

The Influence of Memory and Metacognitiveness on Students' Value



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ABSTRACT: Learning behavior has an important role in forming the basis of intellectual, social and emotional development, including for elementary school students. Achieving learning goals and increasing learning achievement can be achieved by paying attention to several aspects, both internal and external. Internal aspects include student learning behavior. The student's learning behavior consists of several components, namely attitude, learning motivation, learning strategies, memory and metacognitive components. This research aims to analyze the contribution of two components of learning behavior, namely memory and metacognitive, to student achievement, namely achievement of grades, at the time of improvement. class.

This research is quantitative research with a descriptive approach, data analysis is quantitative/statistical, with the aim of testing the hypothesis that has been applied. Data processing was carried out using regression tests and correlation tests using SPSS version 20. The research subjects were 3rd grade students of SDN 1 Drangong, Serang Regency, SDN Kubang Lesung Kulon and SDN Cimone 3, with a total sample of 94 respondents. The results of the research showed that the independent variables were memory and metacognitive variables, both partially and simultaneously, have a positive effect on the independent variable, namely achievement of grades. The Memory Variable (X1) has a sig value of 0.000 and a calculated t of 5.112. Metacognitive (X2) has a sig value of 0.024 and t count of 4.273. Meanwhile, simultaneously the sig value obtained is 0.000 and the calculated F is 30,256. This can be interpreted that if memory and metacognition increase, then the achievement of grades will also increase

KEYWORDS: Memory, Metacognition, Student Values.

INTRODUCTION

Education is a foundation in life that must be built from an early age. The objectives of national education are stated in Law no. 20 of 2003 Article 1 paragraph 2 which is based on Pancasila and the 1945 Constitution of the Republic of Indonesia. In the 4th paragraph of the opening of the 1945 Constitution there is the sentence "Educating the life of the nation" is the goal of national education which describes the ideals of the Indonesian nation to educate and equalize education to all corners of Indonesia in order to achieve an intelligent national life.

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, intelligence, noble morals, and the skills needed by themselves, the nation's community and the state. Learning behavior is an important component in learning. Learning behavior is an attitude that is inherent in students in responding and reacting to every teaching and learning activity that occurs whether they are enthusiastic and responsible for the learning opportunities given to them.

Achieving learning goals and increasing learning achievement can be achieved by paying attention to several aspects, both internal and external. Internal aspects include student learning behavior. Student learning behavior consists of several components, namely attitude, learning motivation, learning strategies, memory and metacognitive components. Achieving learning goals can take the form of achieving final learning grades. This research aims to determine the contribution of two components in learning behavior, namely the Memory and Metacognitive components, to the achievement of grades during grade promotion.

In basic education, learning behavior has an important role in forming the basis of children's intellectual, social and emotional development. At this stage of basic education, students are in the stage of building basic academic abilities. Learning behavior involves developing metacognitive skills, such as understanding how they learn and how they organize themselves. This allows students to become more effective learners over time. Positive learning behavior in elementary school students can increase

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students' motivation and enthusiasm for learning. Students who feel motivated tend to be more focused, persistent, and able to overcome obstacles. Learning behavior in basic education forms the foundation for subsequent learning at higher levels of education. The skills and habits developed at the elementary level can help students become more effective learners in the future. So it is necessary to study more deeply the contribution of memory and metacognitive components in influencing the achievement of elementary school students' grades when they are promoted to grade. To narrow the focus of the research, the researchers limited respondents to students who had advanced to grade III, in state elementary schools in Serang City, Cilegon City and Tangerang City. As a sample, the locus of SD Negeri 1 Drangong, Serang City was chosen. SD Negeri 1 Kubang Lesung Kulon, Cilegon City and SD Negeri Cimone 3, Tangerang City.

THEORETICAL FRAMEWORK

Learning Behavior

The study of student learning behavior is important to obtain information that is useful for success in the learning process. Several factors that influence student learning behavior in the classroom include the influence of other people, classroom conditions, and learning facilities. By understanding these factors, steps can be taken to improve the quality of the learning process and student learning behavior.

Learning behavior refers to the attitudes and actions that emerge from individuals in response to learning activities. This behavior includes the way individuals respond to certain learning situations, learning habits, learning techniques, and changes in behavior as a result of learning experiences. Several aspects related to student learning behavior include the habit of attending lessons, repeating lessons, reading books, visiting the library, and taking exams.

Dimiyati and Mujiono (2017:259) state that "learning behavior is a learning process that is experienced and internalized and is also a learning activity about learning materials and learning resources in the environment". Meanwhile, according to Aunurahman (2018:222) in the journal Reka Rahayu and Ratna Susanto said that "learning behavior is a student's study habit that has been going on for a long time, giving certain characteristics to their learning activities".

Factors that influence student learning behavior include the social and non-social environment, learning approach factors, as well as factors that shape student learning behavior in the classroom. Behavior caused by internal factors is behavior within the student which is influenced by the student's circumstances, attitudes and interests. In this research, the components that will be studied and become independent variables are the components of attitude, learning motivation, learning strategies, memory and metacognition, whose contribution to elementary school students' achievement will be analyzed.

Memory

Memory is the translation of memory. In general, experts view memory as a relationship between experience and the past (Walgito, 2004). Santrock explains that memory is an element of cognitive development, which includes all situations in which individuals store information received over time (Atkinson, 2000: 213). Memory refers to an individual's ability to possess and retrieve information and also the structure that supports it as well as a form of competence, memory also allows individuals to have a self-identity (Wade, 2008:13).

