THE RELATIONSHIP BETWEEN NUMERICAL ABILITY, CONFIDENT, AND PARENT'S ATTENTION TO MATHEMATICS LEARNING OUTCOMES IN STUDENTS CLASS X OF SMA MUHAMMADIYAH 7 YOGYAKARTA

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ABSTRACT

Low student learning outcomes associated with many factors. The relationship between numerical skills, confidence, and parents' attention is possibly related to learning outcomes. This research aims to determine the presence or absence of positive and significance the relationship between numerical skills, confidence, and parent's attention with Mathematics Learning Outcomes in Students Class X SMA Muhammdiyah 7 Yogyakarta in even semester in the academic year of 2016/2017. The population in this research was the students of X SMA Muhammdiyah 7 Yogyakarta in 2016/2017, consisting of class XA, XB, and XD, totaling 87 students. Samples were taken from XA as the research sample class and with the random sampling technique. The writer uses a questionnaire method to collect numerical skills, confidence, parent's attention, and test method to get the resulting learning of math—the research instrument: validity 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 that there was a positive and significant relationship between numerical skills, confidence, and parent's attention with mathematics learning outcomes in students class X in even semester of SMA Muhammadiyah 7 Yogyakarta in the academic year of 2016/2017. It is showed by $F_{count} > F_{table}$ is $24{,}2419 > 2{,}99$ with R= 0,8627 and R^2 = 0,7442 with $\hat{Y} = -22{,}8872 + 0{,}7098\,X_1 + 0{,}0182X_2 + 0{,}4114\,X_3$, with Relative Contribution(RC) $X_1 = 83{,}8625\%$, RC $X_2 = 0{,}3335\,\%$ and RC $X_3 = 15{,}8039\%$, Effective Contribution(EC)$X_1 = 62{,}4089\%$, EC$X_2 = 0{,}2482\%$ and EC$X_3 = 11{,}7610\%$.

Keywords: Numerical Skills, Confident, Parent's Attention, Mathematics Learning Outcomes.

INTRODUCTION

Education plays a vital role in improving the quality of human resources and realizing the nation's goals in educating the life of the nation of Indonesia. Efforts to improve the quality of resources and educate the nation's life is made through education. Quality education will produce human resources that are qualified, superior, and able to compete. Education also serves and aims to develop the potential of learners to become human beings who believe and fear to God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become a democratic citizen Responsible. One of the most critical and pertinent sciences in human life is mathematics. Mathematics is a universal science underlying the development of modern technology. It can be said to be virtually any science, having an essential role in various disciplines and advancing human thought. Therefore, mathematics needs to be taught at every level of education in Indonesia, ranging from elementary school (SD) to high school (SMA).

Successful learning is mainly due to several factors, but it can be classified into two groups: internal factors and external factors (Slameto, 2015:54-55). Internal factors are the factors found in students include intelligence, numerical ability, self-confidence, interest, and motivation. While external factors are the factors outside, the students include the environment, parental attention, interaction, facilities, infrastructure, etc. One of the internal factors affecting student learning outcomes in this research is the ability to count. In studying mathematics, numeracy (numerical) skills are something that every student needs to have. According to Fudyantarta, Ki (2010:68), Numerical ability is the ability to

understand number relationships and solve problems related to the concepts of numbers. With digital capabilities, students will make it easier to solve issues related to numbers and counts. Meanwhile, according to Sukardi, Lord Ketut (2003:122), The ability to test numbers (Numerical ability = NA) is to reveal the ability of the students to have numbers, use, or relationships manipulate with numbers, and logically describe Many materials.

In addition to numerical ability, students ' confidence will also influence the student's learning outcomes. Self-esteem is one of the internal factors that come from within the students. According to Perry, Mertin (2003; 96), confidence is the ability to trust its abilities. While Rochman, Chaerul, and Heri Gunawan (2011:76-77) argue that self-esteem is a condition of someone who can control and maintain confidence. John Fereira, a consultant from Deloitte and Touche Consulting, as quoted by Ari Ginanjar (2000), says someone with confidence and being able to control himself and maintain self-confidence, will be able to make changes The environment. A student who has a good sense of confidence will face the difficulties that will be faced in the learning activities.

