THE RELATIONSHIP BETWEEN LEARNING MOTIVATION, LEARNING INDEPENDENCE, AND LEARNING ENVIRONMENT WITH MATHEMATICS LEARNING OUTCOMES OF EIGHT GRADE STUDENT OF SMP MUHAMMADIYAH BANTUL

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ABSTRACT

Low students learning outcomes associated with many factors. Learning motivation, learning independence and learning environment are some of the factors possibly related to mathematics learning outcomes. This research aims to know about is there any positive correlation and significance or not between learning motivation, learning independence, and learning environment with mathematics learning outcomes of eight grade students of SMP Muhammadiyah Bantul in odd semester in the academic year of 2016/2017. The population in this research was the students of VIII grade in SMP Muhammadiyah Bantul in the academic year of 2016/2017, consisted of class VIIIA, VIIIB, VIIIC, VIIID, and VIIIE totaling 145 students. Samples were taken from VIIID as the research sample class and with the random sampling technique. The writer uses a questionnaire method to collect the data of learning motivation, learning independence, and learning environment and test methods to get the result learning of math. The research instrument: validity test, different power test, and reliability test. Test requirement analysis includes a test of normality, a test of linearity, 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 motivation, learning independence, and learning environment with mathematics learning outcomes of eight grade students of SMP Muhammadiyah Bantul in odd semester in the academic year of 2016/2017. It is showed by F_{count} = 12,6752 and Ft_{able} = 2,98 so $F_{count} > F_{table}$ with R = 0,7707 and R^2 = 0,5939 with $\hat{Y}$ = -117,6784 + 0,7637X_1 + 0,5845X_2 + 0,5046X_3 , with SR X1 = 53,24%, SR X2 = 28,7006% and SR X3 = 18,0594%, SE X1 = 31,6199%, SE X2 = 17,0457% and SE X3 = 10,7257%.

Keywords: Learning Motivation, Learning Independence, and Learning Environment, Mathematics Learning Outcomes.

INTRODUCTION

Education is a common activity in human life wherever and whenever humans inevitably experience the educational process. Education has an important role to ensure the development and survival of a nation because education is a vehicle to improve and develop the quality of human resources in the face of global competition. Education should be managed well in quality and quantity. Good quality and quantity education can be achieved with the implementation of timely and appropriate education to achieve learning objectives carried out in the form of teaching and learning process which is the implementation of the school curriculum through teaching activities.

Schools as educational institutions have an important role in providing assistance to students in order to obtain the necessary educational experience. Teaching and learning processes and student learning outcomes are largely determined by the role and competence of teachers. In order for the teaching and learning process to be successful, a teacher before teaching should have a clear picture of the state of his students. For example about talent, independence, attitude, character, ability and learning environment of students in order to support the teaching and learning process.

One of the subjects given since basic education in mathematics. This is because mathematics is one of the basic sciences in learning other sciences and this shows that mathematics is very important because by mastering the field of mathematics students can think logically, analytically, systematically, critically and creatively so that students are able to deal with changing situations in life and in the world

and has the ability to obtain, manage and develop other knowledge. Therefore mathematics is referred to as the queen or mother of knowledge, it is intended that mathematics is as a source of other sciences.

Mathematics has an important role in everyday life. But mathematics is also a subject that is not liked. This happens because mathematics is a difficult subject, boring and scary at the same time. The object of mathematics which is an abstract thought object is thought to be one of the factors why it can happen. If mathematics continues to be a frightening subject then it is certain that student mathematics learning outcomes are low.

Based on observations made by the author at the Muhammadiyah Bantul Middle School on May 20, 2016, it shows that student learning outcomes are still low. It appears that most students still experience difficulties because mathematics is a subject that deals with many formulas and calculations. Difficulty in learning mathematics is what influences student learning outcomes in mathematics, indicators of the low learning outcomes of mathematics seen from the still students who obtain learning outcomes under the KKM (Minimum completeness criteria), namely 75.

