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Analysis of Kumon Learning at SMA PAB Saentis Kaliserayu Sub-District Road Percut Sei Tuan Desa Saentis

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Abstract: *The learning that has been carried out so far in the school tends to apply classical learning techniques that do not pay attention to the stages in the variety of learning. For this reason, a good way is needed to learn a lesson, one of which is known as a learning technique. In this research activity, the theme of mathematics learning for school children is based on the KUMON method. This technique is considered one of the solutions that is expected to increase children's academic values and awareness in learning and train children to have independence and full responsibility in the learning process. Indirectly, when repeating the material done by the child, the child will get a reinforcement value that is more than the material conveyed Repetition is intended to provide added value in learning a new material and is implicit in the hierarchical structure of the material that has been learned so that it will be self-absorbed when the child is faced with a problem that establishes a relationship to relates the past material to the future material. the regression analysis test using simple linear regression analysis with the general form of the equation formed is as follows: Y = 0.099X + 36.823. Where the learning variable affects the bound variable of learning outcomes of 0.099 and the value of the constant when no one variable influences, it will produce a learning outcome value of 36, 823. hypothesis test proved to be accepted and the null hypothesis was rejected from the results of the calculation of the value of t obtained was t calculated 6.796 greater than t tabel = 0.697 and sig = 0.763 > sig 0.05, it can be proven that the learning variable has a positive and significant effect on the learning outcome variable.*

Keywords: *Teaching Methods, Kumon Learning, PAB 8 Saentis*

INTRODUCTION

In the era of globalization, the advancement of science and technology, and a culture that is increasingly developing and advanced, it is necessary to have enough individuals who can face all problems and adapt to the environment with the current situation and conditions. Therefore, intensive training and coaching are needed to build the expected individuals. This can be done, one of which is through education. Education is inseparable from the process of teaching and learning activities, the learning process that develops in the classroom is generally determined by the role of teachers and students as individuals who are directly involved in the process. Therefore, in the learning process to improve learning outcomes such as the ability to think reasoning. The ability to think and reason in mathematics lessons related to abstract concepts arranged in hierarchically and deductive reasoning that requires gradual and sequential understanding. The results of the interview study of high school students found problems related to mathematics lessons that stated that students thought that mathematics was a difficult teaching material. The interview results show that many complaints from students about mathematics lessons are difficult, uninteresting, boring, and feared by many children.

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Complicated calculations and difficult formulas make many children dislike math lessons. Teachers have not accustomed students to learning independently with feedback. After explaining the material, the teacher tells students to work on the questions contained in the package book and LKS book independently. Likewise, according to the results of a study by one of Kumon's supervisors, who stated that the mathematics learning process still does not show a significant improvement in learning outcomes. The learning process takes place conventionally. Based on the background stated above, it is necessary to research on Analysis of Kumon Learning At SMA PAB Saentis Kaliserayu Sub-Distrik Road Percut Sei Tuan Desa Saentis.

LITERATURE REVIEW

According to Dimyati and Mudjono (2019), learning outcomes are a process of relationships that influence each other, in two components of the process, an action for learning and teaching, there is a relationship between the party being taught and the party providing learning. Meanwhile, according to Suprijono (2019), Learning Outcomes are attitudes that are obtained after a learner gets material or learning actions, which can be in the form of attitudes, patterns, activities, and appreciation skills after the learning stages are carried out. As for the process, there are several steps in implementing KUMON learning, which are as follows:

Steps:

1. At first, the teacher presents the concept and the students pay attention to the presentation.
2. Then students take the pocketbook that has been provided, submit the homework worksheet that has been done at home, and take the worksheet that the teacher has prepared for the student to work on that day.
3. Students sit down and start working on their worksheets because the lessons are programmed according to their respective abilities, usually, students can work on the worksheets with a banger.
4. After completing the work, the worksheet is handed over to the teacher to be checked and graded. While the worksheets are assessed, students practice with learning aids.
5. After the worksheet has been checked and graded, the teacher records the learning results of the day on the "grade list". These results will later be analyzed for the preparation of the following learning program.

