

## THE RELATIONSHIP AMONG THE INTENSITY OF LEARNING, SELF REGULATED LEARNING AND PARENT'S ATTENTION WITH STUDENTS MATHEMATICS LEARNING OUTCOMES

Novita Yanti<sup>a</sup>, Sunaryo<sup>b</sup>

Program Studi Pendidikan Matematika Universitas Ahmad Dahlan  
Jalan Ring Road Selatan, Tamanan, Banguntapan, Bantul, Yogyakarta  
<sup>a</sup>novinoyanti27@gmail.com, <sup>b</sup>sunaryo.bener@yahoo.co.id

### ABSTRACT

Based on the observation in State Junior High School 9 Yogyakarta (SMP Negeri 9 Yogyakarta) obtained some information that the lack of student learning intensity, self-regulated learning is still low, and the lack of attention from parents in learning activities. This study aims to determine the presence or absence of a positive relationship between and significant relationship among the intensity of learning, self-regulated learning, and parent's attention with students mathematics learning outcomes of class VIII SMP Negeri 9 Yogyakarta academic year 2016/2017. The population in this research was the students of VIII grade in SMP Negeri 9 Yogyakarta in 2016/2017, consisting of class VIIIA, VIIIB, VIIIC, VIID, VIIE, and VIIF totaling 206 students. Samples were taken from VIIIA as the research sample class and with the random sampling technique. The researcher uses a questionnaire method to collect the data intensity of learning, independence learning, parent's attention, and test method to get the resulting 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 independence. The writer uses product-moment correlation analysis and multiple linear regression analysis to analyze the data. The results showed a positive and significant relationship between the intensity of learning, independent learning, and parents' attention with mathematics learning outcomes in students class VIII of SMP Negeri 9 Yogyakarta academic year of 2016/2017. It is showed by  $F_{count} > F_{table}$  is  $7,5791 > 2,9223$  with  $R = 0,6566$  and  $R^2 = 0,4311$  with  $\hat{Y} = 4,1062 + 0,3282 X_1 + 0,2986 X_2 + 0,1834 X_3$ , with RC  $X_1 = 46,79\%$ , RC  $X_2 = 432,37\%$  and RC  $X_3 = 20,84\%$ , EC  $X_1 = 20,17\%$ , EC  $X_2 = 13,96\%$  and EC  $X_3 = 8,98\%$ .

**Keywords:** The Intensity Of Learning, Independence Learning, Parent's Attention, and Mathematics Learning Outcomes

### INTRODUCTION

Education is an effort to create an atmosphere of learning and learning processes. Education is done through learning in schools. One of the subjects taught is mathematics. Therefore, mathematics is an important subject because it underlies the knowledge of other subjects and is learning that shapes the personality of students 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 comes from within students, including physical factors such as health, disability, and psychological factors, including intelligence (ability to think), attention, interest in learning, talent, student learning, and self-confidence, motivation. The second factor is the external factor, which is a factor that comes from outside the student self, including family factors such as the way parents educate, the atmosphere of the house, and parents' attention—school factors such as teaching methods, school discipline, and peers.

Based on the results of interviews with mathematics teachers in class VIII at SMP Negeri 9 Yogyakarta, students still lack learning intensity. Some students prefer to learn that there will only be tests compared to studying regularly. According to Nurkholif Hazim, quoted from Susena, Wangsa (2011), the intensity of learning is the roundness of energy exerted by an effort. Likewise, the higher the

effort and sincerity that is carried out with learning, the better the results of learning or mathematical understanding will be achieved.

Based on information obtained from mathematics teachers at SMP Negeri 9 Yogyakarta. The teacher said that students' learning independence was still low, especially in mathematics, according to Moore in Rusman (2012: 365). Student learning independence is the extent to which in the learning process, students can participate in determining the goals, materials and learning experiences, and evaluation of learning—other information obtained from interviews with mathematics teachers in class VIII at SMP Negeri 9 Yogyakarta. The teacher said the lack of attention from students' parents in their children's learning activities. A child's learning outcomes are very influential in the way parents educate their children. This is explained by Rusyan, Tabrani (1989: 196), stating that children need stimulation, encouragement, guidance, or motivation from their parents. By accompanying children to learn, children will feel more motivated to get good learning outcomes.

