THE RELATIONSHIP AMONG PARENT'S ATTENTION AND UTILIZATION OF LEARNING RESOURCES WITH LEARNING ACHIEVEMENT OF MATHEMATICS STUDENTS

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ABSTRACT

Results of low mathematics associated with many factors. Parent's attention and utilization of learning resources are two factors that allegedly associated with the learning achievement of mathematics students. This research has to determine whether or not a positive and significant relationship between parent's attention and utilization of learning resources with students mathematics learning outcomes in class X of even semester in Muhammadiyah Senior High School 5 Yogyakarta (SMA Muhammadiyah 5 Yogyakarta) academic year 2016/2017. The population in this research was all students of class X in even semester in the academic year 2016/2017 with the total number of 190 students in 6 classes. Function random sampling technique to class to take a sample class, to obtain class D as a class of research and class X C as a trial class. Data collection techniques are done with the documentation method, questionnaire method, and the test method. The research instruments used are field records, questionnaires, and test questions. The instruments test used test of validity, reliability testing, and different power. Analysis of instrument trials using the normality test, independent test, and linearity test. Data analysis using linear regression analysis and correlation analysis. The results showed a positive and significant relationship between parents' attention and the utilization of learning resources with mathematics learning outcomes with a learn regression equation $\hat{Y} = -24,624 + 0,556\,X_1 + 0,402\,X_2$ and multiple correlation coefficient (R) of 0,834. As well as obtained $F_{count} = 28,618$ and $F_{table} = 3,39$, so $F_{count} > F_{table}$. Relative contribution of (X_1) = 64,162% and (X_2) = 35,838% with coefficient of determination was 0,696 and effective contribution (X_1) = 44,657% and (X_2) = 24,943%.

Keywords: parent's attention, utilization of learning resource, learning achievement of mathematics

INTRODUCTION

Education is a means to improve the quality of Human Resources (HR) in ensuring sustainable development. Improving the quality of human resources becomes very important about facing the era of global competition. In the overall effort of education, the atmosphere of learning and the learning process are activities that encourage the realization of an education. Mathematics is one of the fields of study studied by students ranging from students sitting in elementary school to high school or even in college. Based on the results of observations and interviews with mathematics subject teachers and many students carried out at SMA Muhammadiyah 5 Yogyakarta, especially in class, X used learning resources in the form of student worksheets, textbooks, and the internet. Student worksheets are a must-have learning resource for students, while textbooks and the internet are used for specific materials. The textbooks used are library books, so if a book is needed, some students will borrow from the school library, and when they finish learning, they will be returned. According to the mathematics subject for class X, the existing mathematics learning resources still need to be added.

Based on interviews with many class X students at SMA Muhammadiyah 5 Yogyakarta, they admitted that their parents did not give firmness about their study time. However, they only reminded them so that they only studied at will. Their parents also rarely asked about the results of their assignments/homework / daily tests/midterm achieved by him. Students claim to wake up late so late that they come to school. From these problems, it can be seen that the attention of the parents of these students is still lacking, meaning that the factors that influence students' learning processes are not functioning correctly.

In mathematics class X SMA Muhammadiyah 5 Yogyakarta, shows that student learning outcomes are still low. Recorded in Table 1 Daily Data with Mathematics of Class X Students Even Semester of SMA Muhammadiyah 5 Yogyakarta in 2016/2017 Academic Year, that 96.84% of all Grade X students have not been able to reach the Minimum completeness Criteria (MMC) set by the school, namely 75. Whereas based on the results of observations and interviews with mathematics class X teachers, good learning outcomes are when a minimum of 75% of the number of students can already understand the material well.

