PEER RELATIONSHIPS, STUDENT LEARNING ENVIRONMENT AT HOME AND INDEPENDENCE OF LEARNING WITH LEARNING OUTCOMES SMP MUHAMMADIYAH 9 YOGYAKARTA

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ABSTRACT

Mathematics is still considered difficult by most students, so the impact on learning outcomes. The lack of good peers and learning environment that is less than adequate and conducive and the lack of seriousness and independent learning is some of the factors that may affect student learning. Therefore, this study was conducted in order to determine whether or not a positive and significant between peer relationships, student learning environment at home and independence of learning with learning outcomes in SMP Muhammadiyah 9 Yogyakarta in Academic Year 2016/2017. The population of this research was all students of class VIII of even semester in SMP Muhammadiyah 9 Yogyakarta in Academic Year 2016/2017 which consists of 5 classes. As a sample class was class VIII B by random sampling technique to class. The questionnaire technique used collection data peer relationships, student learning environment at home and learning independence, as well as the test technique used collection data mathematics learning result of student. Test instruments used validity, distinguishing features and reliability. Test data analysis requirements using the test for normality, independent, and the test for linearity. Data analysis for hypothesis testing using correlation analysis and linear regression analysis. The research result showed that there was a significant positive correlation between peer relationships, student learning environment at home and independence of learning with learning outcomes with $F_{count} = 4{,}2382$ and $F_{table} = 2{,}93$ so that $t_{count} > t_{table}$. Multiple correlation coefficient (R^2)$= 0{,}3048$ with a regression equation $\hat{Y} = 27{,}20 + 0{,}0869\bar{X}_1 + 0{,}1976\bar{X}_2 + 0{,}1051\bar{X}_3$ with relative contribution of (X_1) = 14%, (X_2) = 70%, (X_3) = 16%, and effective contribution $X_1 = 4\%$, $X_2 = 21\%$, dan $X_3 = 5\%$.

Keywords: Peer relationships, student learning environment at home and learning independence with learning outcomes.

INTRODUCTION

In the national education system Law No. 20 of 2003 CHAPTER, I Article 1 states that: Education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have religious-spiritual strength, self-control, personality, intelligence, noble character, and the necessary skills himself, society, nation and state.

Muhammadiyah 9 Yogyakarta Middle School, has the potential to prepare students for senior secondary education and be able to compete with other junior high schools. However, many obstacles that result in learning outcomes, especially in mathematics subject to decline. Based on the data of the pure value of the Odd End Semester Examination (UAS) obtained from the mathematics teacher of class VIII of Muhammadiyah 9 Yogyakarta Junior High School, 97.5% of the students' grades are still below the Minimum Mastery Criteria (KKM) which is 70 in Mathematics subject which is applied in schools. This shows that student learning outcomes in mathematics have not been maximized or are still below the KKM.

Of the many influential factors, there are several factors that are suspected to influence the learning outcomes of students of class VIII of SMP Muhammadiyah 9 Yogyakarta namely peers, students' learning environment at home and learning independence. Peers are friends who consist of children who have psychological similarities and have almost the same age. Desmita (2009: 224) argues, peer interaction of the majority of school-aged children occurs in groups or groups, so this period is often called groupage. Peers in the neighborhood and at school can influence student behavior, students' perceptions of learning outcomes, and student learning independence. From the observations of a number of Muhammadiyah 9 Yogyakarta Middle School students on August 31,

2016, it was found that some students claimed to get along with peers who they felt were suitable and comfortable so that they had their own groups, both in the neighborhood and at school. This can disrupt the learning process that will support the achievement of learning outcomes in mathematics.

According to Sartain in Purwanto, Ngalim (2004: 72) said that what is meant by the environment (environment) includes all conditions in this world that in certain ways affect our behavior, growth, development or our life processes except for genes. even genes can also be seen as preparing the environment for other genes. Student learning environment at home affects student learning outcomes such as length of study, length of time outside of school, type of reading students read, whether or not there is a study room. In addition, what is included in the student learning environment at home is everything that is in the house, both in the form of inanimate objects and living things.

Another factor that plays a role in determining student learning success is learning independence. Learning independence is the readiness of individuals who are willing and able to learn on their own initiative, with or without the help of others in determining learning objectives, learning methods, and evaluating learning outcomes (Tahar, Irzan and Enceng, 2006).