In addition to the internal factors above, there are external factors that will affect student learning outcomes. One such external factor is the attention of parents. Parents, as the first educators for the child's education and personality development, play a huge role in achieving students ' mathematical learning outcomes. According to the Slameto (2015:105), attention is an activity that a person does in conjunction with the selection of stimuli that come from his ward. The warmth of parents in parenting according to R. Clara Pudjijogyanti (1988:31-32) is concerned with the welfare of the children in earnest, responsiveness to the needs of children, spending time (without limits) to participate in Child-selected activities, showing an enthusiastic attitude toward the achievement achieved by the child, and other activities, sensitive to the child's emotional state.

The problem in this study is: 1) is there a positive and significant relationship between numerical ability and learning results of the mathematics of grade X SMA Muhammadiyah 7 Yogyakarta and even semester 2016/2017? 2) is there a positive and significant relationship between the confidence and learning results of mathematics student grade X SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017? 3) is there any positive and significant relationship between parents' attention with the result of learning Mathematics students of Grade X SMA Muhammadiyah 7 Yogyakarta even semester of the school year 2016/2017? 4) is there a positive and significant relationship between numerical ability and self-confidence with learning outcomes of mathematics grade X students SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017? 5) is there any positive and significant relationship between numerical ability and parental attention with the learning outcome of mathematics grade X students SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017? 6) is there a positive and significant relationship between the confidence and attention of parents with learning outcomes of mathematics grade X students SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017? 7) is there a positive and significant relationship between numerical ability, self-confidence, and parental care with learning outcomes of mathematics grade X students SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017?

The purpose of this research is to know: 1) The presence and absence of positive and significant relationship between numerical ability and mathematics learning results of grade X students SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017, 2) Presence and absence of relationship Positive and significant between the confidence and learning outcomes of the mathematics student grade X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017, 3) Presence and absence of positive and significant relationship between parents ' attention and learning outcomes Mathematics Grade X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017, 4) Presence and absence of positive and significant relationship between numerical ability and confidence with learning results of mathematics student grade X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017, 5) Presence and absence of positive and significant relationship between numerical ability and parental attention with learning result of grade X student Mathematics SMA Muhammadiyah 7 Yogyakarta, even semester 2016/ 2017, 6) presence and absence of positive and significant relationship between

confidence and parental attention with the result of learning Mathematics students Grade X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017, 7) Presence and absence of positive relationship and Significant between numerical ability, confidence and parental care with the result of learning Mathematics students Grade X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017.

RESEARCH METHOD

This research is classified as quantitative research. The research site was held at SMA Muhammadiyah 7 Yogyakarta with the subject of study of class X even semester 2016/2017. The population in this research is a student who is equally capable of looking at the average value range of the class X mid-semester exam in the term of SCHOOL Muhammadiyah 7 Yogyakarta 2016/2017, which is XA, XB, XD with a total of 87 students. At the same time, the samples in this study are samples determined randomly to the class, namely by way of drawing a class. The class that was taken as the sample class was XA, with 29 students. The variables used in this study include free variables and bound variables. The independent variables consist of numerical ability (X1), self-confidence (X2), and parental attention (X3), while dependent variables are the result of learning Mathematics (Y). In this study, the data collection techniques used are polls and tests. Poll techniques to gain confidence data and parental attention, while test techniques for obtaining data on numerical ability and student mathematics learning outcomes.

