

The Influence of Reading Interest and Study Habits against Mathematics Learning Outcomes

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Abstract

This study aims to determine the effect of reading interest and study habits on mathematics learning outcomes. The results showed that the variables of reading interest and study habits simultaneously (simultaneously) had an influence on mathematics learning outcomes which were expressed by the following regression equation model: $Y = 49,014 + 0,479X1 - 0,212X2$. From the results of the analysis, it can be concluded that the variables of reading interest and study habits together have a significant influence on mathematics learning outcomes. The two independent variables contributed to the learning outcomes of mathematics by 17%. While partially, reading interest and learning habits each have a significant influence on mathematics learning outcomes.

Keywords

reading interests; study habits; learning outcomes.



I. Introduction

Reading generally involves two skills namely decoding and understanding (Songsiri, 2007, Sulam et al., 2019). Decoding is an isolable ability, which can be taught and assessed in a straightforward manner. While understanding is a complex skill that depends on variations in factors, context. Both the learning factor, the text factor, as well as teaching, all have a role. According to Brassell and Rasinski, reading refers to the ability to understand or create meaning from written texts (Ningsih et al., 2014). In the dictionary that reading words is the ability to test and understand the meaning of words in the text. So, reading is the process of a person in understanding a meaning in the text according to the level of ability possessed. (Syakur, A. et al. 2020)

Reading is a very important skill to be mastered by every individual. Tarigan (2008: 7) says reading is a process that is carried out and is used by readers to obtain messages conveyed by the writer through written media. Rahim (2012: 11) states that the kinds of reading objectives are: (1) Fun; (2) perfects loud reading; (3) using certain strategies; (4) updating his knowledge of a topic; (5) linking new information with information that it already knows; (6) obtaining information for oral or written reports; (7) inform or reject predictions; (8) presenting an experiment or applying information obtained from a text in another way and learning about the structure of the text; (9) answering specific questions. (Wulandari, U. et al. 2020)

Interest in reading needs to be cultivated from an early age because interest in reading has an important role in the learning process which will have an impact on learning outcomes. But the reality now, the main reason for the low interest in reading in students is the effect of using gadgets. The use of gadgets by students is still not right. This can be seen from the results of interviews with students, "most students use gadgets at home to play

games, open social media and to take pictures and only a few students' use gadgets to open study materials or carry out learning activities" (Hapsari & Rachmawati, 2018)

The low interest in reading has an impact on the lack of students in understanding the language. Students' reading ability is not accompanied by the ability to understand the language or the content of the reading. Students who are able to read correctly are not necessarily able to understand the meaning of the contents of the reading. The low ability of students to understand the meaning of the reading content results in students being less able to translate and interpret the contents of the reading into a conclusion. Therefore, students must have an interest in reading in order to improve the ability to understand language so that it can help in the learning process and student learning outcomes. Learning activities are an educational process in schools. This means that the success or failure of achieving educational goals is very dependent on how the achievement of the educational taxonomy experienced by students includes cognitive, affective and psychomotor aspects. In an educational institution, the success of the teaching and learning process can also be seen from the learning outcomes achieved by students.

According to (Nurhaidah, 2016) reading interest is "a source of strong motivation for someone to analyze and remember and evaluate the readings they have read". Having a strong motivation in reading activities for someone to analyze, remember and evaluate what has been read, which is an exciting learning experience and will affect a person's form and intensity in determining his future goals in the future. This is part of the self-development process that must always be honed because reading interest is not born.

Based on the above opinion, it can be concluded that reading interest is a person's desire to interpret writing by involving many things followed by a sense of pleasure and the existence of someone's effort to read is done because of the motivation from within. Someone who has a strong interest in reading will be manifested in his willingness to get reading material and then read it on his own consciousness so that the right meaning is obtained towards a measurable understanding. Therefore, the reading experience can improve and broaden students' learning understanding.

Study habits are learning behaviors that are formed in students along with the learning process carried out because students learn and observe from the surrounding environment, not talents that students have since childhood. Through a learning process that will form students' learning habits consciously or not and the process takes place continuously. The learning process is carried out by students when they are at home or at school. This is done by students to obtain satisfactory learning outcomes. According to Djaali, the notion of "habits is a way of acting that is obtained through repeated learning, which in the end becomes permanent and automatic". Meanwhile, according to Slameto (2013: 82) "Learning habits aim to gain knowledge, attitudes and skills. Based on the description above, the authors are interested in researching the influence of reading interest and study habits on mathematics learning outcomes.