Based on information from mathematics teachers in class VIII at SMP Negeri 9 Yogyakarta on October 10, 2016, that student learning outcomes have not been maximized; there are still students who have not reached the minimum completeness criteria (MCC), which is 75. This is indicated by the Mid-Term Assessment results Even in Class VIII students at SMP Negeri 9 Yogyakarta 2016/2017 Academic Year in the field of mathematics study:

**Table 1.** Mid-Semester Grade Assessment VIII Yogyakarta 9 Public Middle School 2016/2017 Academic Year

Class	Complete ( $\geq 75$ )	Complete ( $< 75$ )
VIII A	14	20
VIII B	26	8
VIII C	17	17
VIII D	16	18
VIII E	13	20
VIII F	20	16
Amount	106	99
amount (%)	51,7%	48,3%

The hypothesis of this research are:

1. Whether there is a positive and significant relationship between the intensity of learning and mathematics learning outcomes of students of class VIII at SMP Negeri 9 Yogyakarta in the 2016/2017 school year.
2. There is a positive and significant relationship between learning independence and mathematics learning outcomes of eighth-grade students at SMP Negeri 9 Yogyakarta in the 2016/2017 school year.
3. Whether there is a positive and significant relationship between parents' attention and mathematics learning outcomes of eighth-grade students at SMP Negeri 9 Yogyakarta in the 2016/2017 school year.
4. Whether or not there is a positive and significant relationship between the intensity of learning and learning independence with the mathematics learning outcomes of eighth-grade students at SMP Negeri 9 Yogyakarta in the 2016/2017 school year.
5. Whether there is a positive and significant relationship between learning independence and parents' attention with the mathematics learning outcomes of students of class VIII at SMP Negeri 9 Yogyakarta in the 2016/2017 school year.
6. Whether or not there is a positive and significant relationship between the intensity of learning and parents' attention with the mathematics learning outcomes of eighth-grade students at SMP Negeri 9 Yogyakarta 2016/2017 school year.

7. Whether there is a positive and significant relationship between learning intensity, learning independence, and parents' attention and mathematics learning outcomes of Grade VIII students at SMP Negeri 9 Yogyakarta in the 2016/2017 school year.

## METHODS

This research is classified as quantitative research. The research was carried out at SMP Negeri 9 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 VIII in the even semester of SMP Negeri 9 Yogyakarta in the 2016/2017 school year consisting of six classes, namely classes VIIIA, VIIIB, VIIC, VIID, VIIE and VIIF with a population of 206 students. In this study, samples were taken randomly using a random sampling technique for classes, namely 1 class, which was taken randomly. Sampling is done by lottery. After taking random classes by lottery, it turns out that class VIIIB was taken as a trial class and class VIIIA as a sample class.

This study consists of four variables consisting of three independent variables and one dependent variable. The independent variable (independent) consists of the intensity of learning ( $X_1$ ), learning independence ( $X_2$ ), and parents' attention ( $X_3$ ), while the dependent variable (dependent) is the result of learning mathematics ( $Y$ ). Data collection techniques used questionnaires and test methods. In this study, the questionnaire method was used to obtain data on learning intensity, learning independence, and parents' attention consisting of 25 questions for each questionnaire. The test method is used to obtain data about the results of mathematics learning for eighth-grade students of SMP Negeri 9 Yogyakarta consisting of 25 questions. The questionnaire instrument test uses a content validity test by reviewers. For learning achievement test questions according to Arikunto, Suharsimi (2013), product-moment correlation technique, for questionnaire instrument reliability testing, according to Arikunto, Suharsimi (2012) uses alpha Cronbach formula, while the instrument reliability test results learn in Arikunto, Suharsimi (2012) using the KR-20 formula. After the data is collected, the analysis prerequisite tests that must be met include normality test, independent test, and linearity test. Data analysis uses product-moment correlation analysis and multiple linear regression analysis.

## RESULTS AND DISCUSSION

Data normality test functions to test whether the data distribution used is from a normal distribution or not.

**Table 2.** Summary of Test Results for Research Variables Normality

No	Variable	$\chi^2_{count}$	$\chi^2_{table}$	df	Info.
1	Learning Intensity ( $X_1$ )	1,6412	7,8147	3	Normal
2	Independence Learning ( $X_2$ )	2,2303	7,8147	3	Normal
3	Parents attention ( $X_3$ )	0,2989	7,8147	3	Normal
4	Mathematics Learning Outcomes ( $Y$ )	3,5144	7,8147	3	Normal

The linearity test aims to determine whether the independent and dependent variables have a linear relationship.

**Table 3.** Summary of Research Variable Linearity Test Results

No	Variable	$F_{count}$	$F_{table}$	Info.
1	$X_1$ with $Y$	0,8079	2,9084	Linear
2	$X_2$ with $Y$	0,6482	2,5436	Linear
3	$X_3$ with $Y$	1,6613	2,4709	Linear

Independence test is used to determine the presence or absence of a relationship between the independent variables  $X_1$  with  $X_2$ ,  $X_1$  with  $X_3$ , and  $X_2$  with  $X_3$ .

