THE RELATIONSHIP OF PARENTS' ATTENTION AND LEARNING INDEPENDENCE ON MATHEMATICS LEARNING ACHIEVEMENT IN GRADE VII STUDENTS

Ety Wahyuni[a], Widayati[b]
Program Studi Pendidikan Matematika Universitas Ahmad Dahlan
Jalan Ring Road Selatan, Tamanan, Banguntapan, Bantul Yogyakarta
[a]ettywahyuni04@gmail.com,[b] widayati@pmat.uad.ac.id

ABSTRACT

Low student achievement is closely related to many factors, one of which is parents' attention and learning independence on the learning achievement. This study aimed to determine whether there is a positive and significant relationship between parents' attention and learning independence on mathematics learning achievement in grade VII students at State Islamic Junior High School (MTs Negeri) 6 Kulon Progo in the academic year 2019/2020. The population in this study were students of grade VII at MTs Negeri 6 Kulon Progo in the academic year 2019/2020, consisting of classes VII A, VII B, VII C, and VII D with a total of 128 students. The sample was taken from class VII A as a research sample and carried out by a purposive sampling technique. The researcher used a questionnaire method to collect data on parents' attention and learning independence. At the same time, the test method was used to determine mathematics learning achievement. Research instruments include validity tests, different power tests, and reliability tests. Requirements analysis includes a normality test, linearity test, and independence test. The researcher used product-moment correlation analysis and multiple linear regression analysis to analyze data. The results showed a positive and significant relationship of parents' attention and learning independence on the mathematics learning achievement in Grade VII students at MTs Negeri 6 Kulon Progo in the academic year 2019/2020. This was indicated by $F_{count} > F_{table}$ which was 8.48355> 3.32765 with R = 0.60754 and R^2=0.36911 with RC X_1 = 31.85638%, RC X_2= 68.14361% and EC X_1= 11.75863 %, EC X_2 = 25.15276%.

Keywords: Parents' Attention, Learning Independence, Mathematics Learning Achievement.

INTRODUCTION

According to Komariah (2011: 1) in Hendry Budiman (2017: 88), education is a strategic tool to improve people's lives. Through education, humans become smart, have skills, a good life attitude to get along well in the community, and help themselves, their families, and society. The Indonesian education system, which consists of general provisions, always changes from time to time, such as curriculum, goals, students, and education personnel. This is due to the development of increasingly sophisticated science and technology (IPTEK) and increasingly talented human resources (HR), which is why the purpose of education is always changing towards a better direction, namely towards the achievement of Indonesia's full human personality. The point is that people who believe in God Almighty, noble, knowledgeable, capable, creative, independent and become citizens of a democratic country.

Students' difficulties related to mathematics are very influential on student achievement or learning results, so students are reluctant to learn mathematics. Organizing learning is one of the teacher's main tasks. Learning can be interpreted as an activity that is shown to students to learn. One of the teachers' ways is to strive for students to improve learning achievement in mathematics to teach students. According to Dimyati and Mujiyono (2009: 113), learning is a daily activity for school students. There are learning activities at school, at home, and other places such as museums, libraries, etc.

In the world of education, there are many things learned, one of which is mathematics. Mathematics is the study of numbers in calculations. According to Hans Freudenthal, 'mathematics is a human activity which must be linked to reality.' Thus, mathematics is a way of thinking logically

presented in numbers, spaces, and forms with existing rules, which cannot be separated from these human activities.

Also, parents' participation has a very important meaning in education, namely, to educate children well. Parents also have the primary responsibility for the care and protection of children from infancy to adolescence. The role of parents can be said to be lacking if they ignore their children's learning achievement, such as not understanding their child's learning schedule, not fulfilling their children's learning tools completely, do not want to know their child's learning progress, do not care about the difficulties experienced by children in learning and do not try to know things which cause children less successful in the learning process. The time limitations of parents in educating children influence the development of children's learning abilities. Parents must have free time to educate children, which pays attention to the child's development and can improve children's learning results and vice versa. If parents do not have free time educating and paying attention to children's development, their learning results will decrease. In essence, every parent hopes that their children grow and develop into good children and not fall prey to actions that can harm themselves and others. At home, children need their parents' attention and affection. Parents' lack of attention can cause various problems in children, such as lazy to study and difficult to Lackicult to concentrate on learning, which results in learning results that will decrease. According to Slameto (2013: 105), attention is an activity carried out by someone about the choice of stimuli from the environment.