II. Research Methods

The method used in this study uses quantitative research methods. The research approach used survey research, according to Kerlinger who stated that "survey research is research conducted on large or small populations, but the data studied are data from samples taken from that population, so that relative incidence, distribution, and relationships between variables are found. Sociological and psychological. Causality approach is carried out to collect information from the population which aims to explain the phenomena that occur by examining the influence relationship between each variable. The sample in this study was 40 students.

The research data was collected using a questionnaire with the aim of obtaining data about interest in learning and study habits given to students. While the data on learning outcomes using tests given to students.

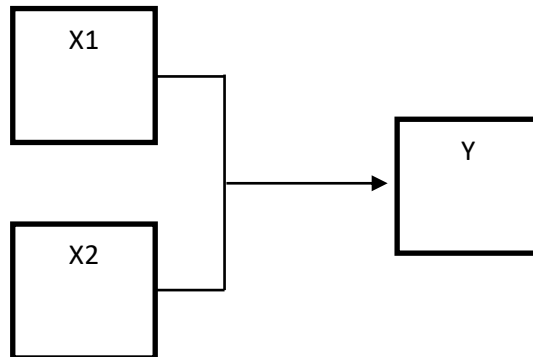


Figure 1. Research Design

III. Result and Discussion

In testing the hypothesis of the variables simultaneously (together) formulated in this study, an estimation was made using the Ordinary Last Square (OLS) model using the SPSS V.25 program.

Table 1. Hypothesis Testing Results X1, X2, Y

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	49,014	10,187		4,811	.000
	Study Habits	.479	.285	.782	1,682	.101
	Reading Interest	-.212	.238	-.413	-.889	.380
a. Dependent Variable: Mathematics Learning Outcomes						

Model estimation the regression equation obtained is as follows:

$$Y = 49,014 + 0.479X1 - 0.212X2$$

Where:

Y = Mathematics Learning Outcomes

X1 = Reading Interest

X2 = Study Habits

Table 2. Table ANOVA

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	394,978	2	197,489	3,797	.032b
	Residual	1924,622	37	52017		
	Total	2319,600	39			
a. Dependent Variable: Mathematics Learning Outcomes						
b. Predictors: (Constant), Reading Interest, Study Habits						

From the Anova table, the F-Statistic value of 3.797 is obtained which is significant at the 5% confidence level and is also indicated by the sig value. = 0.032 which is smaller than 0.05 (5%). So it can be concluded that the variables of reading interest (X1) and study habits (X2) together have a significant effect on mathematics learning outcomes.

The value of R2 (Coefficient of determination) of 0.170 can explain the variables of reading interest (X1) and study habits (X2) contributing to mathematics learning outcomes (Y) by 17%, and other factors will affect mathematics learning outcomes by 83%.

The resulting regression model gives an intercept value of 49,014 and the coefficient value of the reading interest variable (X1) is 0.479 explaining that if reading interest (X1) is increased by 1 unit, the learning outcomes of mathematics will increase by 0.479 units assuming other variables are considered constant. The coefficient value of the study habits variable (X2) is -0.212, explaining that if the study habits (X2) are increased by 1 unit, the learning outcomes of mathematics will increase by -0.212 units assuming other variables are considered constant.

The correlation coefficient value of 0.413 also means that the relationship between the variables of reading interest (X1) and study habits (X2) on mathematics learning outcomes (Y) is quite strong. Partially the effect of each independent variable on the dependent variable, the following tests were carried out:

3.1. Reading Interest Variable (X1) on Mathematics Learning Outcomes (Y)

The results of the model estimation to see the effect of reading interest (X1) on mathematics learning outcomes (Y) are presented in the following table:

Table 3. Hypothesis Testing Results X1, Y

Model		Coefficients ^a				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	59,752	8.127		7.352	.000
	Reading Interest	.168	.079	.327	2,132	.040

a. Dependent Variable: Mathematics Learning Outcomes

From the table above, the regression equation model is obtained as follows:

$$Y = 59.752 + 0.168X1$$

The results of the estimation model above show that the reading interest variable (X1) has a positive effect on mathematics learning outcomes (Y), which means that the higher the reading interest variable score (X1), the mathematics learning outcomes (Y) will also increase. The coefficient value of the reading interest variable (X1) of 0.168 explains that if the reading interest (X1) increases by 1 unit, the mathematics learning outcomes (Y) will increase by 0.168 units assuming other variables are considered constant.