**Table 4.** Summary of Test Results for Research Variables

No	Variable	$\chi^2_{count}$	$\chi^2_{table}$	df	Info.
1	X <sub>1</sub> with X <sub>2</sub>	25,8155	37,6525	25	Independent
2	X <sub>1</sub> with X <sub>3</sub>	21,7414	37,6525	25	Independent
3	X <sub>2</sub> with X <sub>3</sub>	30,2285	37,6525	25	Independent

1. Testing the first hypothesis.

In the first hypothesis test, a simple correlation coefficient ( $r$ ) of 0.4476086453 is obtained. To get the determinant coefficient ( $r^2$ ) of 0.2000353328, which can be explained that the intensity of learning influences 20.03533% learning outcomes while other factors influence the rest. The variation in mathematics learning outcomes (Y) is explained by the intensity of learning (X<sub>1</sub>) through linear lines  $\hat{Y} = 47,11181631 + 0,3260024772 X_1$ , with a regression coefficient 0.3260024772. This means that every increase of one unit of X1 results in 0.3260024772 increase in Y. Testing the correlation coefficient's significance using the t-test is obtained  $t_{count} = 2.83154784$  while the  $t_{table} = 1.693888748$  at a significant level of 5%. The first hypothesis test results are accepted that there is a positive and significant relationship between learning intensity with mathematics learning outcomes. The higher the intensity of student learning, the better the student's learning outcomes.

2. Testing the second hypothesis

In the second hypothesis test, a simple correlation coefficient ( $r$ ) of 0.410777948 is obtained. The determinant coefficient ( $r^2$ ) is obtained for 0.168738523, which can be explained that 16.8738523% of learning outcomes are influenced by learning independence while other factors influence the rest. There is a variation in the learning outcomes of mathematics Y, which is explained by the independence of learning X<sub>2</sub> through a linear  $\hat{Y} = 43,03920248 + 0,360956517 X_2$ , with the regression direction coefficient of 0.360956517. This means that each increase of one unit of X<sub>2</sub> results in 0.360956517, an increase in Y. Testing of the significance of the correlation coefficient by using the t-test obtained  $t_{count} = 2.548668098$  while  $t_{table} = 1.693888748$  at a significant level of 5%. The second hypothesis test result is accepted that there is a positive and significant relationship between learning independence with mathematics learning outcomes. In other words, the higher the independence of student learning, the higher the learning outcomes.

3. Third hypothesis testing.

In the third hypothesis test obtained a simple correlation coefficient ( $r$ ) of 0.333536835. To get the determinant coefficient ( $r^2$ ) of 0.11124682, which can be explained that parents' attention influences 11.124682% of learning outcomes while other factors influence the rest. There is a variation in mathematics learning outcomes (Y) explained by parents' attention X<sub>3</sub> through a linear  $\hat{Y} = 51.29267707 + 0.227084834 X_3$ , with a regression direction coefficient of 0.2270848834. This means that every increase of one unit of X<sub>3</sub> results in a 0.2270848834 Y increase. Testing of the significance of the correlation coefficient by using the t-test is obtained  $t_{count} = 2.001373794$ , while  $t_{table} = 1.6938887$  at a significant level of 5%. The third hypothesis test results are accepted that there is a positive and significant relationship between parents' attention and mathematics learning outcomes. The higher the parents' attention in mathematics, the greater the student's learning outcomes.

4. Testing the fourth hypothesis

The multiple correlation analysis obtained the double correlation ( $R$ ) coefficient value of 0.602205581. This study also obtained a coefficient of determination ( $R^2$ ) of 0.362651561, meaning 36.2651561% learning outcomes are influenced by learning intensity and learning independence while other factors influence the rest. The variation of (Y) mathematics learning

outcomes can be explained by the intensity of learning  $X_1$  and learning independence  $X_2$  through linear lines  $\hat{Y} = 17,6283 + 0,3208 X_1 + 0,3541 X_2$ . This means an increase of one unit  $X_1$  results in 0.3208 increase in Y and an increase in one unit  $X_2$  results in 0.3541 increase Y. Whereas the relative contribution of  $X_1$  was 54.36%, and  $X_2$  was 19.71%, and the effective contribution was 45.64%, and  $X_2$  was 16.55%. Tests on the significance of the correlation coefficient using the F-test obtained  $F_{count} = 8.819507292$  while  $F_{table} = 3.30482$  at a significant level of 5%. The fourth hypothesis test results are accepted that there is a positive and significant relationship between learning intensity and learning independence with mathematics learning outcomes. In other words, the higher the intensity of student learning, the student learning outcomes will also be better. Similarly, the independence of learning, the higher the independence of student learning in mathematics, the better the learning outcomes.