KUMON is a technique that is rarely applied in learning at school. This learning requires the effectiveness of students in thinking at a high cognitive level so that they are not too dependent on the teacher as the party who gives or delivers the material for students are

given time to think and spend all their abilities, in this case, will build a sense of confidence that arises by itself when the problem or the problem presented in the question can or can be solved properly. The hypothesis formulated in this study is as follows:

Ho: There is a significant positive influence between KUMON learning and Student learning independence

Ha: There is no positive and significant influence between KUMON learning and student learning independence

RESEARCH METHOD(S)

The type and design of the research for the application of the KUMON method uses a type of quantitative research where the priority of data is quantitative data taken using a questionnaire and then analyzed using the quantitative data analysis method. According to Sugiyono (2017), quantitative research is a scientific method that meets scientific or scientific principles because it has fulfilled scientific principles concretely and empirically, objectively, measurably, rationally, and systematically. The research site in the Percut Sei Tuan sub-district is precisely at the PAB 8 Saentis High School which is located in Jalan Kaliserayu, Saentis Village. The sample is students in class XI of SMA PAB 8 Saentis who are taking part in mathematics learning related to quadratic equations and inequality. The population is the entire student of SMA PAB 8 Saentis which is in class XI consisting of 3 classes each of which has a total of 20 students. The total population is 60 people with most of them students who are participating in learning equations and quadratic inequality materials. Because the population is smaller than 100, the sample withdrawal can be categorized as a census sample withdrawal where all members of the population are included as the total number of samples that will be used as respondents in this study are all students in class XI of PAB Saentis High School. The research variables in this study are independent variables and bound variables. The independent variable is symbolized by X, and the bound variable is symbolized by Y. The implicit interpretation variable contained in this study is for the independent variable is learning and the bound variable is the learning outcome. The influence of learning by using KUMON on the learning outcomes of students attending SMA PAB 8 Saentis will be seen or analyzed. The instrument in this study is a tool used to collect data at the research site. Collecting data related to the success of the learning used and its relationship with the learning outcomes obtained by students can be seen by describing and collecting the data obtained by distributing questionnaires to students in grade XI after the implementation of learning using the KUMON model is applied. The results of obtaining scores can be reviewed from the learning results that

have been carried out, especially in the material Quadratic Equations and Quadratic Inequalities.

RESULT AND DISCUSSION

The learning carried out at school requires variety so that children who take part in learning do not feel bored and want to follow the learning process consciously without having to have a sense of compulsion. Fostering a sense of need for students to learn something is a real challenge so that in the future it will become a provision of knowledge that has been attached to students' knowledge and thinking for a very long time. The test uses a heteroscedasticity test whether the data is distributed normally or not, if the data passes the heteroscedasticity test or no symptoms of heteroscedasticity are found, then it can be said that the data spreads without forming a data pattern in the form of a randomly spread plot. The Normality test is a test conducted with the aim of assessing the distribution of data on a group of data or variables, whether the distribution of the data is normally distributed or not.