Test of poll instruments using the content validity test by the study and instrument reliability test with alpha formula, while the test instrument using the validity test of content by the study and correlation technique and reliability test with product moment formula. Test prerequisite analysis with a test of normality with the Chi-squared formula, test the linearity of the test-F formula, and the independency test of the Chi-squared formula. The research hypothesis test uses simple correlation tests, double regression analysis tests, and double linear regression tests with three free variables. The research hypothesis test uses simple correlation tests conducted to determine the presence or absence of a positive and significant relationship between 1) numerical ability with students ' mathematical learning outcomes, 2) self-confidence with learning outcomes Mathematics students, 3) parents ' attention with student mathematics learning results. Subsequent research hypothesis trials using double regression analysis tests were conducted to determine the presence or absence of positive and significant relationships between 1) numerical ability and self-confidence with students ' mathematical learning outcomes, 2) Numerical ability and parental attention with students ' mathematical learning outcomes, 3) The confidence and attention of parents with students ' mathematical learning outcomes. A double linear regression test with three free variables is performed to determine the presence or absence of a positive and significant relationship between numerical ability, confidence and parental attention with students ' mathematical learning outcomes.

RESULTS AND DISCUSSION

The summary of normality test results can be seen in Table 1.

Table 1. Summary of Normality Test Results

Variable	χ^2_{count}	χ^2_{table}	df	Information
X_1	4,4147	7,8147	3	Normal
X_2	1,1072	5,9915	2	Normal
X_3	5,6154	5,9915	2	Normal
Y	4,8047	5,9915	2	Normal

From the test of normality at a significant level 5% visible $\chi^2_{count} \leq \chi^2_{table}$, this means that the data spread obtained in an each-each variable is a normal distribution.

The summary of linearity test results can be seen in table 2.

Table 2. Summary of linearity test results

Variable	F_{count}	F_{table}	Information
X_1 and Y	-0,8293	2,62	Linear
X_2 and Y	-1,0325	2,83	Linear
X_3 and Y	0,6877	2,62	Linear

From the test linearity at a significant level 5% (α = 0.05) and the degree of freedom of the $(v_1) = k - 2$ and the denominator $(v_2) = n - k$ visible $F_{count} \leq F_{table}$ (1-α)(k-2,n-k), this means that there is a direct link between the free variables (X) and the variable Bound (Y).

The summary of the independence test results can be seen in table 3.

Table 3. Summary of Independent test results

Variable	χ^2_{count}	χ^2_{table}	df	Information
X_1 and X_2	29,760	37,652	25	Independent
X_1 and X_3	24,549	37,652	25	Independent
X_2 and X_3	25,950	37,652	25	Independent

From the independence test at a significant level of 5% (α = 0.05) and the degree of freedom (df) = k-1)(b-1) is seen $\chi^2_{count} \leq \chi^2_{table}$, this means that the spread of data obtained in each of the variables is mutually independent.

The summary of the first hypotheses test results can be seen

Table 4. First hypothesis test Result summary

t_{count}	t_{table}	v	Information
8,3776	1,7033	27	H_0 rejected, H_1 accepted

From the first hypothesis test at a significant level of 5% and v = 31, it can be seen that $t_{count} = 8{,}3776$ and $t_{table} = 1{,}7033$ so that $t_{count} > t_{table}$ which means that there is a positive and significant relationship between numerical ability and mathematics learning outcomes of class X students of SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017 academic year.

The summary of the second hypothesis test results can be seen in table 5.

Table 5. Second hypothesis test Result summary

t_{count}	t_{table}	v	Information
2,1076	1,7033	27	H_0 rejected, H_1 accepted

From the second hypothesis test to a significant level of 5% and V = 27 It can be seen that t_{count} = 2,1076 and t_{table} = 1,7033 so $t_{count} > t_{table}$ which means there is a positive and significant relationship between the confidence with the results of mathematics teaching Grade X students SMA Muhammadiyah 7 Yogyakarta in the first semester of the school year 2016/2017.

The summary of the third hypothesis test results can be seen in table 6.