5. Testing the fifth hypothesis.

From the multiple correlation analysis, the double correlation coefficient ( $R$ ) is 0.567509159. This study also obtained a coefficient of determination ( $R^2$ ) of 0.322066646, meaning 32.2066646% of learning outcomes are influenced by the intensity of learning and parents' attention. In contrast, the rest is influenced by other factors. There are variations in mathematics learning outcomes (Y) which can be explained by the intensity of learning  $X_1$  and parents' attention  $X_3$  through linear lines  $\hat{Y} = 23,5993 + 0,3346 X_1 + 0,2377 X_3$ . This means an increase of one unit  $X_1$  results in 0.3346 increase in Y and an increase in one unit  $X_3$  results in a 0.2377 increase in Y. While for relative contributions  $X_1$  of 63.85% and  $X_3$  of 20.56% and effective contributions of  $X_1$  of 36.15% and  $X_3$  of 11.64%, it can be concluded that the variable of learning intensity gives the most significant contribution to learning outcomes than the parent's attention variable. Tests on the significance of the correlation coefficient using the F-test obtained  $F_{count} = 7.363604377$  while  $F_{table} = 3.30482$  at a significant level of 5%. The fifth hypothesis test results are accepted that there is a positive and significant relationship between learning intensity and parental attention with mathematics learning outcomes. In other words, the higher the intensity of student learning, the student learning outcomes will also be better. Similarly, parents' attention, the better the attention given by parents, the results of learning mathematics will be more improved.

6. Testing the sixth hypothesis.

From the multiple correlation analysis, the double correlation coefficient ( $R$ ) is 0.47793548. In this study also obtained a coefficient of determination ( $R^2$ ) of 0.228422280, meaning 22.8422280% learning outcomes are influenced by learning independence and attention of parents while other factors influence the rest. There are variations in mathematics learning outcomes (Y) which can be explained by the independence of learning  $X_1$  and parents' attention  $X_2$  through linear lines  $\hat{Y} = 30,9751 + 0,3094 X_2 + 0,1711 X_3$ . This means an increase in one unit of  $X_2$  results in a 0.3094 increase in Y, and an increase in one unit of  $X_3$  results in a 0.1711 increase in Y. As for the relative contribution of  $X_2$  of 63.31% and  $X_3$  of 36.69% and effective contribution of  $X_2$  of 14.46% and  $X_3$  of 36.69%, it can be concluded that the Learning independence variable gives the most significant contribution to learning outcomes than parents' attention variables. Tests on the significance of the correlation coefficient using the F-test obtained  $F_{count} = 4.588722186$  while  $F_{table} = 3.30482$  at a significant level of 5%. The sixth hypothesis test results are accepted that there is a positive and significant relationship between learning independence and parental attention with mathematics learning outcomes. With the high independence of student learning, student learning outcomes will also increase. Similarly, the attention of good parents, children will be more eager to carry out their obligations as a student that is learning so that students will get good learning outcomes as well.

7. Testing the seventh hypothesis.

From the multiple correlation analysis, the double correlation coefficient ( $R$ ) is 0.65661270. In this study also obtained a coefficient of determination ( $R^2$ ) of 0.4311436 meaning 43.11436% learning

outcomes are influenced by the intensity of learning, independence of learning, and attention of parents while the rest by other factors not examined in this study. Variations in mathematics learning outcomes (Y) can be explained by the intensity of learning  $X_1$ , interest in learning  $X_2$ , and parents' attention  $X_3$  through linear lines  $\hat{Y} = 4,1062 + 0,3282 X_1 + 0,2986 X_2 + 0,1834 X_3$ . This means an increase of one unit  $X_1$  results in 0.3282 increase in Y, an increase in one unit  $X_2$  results in 0.2986 increase in Y, and an increase in one unit  $X_3$  results in a 0.1834 increase in Y. While for relative contributions of  $X_1$  by 46.79%,  $X_2$  by 32.37% and  $X_3$  by 20.84% and contributions effective  $X_1$  amounted to 20.17%,  $X_2$  amounted to 13.96% and  $X_3$  amounted to 8.98%, it can be concluded that the variable intensity of learning gave the most significant contribution to learning outcomes than the variables of learning independence and parental attention. Testing the significance of the correlation coefficient by using the F-test obtained  $F_{count} = 7.579129311$  while  $F_{table} = 2.92228$  at a significant level of 5%. Based on research that has been carried out among the three variables that make the most significant contribution to mathematics learning outcomes is the attention of parents. The seventh hypothesis test results are accepted that there is a positive and significant relationship between learning intensity, learning independence, and parents' attention to mathematics learning outcomes. In other words, the higher the intensity of student learning, the student learning outcomes are also high on the learning outcomes will be good. Likewise, with the independence of student learning is also high in mathematics, the learning outcomes will be better. Also, mathematics learning outcomes can be influenced by parents' attention; the higher the attention of parents to the child, the higher the learning outcomes.