Table 1. Daily Repeat Data with Mathematics Students of Class X Even Semester of SMA Muhammadiyah 5 Yogyakarta in 2016/2017 Academic Year

Class	Average	Total students		Percentage (%)	
		Complete	No complete	Complete	No complete
X A	25,87	-	32	0%	100%
X B	20,73	-	31	0%	100%
X C	41,5	4	28	12,5%	87,5%
X D	23,1	-	31	0%	100%
X E	29,22	-	31	0%	100%
X F	27,01	2	31	6,06%	93,94%

(source: SMA Muhammadiyah 5 Yogyakarta)

Table 1 above shows that the learning outcomes of most students are under the Minimum Completeness Criteria (MCC). According to grade X mathematics teacher, students 'mistakes in working on math problems are partly due to the low awareness/willingness of students to study and the lack of students' understanding of some of the material being taught. Based on the description above, it is necessary to research with the title The Relationship between Parents' Attention and the Utilization of Learning Resources with Mathematics Learning Outcomes of Class X Even Semester High School Muhammadiyah 5 Yogyakarta Academic Year 2016/2017.

Based on the description of the background of the problem, research problems can be formulated as follows: 1) Is there a positive and significant relationship between parents' attention and mathematics learning outcomes of class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. 2) Is there a positive and significant relationship between the use of learning resources with the learning outcomes of students of class X in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. 3) Is there a positive and significant relationship between parents' attention and the use of learning resources with mathematics learning outcomes for class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year.

Based on the formulation of the problem, the objectives of this study are 1) To determine whether there is a positive and significant relationship between parents' attention and mathematics learning outcomes of class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. 2) To determine whether there is a positive and significant relationship between the use of learning resources with mathematics learning outcomes of class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. 3) To find out whether there is a positive and significant relationship between parents' attention and the use of learning resources with mathematics learning outcomes of class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta in the 2016/2017 school year.

METHODS

This research is quantitative. The research site was conducted at SMA Muhammadiyah 5 Yogyakarta, while the research was conducted in the even semester of the 2016/2017 school year. The population in this study were all students of class X SMA Muhammadiyah 5 Yogyakarta even semester 2016/2017 academic year as many as six classes containing students arranged randomly, namely classes X A, X B, X C, X D, X E, and X F. The samples were taken randomly using the technique of random sampling of the class that is taken two classes randomly, taking class samples obtained by lottery class.

To obtain class X D as a research class and class X C as a test class. There are two kinds of research variables, namely the independent variable and the dependent variable. The independent variable in this study consisted of parents' attention (X_1) and the use of learning resources (X_2), while the dependent variable in this study was the result of learning mathematics (Y). Data collection techniques used the method of documentation, tests, and questionnaires. The documentation method is used to obtain data about the list of names, many students, and a list of UHB grades for class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. The test method in this study was used to determine the learning outcomes of students of class X in the even semester of SMA Muhammadiyah 5 Yogyakarta in the 2016/2017 school year as the research sample. At the same time, the questionnaire method was used to obtain data on parents' attention and the use of learning resources for class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta, which became the research sample.

Analysis of the questionnaire instrument trials and tests using content validity tests by reviewers and product-moment correlation techniques (Arikunto, Suharsimi, 2013: 213). To test the reliability of the questionnaire instruments using the Alpha formula (Arikunto, Suharsimi, 2013: 239) and tests using the KR-20 formula (Arikunto, Suharsimi, 2013: 231). Whereas the differentiation test uses the discrimination index formula (Arikunto, Suharsini, 1981: 157-158). After the data has been collected, descriptive data analysis, analysis prerequisite tests, and hypothesis testing are carried out. Analysis prerequisite tests that must be met include normality tests using the chi-square formula (Suparman, 2013: 50), independent tests, and linearity tests. To test the hypothesis used t-test and F-test. For t-test (Khasanah, Uswatun, 2014: 60) using the formula:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}$$

with:

r = correlation coefficient
n = number of samples

For the F-test (Khasanah, Uswatun, 2014: 106) using the formula:

$$F = \frac{R^2(n-k-1)}{(1-R^2)k}$$

With:

F = F price regression
R^2 = coefficient of double determination
n = sample size
k = number of independent variables

RESULTS AND DISCUSSION

From the results of the study of the instrument stated that the instrument is feasible to be presented or distributed to be filled by respondents. For the instrument trial analysis, based on the validity test of the mathematics learning outcomes test, it was found that from 25 items, 21 items were declared valid, as shown in Table 2.