After interviews with a number of eighth-grade students at Muhammadiyah Bantul Middle School, information was obtained that mathematics was the most difficult and boring subject. Based on the results of an interview with Mr. Usmaryadi, as a mathematics teacher in class VIII at Muhammadiyah Bantul Middle School, it was found that most students had very low motivation, only a few students who had high learning motivation. This can be seen when in following the process of learning mathematics, students look less enthusiastic about mathematics, are not serious in learning, students chat with friends, and some students tend to pay less attention when the teacher teaches.

Based on observations at SMP Muhammadiyah Bantul, it is known that most students lack learning independence. This can be seen when in following the teaching and learning process students tend to be passive, do not dare to ask when there is material that is not yet clear, and when working on the questions given by the teacher looks some students lack confidence in their abilities so that they see the work of friends.

Mr. Usmaryadi as a mathematics teacher at SMP Muhammadiyah Bantul explained that the learning environment in schools can determine student learning success. As it is known that in SMP Muhammadiyah Bantul infrastructure facilities such as libraries and laboratories are already available. The laboratory consists of Science Laboratories and Computer Laboratories, it's just that the Computer Laboratories are still lacking in facilities ie one computer is used for two students so that it is less than optimal for practical learning activities. Book facilities in the library are not utilized well by students because of the location of the library adjacent to the canteen, the library is only used as a shelter for snacks/ to read books or borrow books that are available.

Learning outcomes are an assessment of the results of the implementation of learning carried out by the teacher symbolized by the figures which are actualizations of student abilities. Based on these learning outcomes teachers can find out the level of learning the success of their students. If the learning outcomes are still low, a teacher must try to find deficiencies/obstacles in the implementation of learning. The low learning outcomes obtained by students are not entirely the teacher's fault. Many factors affect student learning outcomes both internal factors of the students themselves and external factors. One internal factor that influences student learning outcomes is psychological factors. Of the many factors that affect student learning outcomes, especially in this case mathematics is a factor of student motivation and learning independence. While external factors affect student learning outcomes one of which is a student learning environment.

Motivation is both a motivating factor and an impetus that can trigger a sense of enthusiasm and is also able to change the behavior of humans or individuals to lead to things that are better for themselves. Learning motivation is an impulse or driving force from within an individual that gives direction and enthusiasm for learning activities so that it can achieve the desired goals. So the role of motivation for students in learning is very important. The motivation will increase, strengthen and direct the learning process so that effectiveness in learning will be obtained.

Learning independence is a condition where a child tries to learn independently with his abilities and enthusiasm arising from oneself without coercion from other parties. Learning independence is the readiness of individuals who are willing and able to learn on their own initiative with or without help from other parties.

In addition to internal factors, external factors also affect student learning outcomes, one of which is the learning environment. The environment can not be separated from human life, in the process of teaching and learning environment is a learning resource that influences children's development. The learning environment is a place for learning activities to take place from outside influences on the sustainability of the activity. The learning environment at school is closely related to the learning outcomes that students will get. Schools must facilitate teaching and learning activities with a supportive environment to improve student learning concentration.

Based on the description above, the writer is interested in conducting research with the title "The Relationship between Learning Motivation, Learning Independence and Learning Environment with Learning Outcomes Grade VIII Students of SMP Muhammadiyah Bantul Odd Semester Academic Year 2016/2017".

Based on the background and boundaries of the problem, the problem can be formulated to be investigated. Is there a positive and significant relationship between motivation, independence and mathematics learning environment with mathematics learning outcomes for students of class VIII of SMP Muhammadiyah Bantul in the odd semester of the 2016/2017 school year?

The aim of this research is to find out whether or not there is a positive and significant relationship between motivation, independence and mathematics learning environment with mathematics learning outcomes for students of class VIII of SMP Muhammadiyah Bantul odd semester 2016/2017 academic year.

METHODS

This research is classified as quantitative research. The research site was conducted at Bantul Muhammadiyah Middle School in the odd semester of the 2016/2017 school year. The population in this study were all students of class VIII of Muhammadiyah Bantul Junior High School consisting of 5 classes, namely VIII A, VIII B, VIII C, VIII D and VIII E totaling 145 students.

According to Sugiyono (2015: 118), the sample is part of the number and characteristics of the population. In this study, the sample was taken randomly by using a random sampling technique for the class and the sample class was taken as class VIII D and the test class was class VIII C.