Furthermore, according to Ahmadi (2009: 142), attention is closely related to mental about reacted at a time. Based on the opinion above, it can be concluded that parents' attention is a form of emotional attachment given by parents to children. Emotional ties of love and sincere love to children. Parents' attention is needed in achieving children's learning success.

Also, the independence of learning is very important in learning mathematics. Learning will succeed optimally if done with full independence. Independence is a form of attitude towards objects in which individuals have the independence not affected by others. People who behave independently can solve problems faced by themselves without having to expect help from others. Learning independence is a form of learning centered on the students' creation of important opportunities and experiences for them to become confident, motivated, and able to learn at all times. With this independence, students will develop their values, attitudes, knowledge, and skills. Based on the description above, an increase in student learning independence is very necessary. Learning achievement generally increases if independence for learning increases. According to Hendra Surya (2003: 114), Independent learning is the process of moving power or strength from within an individual who learns to move his potential to learn objects of learning independence without any foreign pressure or influence outside him. Thus, learning is more directed to the formation of independence in ways of learning. According to Haris Mujiman (2007: 1), Learning Independence can be interpreted as the nature and ability of students to carry out active learning activities, which are driven by the motive to master a competency that is already owned. According to Umar Tirtaraharja and LaSulo (2005: 50), Learning independence is an ongoing learning activity driven by one's own volition, self-choice, and accompanied by a sense of responsibility from the learner's self. According to Abu Ahmadi (2004: 31), Learning Independence is as independent learning, not depend on others. From some of these opinions, it can be concluded that learning independence is an activity/learning activity carried out by students of their own volition and has a high level of confidence in completing their assignments.

The objectives of this study are as follows: 1) Find out whether there is a positive and significant relationship of parents' attention and learning achievement on mathematics learning for Grade VII students at MTs Negeri 6 Kulon Progo Academic Year 2019/2020. 2) Find out whether there is a positive and significant relationship of learning independence and learning achievement on the mathematics learning for VII grade students at MTs Negeri 6 Kulon Progo 2019/202 Academic Year. 3) Find out whether there is a positive and significant relationship of parents' attention and learning independence on the learning achievement in mathematics learning for VII grade students at MTs Negeri 6 Kulon Progo Academic Year 2019/2020.

METHODS

This research was a correlation study. The research method used was quantitative (Sugiyono, 2012: 14). This study's population was Grade VII students at MTs Negeri 6 Kulon Progo in the 2019/2020 academic year. A total of 128 students were divided into four classes. Sampling was determined purposively, that is, with a non-random sampling technique. Classes taken as sample classes were class VII A with a total number of students of 32. Data collection techniques used were questionnaire techniques with instruments in questionnaires and test techniques in objective questions in multiple-choice. The analysis prerequisite test was done using the normality test with Chi-squared formula, linearity test of F-test formula, and Chi-squared formula independence test. The research hypothesis test was performed using a simple correlation test, multiple regression analysis tests, and a multiple linear regression test with two independent variables. Research hypothesis testing using a simple correlation test was performed to determine whether there are positive and significant relationships between 1) parents' attention to learning achievement in students' mathematics learning, 2) independence of learning to learning achievement in students' mathematics learning. Furthermore, the research hypothesis test using a multiple regression analysis tests was carried out to determine whether there is a positive and significant relationship of parents 'attention and learning independence on learning achievement in students' mathematics learning.

RESULTS AND DISCUSSION

Based on the normality test that has been done, it is obtained that the three variables, namely parents' attention, learning independence, and mathematics learning achievement outcomes, are normally distributed. The summary of normality test results can be seen in Table 1.

Tabel 1. The Summary of Normality Test

No	χ^2_{count}	χ^2_{table}	Dk	Information
X_1	2,76506	7,81473	3	Normal
X_2	1,12085	7,81473	3	Normal
Y	3,05799	5,99146	2	Normal

From the normality test at a significant level of 5%, it is seen $\chi^2_{count} \leq \chi^2_{table}$, which means that the distribution of data obtained on each variable is normally distributed.