Table 6. Third hypothesis test Result summary

t_{count}	t_{table}	v	Information
4,2866	1,7033	27	H_0 rejected, H_1 accepted

From the third hypothesis test to a significant level of 5% and V = 27 It can be seen that t_{count} = 4,2866 and t_{table} = 1,7033 so $t_{count} > t_{table}$ which means there is a positive and significant relationship between the attention of parents with the results of mathematical learning Grade X students SMA Muhammadiyah 7 Yogyakarta in the first semester of the school year 2016/2017.

The summary of the fourth hypothesis test results can be seen in table 7.

Table 7. Summary of the fourth hypothesis test results

t_{count}	t_{table}	v	Information
34,288	3,37	$v_1 = 2$ $v_2 = 26$	H_0 rejected, H_1 accepted

From the fourth hypothesis test at a significant level of 5%, v_1 numerator = 2 and v_2 denominator = 26 so that it can be obtained $F_{count} = 34{,}288$ and $F_{table} = 3{,}37$ so $F_{count} \geq F_{table}$ which means there is a positive and significant relationship between independence of numerical ability and trustworthiness yourself with the results of learning mathematics class X students of Muhammadiyah 7 Yogyakarta High School even semester 2016/2017 school year.

The summary of the results of the fifth hypothesis test can be seen in Table 8.

Table 8. Summary of the Fifth Hypothesis Test Results

F_{count}	F_{table}	v	Information
37,8115	3,37	$v_1 = 2$ $v_2 = 26$	H_0 rejected, H_1 accepted

From the fifth hypothesis test at a significant level of 5%, v_1 numerator = 2 and v_2 denominator = 26 so that it can be obtained F_{count} = 37.8115 and F_{table} = 3.37 so that $F_{count} \geq F_{table}$ which means there is a positive and significant relationship between numerical ability and attention parents with mathematics learning outcomes in class X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017 academic year.

The summary of the results of the sixth hypothesis test can be seen in Table 9.

Table 9. Summary of the Results of the Sixth Hypothesis Test

F_{count}	F_{table}	v	Information
9,1997	3,37	$v_1 = 2$ $v_2 = 26$	H_0 rejected, H_1 accepted

From the sixth hypothesis test at a significant level of 5%, v_1 numerator = 2 and v_2 denominator = 26 so that it can be obtained F_{count} = 9.1997 and F_{table} = 3.37 so that $F_{count} \geq F_{table}$ which means there is a positive and significant relationship between self-confidence and the attention of parents with the results of learning mathematics students of class X SMA Muhammadiyah 7 Yogyakarta even semester 2016/2017 academic year.

The summary of the results of the seventh hypothesis test can be seen in Table 10.

Table 10. Summary of Seventh Hypothesis Test Results

F_{count}	F_{table}	v	Information
24,2419	2,99	$v_1 = 3$ $v_2 = 25$	H_0 rejected, H_1 accepted

From the seventh hypothesis test at 5% significance level, v_1 numerator = 3 and v_2 denominator = 25 so that it can be obtained F_{count} = 24.2419 and F_{table} = 2.99 so $F_{count} \geq F_{table}$ which means there is a positive and significant relationship between numerical ability, taste confidence and attention of parents with the results of mathematics learning class X SMA Muhammadiyah 7 Yogyakarta even semester of the 2016/2017 school year.

CONCLUSION

Based on the analysis of the experimental data and its discussion, this activity concludes the following:

1. There is a positive and significant relationship between numerical ability and mathematics learning outcomes of class X students of SMA Muhammadiyah 7 Yogyakarta in the even semester of the 2016/2017 school year. This is indicated by the t-test that is $t_{count} > t_{table}$ or 8.3776 > 1.703. The simple correlation coefficient *(r)* between numerical ability and mathematics learning outcomes is 0.849. And the simple regression equation for Y over X_1 is $\hat{Y} = 8{,}6901 + 0{,}8214X_1$
2. There is a positive and significant relationship between self-confidence and mathematics learning outcomes of class X students of Muhammadiyah 7 Yogyakarta High School, even semester 2016/2017 academic year. This is indicated by the t-test that is $t_{count} > t_{table}$ or 2.1076 > 1.7033. The simple correlation coefficient *(r)* between parents' attention and mathematics learning

outcomes is 0.3758. A simple regression equation for Y over X_2 is also obtained. $\hat{Y} = -43{,}2585127 + 1{,}14104946\, X_2$.