The purpose of this study is to determine whether or not there are:

1. The relationship between peers with student mathematics learning outcomes;
2. The relationship between student learning environment at home with student mathematics learning outcomes;
3. The relationship between learning independence with student mathematics learning outcomes;
4. The relationship between peers and student learning environment at home with student mathematics learning outcomes;
5. The relationship between peers and learning independence with student mathematics learning outcomes;
6. The relationship between student learning environment at home and learning independence with student mathematics learning outcomes;
7. The relationship between peers, student learning environment at home and learning independence with student mathematics learning outcomes

METHODS

This research is quantitative research with a population of all classes VIII even semester of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year consisting of 5 classes. Sampling is done by random sampling of the class. The sample of this study was 33 students in class VIII B. Data collection techniques used were questionnaires and test methods. A questionnaire is a data collection technique that is done by giving a set of statements or written questions to respondents to answer, (Sugiyono, 2015: 199). The test is a tool or procedure used to find out or measure something in an atmosphere, by means and rules that have been determined (Arikunto, Suharsimi, 2012: 67). The instruments used were questionnaires and tests. The questionnaire was used to obtain data from peers, the learning environment of students at home and learning independence, while the test was used to obtain data on mathematics learning outcomes on the subject of the two-variable linear equation system. Before the instrument was tested in the research class, so that the test results of the learning outcomes that were prepared did not deviate from the material being taught, then made a grid, test questions on the trial, questionnaire questions, and study of questions and test questionnaires. The instrument that was compiled was then tested in the first-class trial class VIII A. Furthermore, the test items were analyzed using the validity test using the product-moment formula, different power using the discrimination index formula, and the reliability test using the Kuder Richardson-20 formula (KR -20). Analysis prerequisite test used a normality test, independent test, and linearity test. Data analysis using linear regression analysis and correlation analysis. In addition, a contribution test was conducted to determine the relative contribution and effective contribution of peers, the learning environment of students at home and the independence of learning with mathematics learning outcomes.

RESULTS AND DISCUSSION

Based on the research that has been carried out obtained data from peers, the learning environment of students at home, learning independence and mathematics learning outcomes.

1. Normality Test

Based on the normality test that has been done, it was found that the four peer variables, the learning environment of students at home, learning independence and mathematics learning outcomes are normally distributed. The summary of normality test results can be seen in Table 1.

Table 1. Normality Test Results

No.	Variable	χ^2_{count}	χ^2_{table}
1.	Peers (X_1)	1,2214	7,8147
2.	Student learning environment at home (X_2)	2,9192	7,8147
3.	Learning independence (X_3)	4,7019	7,8147
4.	Mathematics Learning Outcomes (Y)	1,9804	7,8147

2. Independent Test

Based on the independent tests that have been carried out, it is found that the three independent variables, peers and the learning environment of students at home, peers and learning independence, as well as the learning environment of students at home and learning independence, it is found that between the variables are mutually independent or mutually independent. The summary of independent test results can be seen in Table 2.

Table 2. Independent Test Results

No.	Variable	χ^2_{count}	χ^2_{table}
1	X_1 to X_2	42,9061	43,7730
2	X_1 to X_3	43,7429	50,9985
3	X_2 to X_3	32,3487	43,7730

3. Linearity Test

Based on the linearity test that has been done, it was found that between peers with mathematics learning outcomes, student learning environment at home with mathematics learning outcomes, and independence of learning with mathematics learning outcomes, there is a linear relationship. The summary of linearity test results can be seen in Table 3.

Table 3. Linearity test results

No	Variable	F_{count}	F_{table}
1	X_1 to Y	-0,2883	2,92
2	X_2 to Y	0,8920	3,86
3	X_3 to Y	1,0699	2,54

4. Hypothesis Testing

a. First Hypothesis

Based on the results of the simple t-test correlation analysis, the correlation coefficient of peers (X_1) with mathematics learning outcomes (Y) was obtained by 0.3934 results $t_{count} = 2{,}3825$ while t_{table} at a significant level of 5%, df = n-2 = 31, with n = 33 which is 1.6960. So $t_{count} > t_{table}$, then the first hypothesis has been tested by rejecting $H_{0.1}$ and accepting $H_{1.1}$, which means there is a positive and significant relationship between peers and mathematics learning

outcomes of students of class VIII even semester of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year. While the regression equation is $\hat{Y} = 37{,}6718 + 0{,}3075X_1$.

b. Hipotesis Kedua

Based on the results of the simple t-test correlation analysis, the correlation coefficient obtained for student learning at home (X_2) with mathematics learning outcomes (Y) of 0.5192 and the results of t_{count}= 3.3824 while t_{table}, at a significant level of 5%, dk = n -2 = 31, with n = 33 which is 1.6960. So $t_{count} > t_{table}$, the second hypothesis has been tested by rejecting $H_{(0,2)}$ and accepting $H_{(1,2)}$, which means there is a positive and significant relationship between the learning environment of students at home with the mathematics learning outcomes of VIII grade students in the even semester of junior high school Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year. While the regression line equation is $\hat{Y} = 38{,}1847 + 0{,}2520X_2$.

c. Third Hypothesis

Based on the results of the simple t-test correlation analysis, the correlation coefficient of learning independence (X_3) with mathematics learning outcomes (Y) was obtained by 0.3561 and the results of t_{count} =2.1217 while the t_{table}at the 5% significance level, df = n-2 = 31, with n = 33 which is 1.6960. So $t_{stat} > t_{table}$, then the third hypothesis has been tested by rejecting $H_{(0.3)}$ and accepting $H_{(1.3)}$, which means there is a positive and significant relationship between learning independence with mathematics learning outcomes of VIII grade students in the even semester of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year. While the regression line equation is$\hat{Y} = 41{,}4173 + 0{,}2678X_3$.