## CONCLUSION

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

1. There is a positive and significant relationship between learning intensity and mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the t-test, namely  $t_{count} = 2.83154784 > t_{table} = 1.693888748$ . The simple correlation coefficient ( $r$ ) between learning intensity and mathematics learning outcomes is 0.4476086453 equal to the linear regression equation  $\hat{Y} = 47,11181631 + 0,3260024772 X_1$ .
2. There is a positive and significant relationship between learning independence with mathematics learning outcomes for students of class VIII of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the t-test, namely  $t_{count} = 2.548668098 > t_{table} = 1.693888748$ . The simple correlation coefficient ( $r$ ) between learning independence with mathematics learning outcomes is 0.410777948 equal to the linear regression equation  $\hat{Y} = 43,03920248 + 0,360956517 X_2$ .
3. There is a positive and significant relationship between parents' attention and the mathematics learning outcomes of VIII grade students of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the t-test, namely  $t_{count} = 2.001373794 > t_{table} = 1.69388887$ . The simple correlation coefficient ( $r$ ) between parents' attention and mathematics learning outcomes 0.333536835 with the linear regression equation  $\hat{Y} = 51.29267707 + 0.227084834 X_3$ .
4. There is a positive and significant relationship between learning intensity and learning independence with mathematics learning outcomes for students of class VIII of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the F-test that is  $F_{count} = 8.819507292 > F_{table} = 3.30482$ . The multiple correlation coefficient ( $R$ ) between learning intensity and learning independence with mathematics learning outcomes is 0.602205581, and ( $R^2$ ) is 0.362651561 with linear regression equations  $\hat{Y} = 17,6283 + 0,3208 X_1 + 0,3541 X_2$ . The relative contribution is 54.36%, and the relative contribution is 45.64%, and the effective contribution is 19.71%, and the effective contribution is 16.55%.

5. There is a positive and significant relationship between learning intensity and parents' attention with mathematics learning outcomes of students of class VIII of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the F-test that is  $F_{count} = 7.363604377 > F_{table} = 3.30482$ . The multiple correlation coefficient ( $R$ ) between learning intensity and parents' attention with mathematics learning outcomes is 0.567509159, and ( $R^2$ ) is 0.3222066646 with the multiple linear regression equation  $\hat{Y} = 23,5993 + 0,3346 X_1 + 0,2377 X_3$ . The relative contribution of  $X_1$  was 63.85%, and the relative contribution of  $X_3$  was 36.15%, and the effective contribution was  $X_1$  by 20.56%, and the effective contribution was  $X_3$  by 11.64%.
6. There is a positive and significant relationship between learning independence and parents' attention with the mathematics learning outcomes of Grade VIII students of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the F-test that is  $F_{count} = 4.588722186 > F_{table} = 3.30482$ . The multiple correlation coefficient ( $R$ ) between learning independence and parents' attention with mathematics learning outcomes is 0.47793598, and ( $R^2$ ) is 0.228422801 with multiple linear regression equations  $\hat{Y} = 30,9751 + 0,3094 X_2 + 0,1711 X_3$ . The relative contribution of  $X_1$  was 63.31%, and the relative contribution of  $X_2$  was 36.69%, and the effective contribution was 14.46%, and the effective contribution was 8.38%.
7. There is a positive and significant relationship between learning intensity, learning independence, and parents' attention and mathematics learning outcomes of students of class VIII of SMP Negeri 9 Yogyakarta in the 2016/2017 school year. This is indicated by the F-test that is  $F_{count} = 7.579129311 > F_{table} = 2.92228$ . The multiple correlation coefficient ( $R$ ) between learning intensity, learning independence, and parents' attention with mathematics learning outcomes is 0.65661270, and ( $R^2$ ) is 0.4311436 with multiple linear regression equations  $\hat{Y} = 4,1062 + 0,3282 X_1 + 0,2986 X_2 + 0,1834 X_3$ . The relative contribution of  $X_1$  was 46.79%, the relative contribution was 32.37%, and the relative contribution was 20.84% , and the effective contribution was 20.17%,  $X_2$  was 13.96%, and the effective contribution was 8, 98%.

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