and hypothesis testing using t-test, linear regression test, multiple correlation coefficient test.

RESULTS AND DISCUSSION

Based on the research that has been carried out, obtained an average value in the form of the distribution of the frequency of the independent variables and the dependent variable. The frequency distribution for the average learning motivation is 79.5455 and the standard deviation is 7.1767 with a percentage of 63.64% which is categorized as moderate. For the variable frequency distribution of student attention with an average of 78.5455 and a standard deviation of 6.2953 with a percentage of 60.61% which is categorized as moderate. Besides that, for the mathematics learning outcomes variable the average value was 71.66667 and the standard deviation was 9.33697 which was categorized mostly complete with a percentage of 60.61%

1. Normality Test

The summary of the normality test results from the three variables can be seen in the following table.

Table 1. Summary of Normality Test Results

Variable	χ^2_{count}	χ^2_{table}
Motivation to learn	2,706	5,591
Student Attention	0,553	5,591
Mathematical Learning Outcomes	4,573	7,815

From the normality test at a significant level of 5% and degrees of freedom = 2, it can be seen that $\chi^2_{count} = 2,706$ and $\chi^2_{table} = 5,591$, so that $\chi^2_{count} < \chi^2_{table}$ which means the learning motivation variable is normally distributed. In the variable student, attention can be seen that $\chi^2_{count} = 0,553$ and $\chi^2_{table} = 5,591$, so that $\chi^2_{count} < \chi^2_{table}$ which means the student attention variable is normally distributed. Whereas the variable learning outcomes in mathematics can be seen $\chi^2_{count} = 4,573$ and $\chi^2_{table} = 7,815$, so that $\chi^2_{count} < \chi^2_{table}$ which means that the learning outcomes variable in mathematics is normally distributed.

2. Independence Test

The summary of the results of the independence test of learning motivation and student attention variables can be seen in the following table.

Table 2. Summary of Independence Test Results

Variable	χ^2_{count}	χ^2_{table}
X ₁ and X ₂	24,511	37,652

From the independence test with a significant level of 5% and with a degree of freedom 25 can be seen $\chi^2_{count} \leq \chi^2_{table}$ so that it means that the variables of student motivation and attention are mutually independent.

3. Linearity Test

The summary of the linearity test results of the motivational variables with the learning outcomes of mathematics and the variables of student attention with the results of learning mathematics can be seen in the following table.

Table 3. Summary of Linearity Test Results

Variable	F_{count}	F_{table}
X ₁ and Y	0,8252	2,3848
X ₂ and Y	-0,6131	2,3848

From the linearity test with a significant level of 5% and the degree of freedom of the numerator 16 and the denominator of 15, so that it means that the variables of learning motivation with mathematics learning outcomes are linear and the attention variables of students with mathematics learning outcomes are linear.

4. Hypothesis Test

The summary of the results of the first hypothesis test can be seen in Table 4.

Table 4. Summary of the First Hypothesis Test

t_{count}	t_{table}
1,7202	0,0632

From the results of the first hypothesis test with a significant level of 5% and a degree of freedom 31, so it is obtained $t_{stat} \geq t_{table}$, Thus H₁ concludes that there is a positive and significant influence between learning motivation on mathematics learning outcomes of VIII graders in the odd semester of SMP Muhammadiyah 7 Yogyakarta 2016/2017 school year.

The summary of the results of the second hypothesis test can be seen in the following table.

Table 5. Summary of Second Hypothesis Test Results

t_{count}	t_{table}
2,8781	0,0632

From the results of the second hypothesis test with a significant level of 5% and a degree of freedom 31, so it is obtained $t_{count} \geq t_{table}$, thus H₁ concluded that there was a positive and significant influence between students' attention to the mathematics learning outcomes of VIII grade odd semester students of SMP Muhammadiyah 7 Yogyakarta in the 2016/2017 school year.

The summary of the results of the third hypothesis test can be seen in the following table.

Table 6. Summary of Third Hypothesis Test Results

F_{count}	F_{table}
4,2926	3,32

From the results of the third hypothesis test with a significant level of 5% and the degree of freedom of numerator 2, the denominator is 29, so it is obtained $F_{count} \geq F_{table}$, thus H₁ concluded that there was a positive and significant effect between learning motivation and student attention on mathematics learning outcomes of students of class VIII odd semester of SMP Muhammadiyah 7 Yogyakarta in the 2016/2017 school year.

CONCLUSION

Based on the results of research and discussion, the conclusions can be drawn, namely:

1. There is a positive and significant influence between learning motivation and mathematics learning outcomes for students of class VIII in the odd semester of SMP Muhammadiyah 7 Yogyakarta in the 2016/2017 school year. This is indicated by the t-test is $t_{count} > t_{table}$ or $1.7202 > 0.0632$. Simple correlation coefficient (r) between learning motivation with mathematics learning outcomes of 0.2952. As well as the simple regression equation Y above X₁ is $\hat{Y} = 38,2786 + 0,4160 X_1$.
2. There is a positive and significant influence between students' attention with the mathematics learning outcomes of VIII graders in the odd semester of SMP Muhammadiyah 7 Yogyakarta in the

2016/2017 school year. This is indicated by the t-test that is $t_{count} > t_{table}$ or $2,8781 > 0,0632$. Simple correlation coefficient (r) between mathematical communication with mathematics learning outcomes of 0.4592. In addition, a simple regression equation for Y is also obtained X_2 is $\hat{Y} = 15,5989 + 0,7143 X_2$.

3. There is a positive and significant influence of students' motivation and attention on mathematics learning outcomes for students of class VIII in the odd semester of SMP Muhammadiyah 7 Yogyakarta in the 2016/2017 school year. This is indicated by the F test that is $F_{count} > F_{table}$ or $4,2926 > 3,32$. The multiple correlation coefficient (R) between learning and mathematical communication with mathematics learning outcomes is 0.4717. and the coefficient of determination (R^2) of 0.2225 with a linear line equation $\hat{Y} = 8,4139 + 0,1684 X_1 + 0,6342 X_2$. Relative contribution X_1 of 15,8568 % and X_2 of 84,1432 % and effective contributions X_1 of 3,5282 % and X_2 of 18,7221 %.

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