The variables used in this study include the independent variables and the dependent variable. The independent variable (independent) consists of student motivation (X1), student learning independence (X2), and learning environment at school (X3), while the dependent variable (dependent) is the result of learning mathematics (Y).

In this study, the data collection techniques used were questionnaires and tests. Questionnaire techniques to obtain data on parent's attention, learning environment at school and student motivation, while test techniques to obtain data about student mathematics learning outcomes.

The questionnaire test uses the content validity test by the reviewers and the instrument reliability test with the alpha formula, while the test instrument questions use the content validity test by the reviewers and product-moment correlation techniques, different power tests, and reliability tests with the KR-20 formula (Arikunto, Suharsimi, 2013a: 115). After the data is collected, an analysis prerequisite test is carried out with the normality test, linearity test, and independence test. In this study, the hypothesis test used was regression analysis.

RESULT AND DISCUSSION

In this study also uses analysis prerequisite tests which include:

1. Normality Test

A normality test is done to test the distribution of data obtained by each variable with normal distribution or not. The summary of the normality test results from the four variables are:

Table 1. Summary of Normality Test Results

Variable	x^2_{count}	x^2_{table}	**Dk**	**Info.**
Learning Motivation (X1)	6,5636	7,8147	3	Normal
Learning Independence (X2)	0,9426	5,9915	2	Normal
Learning Environment (X3)	0,8066	7,8147	3	Normal
Learning Outcomes (Y)	3,0067	5,9915	2	Normal

2. Linearity Test

The linearity test is used to determine whether the independent variable and the dependent variable have a linear relationship or not. The summary of linearity test results is:

Table 2. Summary of Linearity Test Results

Variable	F_{coun}	F_{table}	**Info.**
X_1 to Y	1,1888	2,69	Linear
X_2 to Y	0,5895	3,43	Linear
X_3 to Y	0,7178	2,60	Linear

3. Independence Test

Independence test is used to find out whether or not there is a relationship between independent variables. The summary of independence test results is:

Table 3. Summary of Independence Test Results

Variable	x^2_{count}	x^2_{table}	df	Info.
X_1 and X_2	32,075	37,652	25	Independent
X_1 and X_3	35,861	37,625	25	Independent
X_2 and X_3	19,176	37,625	25	Independent

Hypothesis testing

From the multiple correlation analysis, it is obtained the multiple correlation coefficient (R) of 0.7707. In this study also obtained a coefficient of determination R2 of 0.5939, which means 59.39% of learning outcomes are influenced by learning motivation, learning independence, and learning environment while the rest is influenced by other factors. There are variations in mathematics learning outcomes (Y) which can be explained by motivation to learn (X_1), learning independence (X_2), and learning environment (X_3) through linear lines $\hat{Y}$ = -117,6784 + 0,7673X_1 + 0,5845X_2 + 0,5046X_3. This means an increase of one unit X_1 results in a 0.7673 increase in Y, an increase in one unit X2 results in a 0.5845 increase in Y, and an increase in one unit X_3 results in 0.5046 increase in Y. While for the relative contribution of X1 by 53.24%, X_2 is 28, 7006%, and X_3 amounted to 18.0594% and effective contribution X_1 amounted to 31.6199%, X_2 amounted to 17.0457% and X_3 amounted to 10.7257%. This shows that learning motivation provides the most significant relationship to learning outcomes in mathematics compared to learning independence and learning environment.

CONCLUSION

Based on the results of research and discussion as described above, it can be concluded that there is a positive and significant relationship between learning motivation, learning independence and learning environment with mathematics learning outcomes for students of class VIII of SMP Muhammadiyah Bantul in the odd semester of 2016/2017 school year. This is indicated by the F test is $F_{count} > F_{table}$ or 12,6752 > 2,98 The correlation coefficient (R) 0.7707 and the coefficient of

determination (R^2) of 0.5939. Linear equation $\hat{Y} = -117{,}6784 + 0{,}7673X_1 + 0{,}5845X_2 + 0{,}5046X_3$. The relative contribution amounted to X_1 53.24%, X_2 amounted to 28.7006% and X_3 amounted to 18.0594% and effective contribution X_1 amounted to 31.6199%, X_2 amounted to 17.0457% and X_3 amounted to 10.7257%.

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