Based on the research that has been done, it was found that between the independent variable and the dependent variable, parents' attention with mathematics learning achievement, and learning independence with mathematics learning achievement, it was found that there was a linear relationship. The summary of linearity test results can be seen in Table 2.

Table 2. Summary of Linearity Test Results

Variable	F_{count}	F_{table}
X_1 and Y	2,11133	2,77402
X_2 and Y	0,89443	2,44461

From the linearity test at a significant level of 5% ($\alpha = 0.05$) and the degrees of freedom v_1, the numerator k-2 and v_2 denominator n-k it shows that $F_{count} \leq F_{table}$ (1-α)(k-2, N-k)). This means a linear relationship between the independent variable (X) and the dependent variable (Y).

Based on the research that has been conducted, it was found that among the independent variables, namely parents' attention and learning independence. The summary of independence test results can be seen in Table 3.

Table 3. Summary of Independence Test Results

Variable	χ^2_{count}	χ^2_{table}	Df
X_1 and X_2	29,75704	37,6525	25

From the independence test at a significant level of 5% (α = 0.05) and the degrees of freedom (dk) = k-1) (b-1), it is seen that $\chi^2_{count} \leq \chi^2_{table}$. This means that the distribution of data obtained on each variable is mutually independent.

The summary of the results of the first hypothesis test can be seen in Table 4.

Table 4. Summary of First Hypothesis Test Results

t_{count}	t_{table}	Dk	Information
3,75315	1,69726	30	H_0 is rejected, H_1 is accepted

From the first hypothesis test at a significant level of 5% and df = 30, it can be seen that $t_{count} = 3{,}75315$ and $t_{table} = 1{,}69726$ so that $t_{count} > t_{table}$ which means there is a positive and significant relationship between parents' attention and learning achievement on the mathematics learning for students of grade VII at MTs Negeri 6 Kulon Progo in the 2019/2020 academic year.

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

Table 5. Summary of Second Hypothesis Test Results

t_{count}	t_{table}	Df	Information
4,08123	1,69726	30	H_0 is rejected, H_1 is accepted

From the second hypothesis test at a significant level of 5% and df = 30, $t_{count} = 4{,}08123$ and $t_{table} = 1{,}69726$ so that $t_{count} > t_{table}$. This indicates a positive and significant relationship between learning independence and learning results on mathematics learning for VII grade students at MTs Negeri 6 Kulon Progo in the 2019/2020 Academic Year.

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

Table 6. Summary of Third Hypothesis Test Results

F_{count}	F_{table}	Df	Information
8,48355	3,32765	$v_1 = 2$ $v_2 = 29$	H_0 is rejected, H_1 is accepted.

From the third hypothesis test at a significant level of 5%, numerator = 2 and v_2 denominator = 29, obtained F_{count} = 8.48355 and F_{table} = 3.32765 so $F_{count} \geq F_{table}$ There is a positive and significant relationship between parents' attention and independence learning on the learning results in mathematics learning of grade VII students at MTs Negeri 6 Kulon Progo in 2019/2020 Academic Year.

The relative donations size and the amount of effective donation for each variable X_1 and X_2 can be seen in Tabel 7.

Table 7. Summary of Relative Donations and Effective Donations Results

Variable	Relative Donations (%)	Effective Donations (%)
X_1	31,85638 %	11,75863 %
X_2	68,14361 %	25,15276 %

CONCLUSION

Based on the analysis of the experimental data and its discussion, the following conclusions can be drawn from this study:

1. There was a positive and significant relationship between parents' attention and mathematics learning achievement of Grade VII students at MTs Negeri 6 Kulon Progo in the 2019/2020 school year. This was indicated by the t-test obtained, namely that t_{count} = 3.75315 and t_{table} = 1.69726. The $t_{count} > t_{able}$ or 3.75315> 1.69726 at a significant level of 5%, and df = 30. The simple coefficient value (R) between parents' attention and mathematics learning achievement was 0.56525. The linear regression equation was $\hat{Y} = 50.93146 + 0.15888\ X_1$.
2. There was a positive and significant relationship between learning independence and mathematics learning achievement of Grade VII students at MTs Negeri 6 Kulon Progo in the

2019/2020 school year. The t-test indicated this obtained, namely that t_{count} = 4.08123 and t_{table} = 1.69726 so that $t_{count} > t_{table}$ or 4.08123> 1.69726 at a significant level of 5%, and df = 30. The simple coefficient value (R) between learning independence and mathematics learning achievement was 0.59749. The linear regression equation was $\hat{Y} = 43.57709 + 0.24744\ X_2$.