3.2. Learning Ability Variable (X2) on Mathematics Learning Outcomes (Y)

The results of the model estimation to see the effect of Learning Abilities (X2) on mathematics learning outcomes (Y) are presented in the following table:

Table 4. Results Hypothesis Testing X2, Y

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	52.136	9.536		5.467	.000
	Study Habits	.239	.092	.391	2,616	.013

a. Dependent Variable: Mathematics Learning Outcomes

From the table above, the regression equation model is obtained as follows:

$$Y = 59.136 + 0.239X_2$$

The results of the estimation model above show that the learning ability variable (X_2) has a positive effect on mathematics learning outcomes (Y), which means that the higher the learning ability variable score (X_2), the mathematics learning outcomes (Y) will also increase. The value of the learning ability variable coefficient (X_2) of 0.239 explains that if interest in reading learning skills (X_2) is increased by 1 unit, the learning outcomes of mathematics (Y) will increase by 0.239 units assuming other variables are considered constant.

The influence of reading interest and study habits on mathematics learning outcomes quantitatively has been carried out using a regression equation model approach. The standard coefficient on each independent variable shows the magnitude of the influence of each of these variables on the dependent variable. The largest standard regression coefficient is indicated by reading interest of 0.479 and study habits of -0.212.

The results showed that the variables of reading interest and study habits had a positive influence on mathematics learning outcomes. The regression coefficient value of the variables of reading interest and study habits is positive, which means that if the variables of reading interest and study habits increase, the tendency of learning mathematics outcomes also increases. Conversely, if it decreases, it can lead to a decrease in mathematics learning outcomes. The relationship between the variables of reading interest and study habits on mathematics learning outcomes can be stated quite strong with a correlation coefficient value of 0.413 which also means that reading interest and study habits contribute to mathematics learning outcomes by 17%.

The estimation model between reading interest and mathematics learning outcomes shows that the reading interest variable has a positive influence on mathematics learning outcomes. This means that the higher the score for the variable interest in reading, the learning outcomes of mathematics will also increase. Score reading interest regression coefficient of 0.168 means that each increase in the score of reading interest variable by 1 unit will cause an increase in mathematics learning outcomes of 0.168 at a constant of 59.752. Based on the test results on the value of t-statistics obtained a value of 2.132 which is greater than the value of $t(\alpha(5\%,38)) = 1.684$ which is also indicated by the value of $\text{sig.} = 0.040 < 0.05$. This means that the variable of reading interest has a significant influence on mathematics learning outcomes at the 95% confidence level ($\alpha=5\%$).

The estimation model between study habits and mathematics learning outcomes shows that the habit variable learning has a positive influence on mathematics learning outcomes. This means that the higher the score of the study habits variable, the higher the learning outcomes of mathematics will be. The regression coefficient value of study habits is 0.239 which means that every increase in the score of the study habits variable by 1 unit will cause

an increase in mathematics learning outcomes of 0.239 at a constant of 52.136. Based on the test results on the t-statistical value, it is obtained a value of 2.616 which is greater than the value of $t(\alpha(5\%,38)) = 1.684$ which is also indicated by the sig value. = $0.013 < 0.05$. This means that the study habits variable has a significant influence on mathematics learning outcomes at the 95% confidence level ($\alpha=5\%$).

IV. Conclusion

Based on the description in the previous chapter, some conclusions can be drawn as follows:

1. Simultaneously (together) there is a significant influence on the variables of interest in learning and study habits on mathematics learning outcomes.
2. Partially, the variable of interest in learning has a significant effect on learning outcomes in mathematics. This means that the higher the score for the variable interest in learning, the higher the learning outcomes of mathematics.
3. Partially, the study habit variable has a significant effect on mathematics learning outcomes. This means that if there is an increase in the score of the study habits variable, it will increase the learning outcomes of mathematics.

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