Table 2. Summary of Calculation Results for Test Validity in Mathematics Learning Outcomes Tests

Instrument		No items	No items Drop	Drop Item Number	No Valid items
Learning Results	Mathematics	25	4	3,8,24,25	21

Furthermore, based on the reliability test, the instrument of parents' attention, the use of learning resources, and the results of constant mathematics learning. High criteria for instruments of parental attention and mathematics learning outcomes, as well as sufficient criteria for instruments of utilizing learning resources, are shown in Table 3.

Table 3. Summary of Results of Instrument Reliability Test Calculations

Instrument	r_{count}	r_{table}	Criteria
Parents attention	0,879	0,361	High
Use of Learning Resources	0,628	0,361	Enough
Mathematical Learning Outcomes	0,867	0,361	High

Based on the results of the test of distinguishing mathematical learning outcomes, it was found that from 25 items, there were 13 items with good criteria, nine items with sufficient criteria, two items with poor criteria, and 1 item with negative criteria, as shown in Table 4.

Table 4. Summary of Distinguishing Power Test Results Mathematics Learning Outcomes

Variable	Criteria	Item Number Question	Number of Items
Mathematical Learning Outcomes	Very well	-	-
	Well	1,2,4,5,7,9,10,12,13,15,16,19,20	13
	Enough	3,6,11,14,17,18,21,22,23	9
	Ugly	8,25	2
	Negative	24	1

For the prerequisite test analysis in the normality test, it was found that the three variables, namely parents' attention, the use of learning resources, and learning outcomes in mathematics, are normally distributed, as shown in Table 5.

Table 5. Summary of Normality Test Results

Variable	χ^2_{count}	χ^2_{table}	df	Info.
Parents attention (X_1)	1,805	5,9915	2	Normal
Use of Learning Resources (X_2)	1,680	7,8147	3	Normal
Mathematical Learning Outcomes (Y)	1,719	7,8147	3	Normal

Next, based on the independent test, it was found that the parents' attention variables and the utilization of learning resources were independently related, as seen in Table 6.

Table 6. Summary of Independent Test Results

Variable	χ^2_{count}	χ^2_{table}	df	Info.
Parents attention (X_1) with Use of Learning Resources (X_2)	34,564	37,652	25	Independent

Furthermore, based on the linearity test, it was found that between parents' attention variables with mathematics learning outcomes and the use of learning resources and mathematics learning outcomes have a linear relationship, as shown in Table 7.

Table 7. Summary of Linearity Test Results

Variable	F_{count}	F_{table}	Info
Parents attention (X_1) and Mathematical Learning Outcomes (Y)	1,602	2,97	Linear
Use of Learning Resources (X_2) and Mathematical Learning Outcomes(Y)	1,915	3,17	Linear

To test the hypothesis, the results of the first hypothesis test found a positive and significant relationship between parents' attention and mathematics learning outcomes. The results of this study were obtained $t_{count} = 6,905$ and $t_{table} = 1,7056$ at a significant level of 5% with a simple correlation coefficient (r) of 0.804. This can be explained through a linear relationship $\hat{Y} = 62,977 + 0,011 X_1$. This means that every increase of one unit X_1 increases Y; in other words, if parents' attention is high, the mathematics learning outcomes will increase. This study also obtained a coefficient of determination (r^2) of 0.647, which means 64.7% of mathematics learning outcomes are related to parents' attention, while the rest are related to other factors. The results of this calculation indicate that the higher the parents' attention, the results of learning mathematics will increase, and vice versa.