3. There was a positive and significant relationship of parents' attention and independence of learning on the mathematics learning achievement of VII grade students at MTs Negeri 6 Kulon Progo in the 2019/2020 school year. This was indicated by the F-test obtained, namely that F_{count}= 8.48355 and F_{table} = 3.32765 so $F_{count} > F_{table}$ or 8.48355> 3.32765 at a significant level of 5%, with numerator dk = 2 and dk denominator = 29. The multiple correlation coefficient (R) between parents' attention and learning independence on mathematics learning achievement was 0.60754. The coefficient of determination (R^2) was 0.36911 with a linear equation $\hat{Y} = 6.63200 + 0.22996\ X_1 + 0.48277\ X_2$. The relative contribution of X_1 was 31.885638%, and X_2 was 68.14361%, while the effective contribution of X_1 was 11.75863%, and X_2 was 25.15276%.

REFERENCES

Abdurrahman, Mulyono. 2012. *Anak berkesulitan belajar*. Jakarta : Rineka Cipta

Azwar, Saifuddin. 2012. *Reliabilitas dan Validitas*. Pustaka Pelajar

Djamarah, Syaiful Bahri. 2010. *Guru dan Anak Didik dalam Interaksi Edukatif.* Jakarta: Rineka Cipta.

Fahzurrohman, Muhammad. *Model-Model Pembelajaran Inovatif*, (Jogjakarta: Ar-Ruzz Media, 2015), page 205

Hamalik, Oemar. 2007 *Proses Belajar Mengajar*, Jakarta:Bumi Aksara.

Harera, Astrid. 2012. *Pengaruh Motivasi Belajar dan Perhatian Orang Tua terhdap Hasil Belajar Matematika Siswa Kelas X SMA Muhammadiyah 4 Surabaya Tahun Ajaran 2011/2012.*

Jihad, Asep, dan Abdul. 2012. *Evaluasi Pembelajaran*. Yogyakarta: Multi Presindo

Nasution, S. 2007. *Metode Research (penelitian ilmiah)*. Jakarta: Bumi Aksara

Purwanto. 2011. *Evaluasi Hasil Belajar*. Yogyakarta : Pustaka pelajar

Riyanto, 2012. *Prosedur Penelitian Suatu Pendekatan Praktik*. Jakarta : Rineka Cipta

Sudjana. 2002. *Metode Statistika*. Bandung: Tarsito

Sugiyono. 2009. *Memahami Penelitian Kualitatif*. Bandung: Alfabeta

_____. 2017. *Metode Penelitian Pendidikan*. Bandung: CV Alfabeta

Suryani, Nunuk dan Leo Agung.*Strategi Belajar-Mengajar*, hal 95-96

Trianto. 2007. *Model-Model Pembelajaran Inovatif berorientasi Konstruktivistik*. Jakarta: Prestasi Pustaka Publisher

Ulya, Iik Faiqotul, Riana Irawati, dan Maulana. 2016. Peningkatan Kemampuan Koneksi Matematis Dan Motivasi Belajar Siswa Menggunakan Pendekatan Kontekstual. Universitas Pendidikan Indonesia: Sumedang

Undang-Undang RI Nomor 20 Tahun 2003. *Sistem Pendidikan Nasional*. http://www.inherent-dikti.net/files/sisdiknas.pdf Tanggal Akses 10 Oktober 2019

Yusron, Narulita. *Creative Learning*. (Bandung : Nusa Media, 2013), hal 39

Zuriah. 2004. *Konsep-Konsep dan Teknik Supervisi Pendidikan Dalam Rangka Pengembangan Sumber Daya Manusia.* Jakarta: Rineka Cipta.