d. Fourth Hypothesis

Based on the results of the multiple correlation analysis of the F-test, the coefficient of peer correlation (X_1) and student learning environment at home (X_2) with mathematics learning outcomes (Y) of 0.2909 and F_{count} = 6.1535 while F_{table} at a significant level of 5% df = n-2-1 = 30, with n = 33 that is equal to 3.32. So $F_{count} > F_{table}$, then the fourth hypothesis has been tested by rejecting $H_{0.4}$ and accepting $H_{1.4}$, which means there is a positive and significant relationship between peers and the learning environment of students at home with mathematics learning outcomes of VIII grade students in the even semester of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year. Whereas the regression equation is $\hat{Y} = 31{,}0122 + 0{,}1333\bar{X}_1 + 0{,}2092\bar{X}_2$.

e. Fifth Hypothesis

Based on the results of the F-test multiple correlation analysis, the correlation coefficient obtained by peers (X_1) and learning independence (X_3) with mathematics learning outcomes (Y) of 0.1871 and the results of F_{count} = 3.4524 while F_{table} at a significant level 5% df = n-2-1 = 30, with n = 33 which is 3.32. So $F_{count} > F_{table}$, then the fifth hypothesis has been tested by rejecting $H_{0.5}$ and accepting $H_{1.5}$, which means there is a positive and significant relationship between peers and learning independence with mathematics learning outcomes for VIII grade students in the even semester of SMP Muhammadiyah 9 Yogyakarta 2016 / 2017. Whereas the regression equation is $\hat{Y} = 31{,}4105 + 0{,}2236\bar{X}_1 + 0{,}1574\bar{X}_3$.

f. The Sixth Hypothesis

Based on the results of the F-test multiple correlation analysis, the correlation coefficient obtained for student learning at home (X_2) and learning independence (X_3) with mathematics learning outcomes (Y) of 0.2927 and the results of F_{count} = 6.2471 while F_{table} at a significant level of 5% df = n-2-1 = 30, with n = 33 that is equal to 3.32. So $F_{count} > F_{table}$, the sixth hypothesis has been tested by rejecting $H_{0.6}$ and accepting $H_{1.6}$, which means there is a positive and significant relationship between the learning environment of students at home and learning independence with mathematics learning outcomes of VIII grade students in the even semester of SMP Muhammadiyah 9 Yogyakarta Year 2016/2017 teaching. Whereas the regression equation is $\hat{Y} = 30{,}0358 + 0{,}2177\bar{X}_2 + 0{,}1359\bar{X}_3$.

g. Seventh Hypothesis

Based on the results of the F-test multiple correlation analysis, the coefficient of peer correlation (X1), student learning environment at home (X_2) and learning independence (X_3) with mathematics learning outcomes (Y) are 0.3048 and F_{count} = 4.2382 while F_{table} at the 5% significance level dk = n-3-1 = 29, with n = 33 which is 2.93. So $F_{count} > F_{table}$, the seventh hypothesis has been tested by rejecting $H_{0.7}$ and accepting $H_{1.7}$, which means there is a positive and significant relationship between peers, student learning environment at home, and learning independence with mathematics learning outcomes of VIII graders even semester Muhammadiyah 9 Yogyakarta Middle School 2016/2017 Academic Year. Whereas the regression equation is $\hat{Y} = 27{,}20 + 0{,}0869\bar{X}_1 + 0{,}1976\bar{X}_2 + 0{,}1051\bar{X}_3$. The calculation results show that the largest effective contribution obtained from the variable student learning environment at home (X_2) that is equal to 21%. This is in accordance with research Pamungkas, Tri Aniswatun (2013) which states that the variable learning environment at home (X_2) provides an effective contribution of 24.6%.

5. Relative Contributions (SR%) and Effective Contributions (SE%)

The magnitude of the relative contribution (SR%) and the magnitude of the effective contribution (SE%) for each variable X_1, X_2, and X_3 with the Y variable can be seen in Table 4.

Table 4. Relative Contributions and Effective Contributions

Variable	Relative Donations (SR%)	Effective Donations (SE%)
X_1	14%	4%
X_2	70%	21%
X_3	16%	5%
Total	100 %	30 %

CONCLUSION

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

1. There is a positive and significant relationship between peers and mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.
2. There is a positive and significant relationship between the learning environment of students at home with mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.
3. There is a positive and significant relationship between learning independence and mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.
4. There is a positive and significant relationship between peers and the learning environment of students at home with mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.
5. There is a positive and significant relationship between peers and learning independence with mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.
6. There is a positive and significant relationship between student learning environment at home and learning independence with mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.
7. There is a positive and significant relationship between peers, student learning environment at home, and learning independence with mathematics learning outcomes of students of SMP Muhammadiyah 9 Yogyakarta 2016/2017 Academic Year.

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