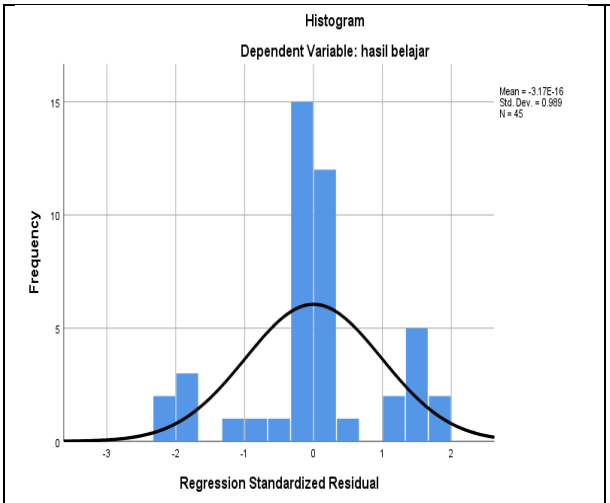

Figure 1. Histogram of Data Normality Test Results

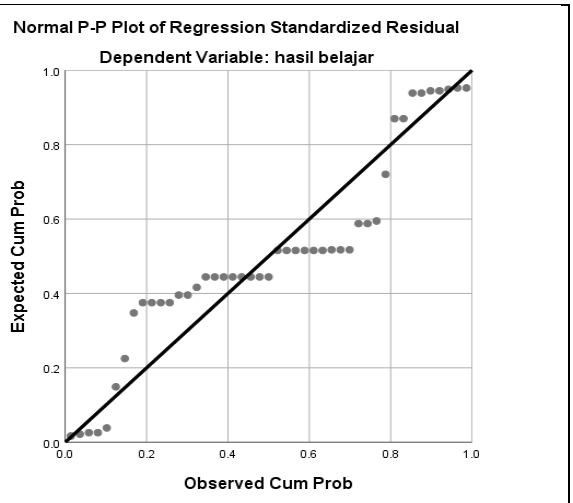

Figure 2. Spread PP – Data Normality Test Plot

The display of the test results of normality shows that the data visually tends to be in the central position or the vex is in the middle and the feel point is around the diagonal line, so it can be concluded that the data is normally distributed. The decision-making criteria related to the multicollinearity test are as follows (Ghozali, 2016):

- If the VIF value < 10 or the Tolerance value > 0.01, then it is declared that there is no multicollinearity.
- If the VIF value > 10 or the Tolerance value < 0.01, then multicollinearity is declared.

Table 1. Multicollinearity Test Results Using SPSS

Coefficients[a]										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	36.823	5.418		6.796	.000					
pembelajaran	.099	.129	.116	.763	.449	.116	.116	.116	1.000	1.000
a. Dependent Variable: hasil belajar										

Therefore, based on the testing criteria of the multicollinearity test, a VIP value of 1,000 < 10 and a tolerance value of > 0.01 can be obtained, it can be stated that there is no multicollinearity in the data to be tested.

This study consists of one independent variable that will be seen and proven its influence on the bound variable where the free variable is learning and the bound variable is the learning outcome, so the influence between the independent variables on the bound variable is to be proven by choosing a simple linear regression type test.

Where the equation to be formed is

Y = Ax + e, With the caption:

Y = learning (KUMON), X = Learning Outcomes , e = error / tolerated error rate

Then a simple linear regression equation can be formed Y = 0.099X + 36.823

Table 2. Results of Simple Linear Regression Test

Coefficients[a]										
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant)	36.823	5.418		6.796	.000					
pembelajaran	.099	.129	.116	.763	.449	.116	.116	.116	1.000	1.000
a. Dependent Variable: hasil belajar										

Where the learning variable affects the bound variable of learning outcomes of 0.099 and the value of the constant when there is no one variable that influences, it will produce a learning outcome value of 36, 823.

Table 3. Results of the Test Hypothesis Test t

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	36.823	5.418		6.796	.000
	pembelajaran	.099	.129	.116	.763	.449

a. Dependent Variable: hasil belajar

So the test criterion is that if t is greater than t table, then the alternative hypothesis is proven and the null hypothesis rejected from the results of the calculation of the value of t obtained is t calculated 6.796 greater than t tbale = 0.697 and sig = 0.763 > sig 0.05, then it can be proven that the learning variable has a positive and significant effect on the learning outcome variable

For the determination test, a determination coefficient value of 0.099 or 9.9 % was obtained which was influenced by learning factors, the rest was influenced by other factors that were not explained in this study.

CONCLUSION AND RECOMMENDATION

The conclusions that can be drawn from the research conducted at SMA PAB 8 SAENTIS are as follows :

1. This study provides the results of a data quality test consisting of validity and reliability where all statements in the questionnaire that reflect learning variables and learning outcomes are declared valid and reliable using SPSS version 25 data analysis.
2. For the regression analysis test using simple linear regression analysis with the general form of the equation formed is as follows: Y = 0.099X + 36.823
   Where the learning variable affects the bound variable of learning outcomes of 0.099 and the value of the constant when there is no one variable that influences, it will produce a learning outcome value of 36, 823.
3. The results of the alternative hypothesis test proved to be accepted and the null hypothesis was rejected from the results of the calculation of the value of t obtained was t calculated 6.796 greater than t tbale = 0.697 and sig = 0.763 > sig 0.05, it can be proven that the learning variable has a positive and significant effect on the learning outcome variable.
4. For the determination test, a determination coefficient value of 0.099 or 9.9 % was obtained which was influenced by learning factors, the rest was influenced by other factors not explained in this study

For researchers to conduct further research choose other variables that can be measured to see their influence on learning outcome variables or increase the number of independent variables so that a comparison of variables that have a greater influence on learning outcome variables can be made. For teachers to carry out learning variations in the teaching and learning process to avoid student boredom when learning a new material.

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