3. There is a positive and significant relationship between parents' attention and the mathematics learning outcomes of class X students of Muhammadiyah 7 Yogyakarta High School, even semester 2016/2017 academic year. This is indicated by the t-test that is $t_{count} > t_{table}$ or 4.2866 > 17033—simple correlation coefficient *(r)* between parents' attention and mathematics learning outcomes of 0.6364. Also, a simple regression equation of Y for X_3 is obtained as well as $\hat{Y} = -68{,}30601290 + 1{,}41652124\, X_3$.
4. There is a positive and significant relationship between students 'numerical abilities and students' self-confidence and mathematics learning outcomes of students of class X SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017 academic year. This is indicated by the F test, which is $F_{count} > F_{table}$ or 34.2878 > 3.37. The multiple correlation coefficient (R) between students' numerical ability and students' confidence with mathematics learning outcomes is 0.8515, and the coefficient of determination (R^2) is 0.7251 with a linear line equation Y^ = -5.0596 + 0.7982X_1 + 0.1708X_2. The relative contribution of X_1 is 96.7879%, and X_2 is 3.2121%, and the effective contribution of X_1 is 70.1797%, and X_2 is 2.3291.
5. There is a positive and significant relationship between students 'numerical ability and parents' attention with the mathematics learning outcomes of class X students of SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017 academic year. This is indicated by the F test that is $F_{count} > F_{table}$ or 37.8115 > 3.37. The correlation coefficient (R) between students' numerical ability and parents' attention with mathematics learning outcomes is 0.8626, and the coefficient of determination (R^2) is 0.7442 with linear equation $\hat{Y} = -21{,}8115 + 0{,}7109X_1 + 0{,}4167X_3$. The relative contribution of X_1 was 83.9909%, and X_3 was 16.0091%, and the effective contribution of X_1 is 62.5020%, and X_3 is 11.9132%.
6. There is a positive and significant relationship between students 'self-confidence and parents' attention with the mathematics learning outcomes of class X students of SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017 academic year. This is indicated by the F test that is $F_{count} > F_{table}$ or 9.1997 > 3.37. The correlation coefficient (R) between student confidence and parents attention with mathematics learning outcomes is 0.6437 and the coefficient of determination (R^2) is 0.4144 with a linear line equation $\hat{Y} = -86{,}0985 + 0{,}3218\, X_2 + 1{,}2961\, X_3$. The relative contribution of X_2 is 10.5893%, and X_3 is 10.5893%, and the effective contribution X_2 is 4.3883%, and X_3 is 37.0523%.
7. There is a positive and significant relationship between students 'numerical ability, student's confidence, and parents' attention with the mathematics learning outcomes of class X students of SMA Muhammadiyah 7 Yogyakarta, even semester 2016/2017 academic year. This is indicated by the F test that is $F_{count} > F_{table}$ or 24.2419> 2.99. The correlation coefficient (R) between the numerical ability of students, student confidence, and parents' attention with mathematics learning outcomes is 0.8627, and the coefficient of determination (R^2) is 0.7442 with a linear line equation $\hat{Y} = -22{,}8872 + 0{,}7098\, X_1 + 0{,}0182X_2 + 0{,}4114\, X_3$. The relative contribution of X_1 is 83.8625%, X_2 is 0.3335% and X_3 is 15.8039% and the effective contribution X_1 is 62.4089%, X_2 is 0.2482% and X_3 is 11, 7610%.

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