From the results of the second hypothesis test, there is a positive and significant relationship between the use of learning resources with learning outcomes in mathematics. This study's results were obtained $t_{count} = 5,756$ and $t_{table} = 1,7056$ at a significant level of 5% with a simple correlation coefficient (r) of 0.749. This can be explained through a linear relationship $\hat{Y} = 63,200 + 0,008 X_2$. This means that every increase in one unit of X_2 increases Y; in other words, if the utilization of learning resources is high, then the results of learning mathematics will increase. In this study also obtained a coefficient of determination (r^2) of 0.560, which means 56.0% of mathematics learning outcomes related to the use of learning resources. At the same time, the rest is related to other factors. The results of this calculation indicate that the higher the utilization of learning resources by students, the results of learning mathematics will increase, and vice versa.

From the results of the third hypothesis test, there is a positive and significant relationship between parents' attention and the use of learning resources with mathematics learning outcomes. The results of this study were obtained $F_{count} = 28,618$ and $F_{table} = 3,39$ at a significant level of 5% with a double correlation coefficient (R) of 0.834. This can be explained through the linear relationship $\hat{Y} = -24,624 + 0,556 X_1 + 0,402 X_2$. This means that every increase of one unit X_1 results in a 0.556 increase in Y, and every increase in one unit X_2 results in a 0.402 increase in Y, in other words, if parents' attention and utilization of learning resources are high, the results of learning mathematics will increase. In this study also obtained a coefficient of determination (R^2) of 0.696, which means 69.6% of mathematics learning outcomes are related to parents' attention and utilization of learning resources. At the same time, the rest are related to other factors. The relative contribution was 64.162% of X_1 and 35.838% of X_2, while the effective contribution was 44.657% of X_1 and 24.943% of X_2. The results of this calculation indicate that the higher the attention of parents and the use of learning resources, the results of learning mathematics will increase, and vice versa.

Furthermore, the magnitude of the relative contribution (RC) and the magnitude of the effective contribution (EC) for each parent's attention variable (X_1) and the use of learning resources (X_2) with mathematics learning outcomes (Y) can be seen in Table 8.

Table 8. Summary of Relative Contributions and Effective Contributions X_1 and X_2 to Y

Variable	Relative Contributions (RC %)	Effective Contributions (EC %)
X_1	64,162 %	44,657 %
X_2	35,838 %	24,943 %
Total	100 %	69,600 %

CONCLUSION

Based on the results of the study and discussion, several research conclusions can be drawn as follows:

1. There is a positive and significant relationship between parents' attention and the mathematics learning outcomes of class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. This is indicated by the t-test, namely $t_{count} = 6,905$ and $t_{table} = 1,7056$, so $t_{count} > t_{table}$. Simple correlation coefficient (r) between parents' attention (X1) with mathematics learning outcomes (Y) of 0.804 with a regression equation $\hat{Y} = 62,977 + 0,011\ X_1$

2. There is a positive and significant relationship between the use of learning resources with the learning outcomes of students of class X in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. This is indicated by the t-test, which is $t_{count} = 5.756$ and $t_{table} = 1.7056$, so $t_{count} > t_{table}$. Simple correlation coefficient (r) between the use of learning resources (X_2) with mathematics learning outcomes (Y) of 0.749 with a regression equation $\hat{Y} = 63,200 + 0,008\ X_2$.

3. There is a positive and significant relationship between parents' attention and the use of learning resources with the mathematics learning outcomes of class X students in the even semester of SMA Muhammadiyah 5 Yogyakarta 2016/2017 school year. This is indicated by the F test, namely $F_{count} = 28.618$ and $F_{table} = 3.39$, so $F_{count} > F_{table}$. The multiple correlation coefficient (R) between parents' attention (X_1) and the use of learning resources (X_2) with mathematics learning outcomes (Y) is 0.834 with a regression equation $\hat{Y} = -24,624 + 0,556\ X_1 + 0,402\ X_2$. The relative contribution of X_1 is 64.162%, and X_2 is 35.838%. Effective contribution X_1 is 44.657%, and X_2 is 24.943%.

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