Atkinson and Shiffrin make an important distinction between the concepts of memory and memory storage. Memory is used to refer to stored data, while storage refers to structural components that contain information (Solso, 2007;37). So it can be concluded that memory is an individual's ability to store, process and retrieve experiences, data, information that has been obtained in the past for the future by considering their own situation and conditions.

The process of remembering or memory is influenced by several factors (Ahmadi, 2004: 42), namely:

Individual Factors. The process of remembering is influenced from within the individual, such as character, physical condition, spiritual condition and age. Remembering that it will be more effective if individuals have great interest, strong motivation, have certain methods of observation and learning, and have good physical condition and health.

Remembered object factors. Something that has a clear organization and structure, has meaning, is related to the individual, and has a strong enough intensity of stimulation is easier for someone to remember.

Environmental factor. The remembering process will be more effective if there is a supportive environment and avoids distractions.

Metacognitive

Based on the definition on Wikipedia, metacognition is the ability to control cognitive domains or aspects. Metacognition can be interpreted as a technique of thinking about thinking, which means that we can think about reflecting, analyzing and understanding how to think so that we can make the right decisions and solve problems more effectively. Metacognition controls

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the six levels of cognitive aspects defined by Benjamin Bloom in Bloom's taxonomy which consist of memory, understanding, applied, analysis and synthetic and evaluation stages.

According to Pasaribu (2010), metacognition can be described into several stages, namely: Focusing on the problem given (problem identification), Making a decision on how to solve the problem, Carrying out the decision to solve the problem, Interpreting the results and formulating an answer to the problem, Carrying out an evaluation of the problem solution. . The evaluation stage in its implementation is an activity carried out from the beginning to the final stage

RESEARCH METHOD

Based on the title stated above, the type of research used is quantitative research with a descriptive approach, namely a research method based on the philosophy of positivism, used to research certain populations or samples, data collection using research instruments, quantitative/statistical data analysis, with the aim of testing the hypothesis that has been applied (Sugiyono, 2011:8) This research uses the multiple linear regression analysis method because the independent variable consists of more than one.

This research took place in three city districts in Banten Province: SD Negeri Drangong 1 Serang, SD Negeri Kubang Lesung Kulon Cilegon City, SD Negeri Cimode 3 Kota Tangerang when implemented in the first semester of the 2023-2024 academic year, to be precise in November 2023.

The population in this study was all fourth grade students in the three schools. Meanwhile, the sample in this study was chosen randomly using a random sampling technique totaling 90 students from three schools.

The data collection technique used to obtain data that is relevant to the problem under study is through the survey method which is a way of obtaining primary data on the research object by directly reviewing the research object. Primary data can be obtained by: library research, which is carried out by reading and studying the literature in the library, with the aim of placing a theoretical basis regarding the main problem being discussed, field research, which is a collection technique. data by visiting the school concerned to make direct observations of the company's activities and obtain data and information regarding the problem being studied

To obtain this data, researchers used the technique of distributing questionnaires, namely a data collection technique that is carried out by giving a set of questions or written statements to respondents to answer (Sugiyono, 2005: 135). According to Maholtra (2005) in Sani (2010: 199) a questionnaire, whether called a form or schedule, interview form, or measurement instrument, is a series of questions that are informed to obtain information from respondents as completely as possible.

This research uses quantitative analysis using statistical calculations. All data that has been collected in the research is then analyzed and hypothesis tested. This research uses multiple linear regression analysis and assumption testing with the help of the Eviews version 10 program as a technique for analyzing Variable Operational research data.

The multicollinearity test aims to see whether or not there is a high correlation between the independent variables in a multiple regression model (Ghozali & Ratmono, 2017).

The multiple linear regression test is a regression used to test the influence of two or more independent (explanatory) variables on one dependent variable (Ghozali & Ratmono, 2017). In general, multiple linear regression is expressed in the following equation:

RESULTS AND DISCUSSION

Influence of Attitude Components (X1), Learning Motivation (X2), Learning Strategy (X3), Memory (X1), and Metacognition (X2) on Grades (Y).

The results of SPSS software processing for multiple regression analysis are presented in the following table:

Table 1. Regresi Berganda
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	42.407	5.475		7.746	.000
	Memory	.836	.164	.431	5.112	.000
	Metacognitiv	.714	.167	.360	4.273	.000

a. Dependent Variable: Value

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Based on the calculation results in the table above, the form of the multiple linear regression equation is obtained as follows:

$$Y = 42.407 + 0.836 X_1 + 0.714 X_2$$

The value of the regression coefficient on the independent variables illustrates that if the independent variable is estimated to increase by one unit and the value of the other independent variables is estimated to be constant or equal to zero, then the value of the dependent variable is expected to increase or decrease according to the sign of the regression coefficient of the independent variable.

From the multiple linear regression equation above, a constant value of 42,407 is obtained. This means that if the Value variable (Y) is not influenced by the independent variables, namely Memory (X1) and Metacognition (X2), it will have a value of 42,407.

The regression coefficient for the independent variable X1 is positive, indicating that there is a unidirectional relationship between Memory (X1) and Value (Y). The regression coefficient for the variable

The regression coefficient for the independent variable X2 is positive, indicating that there is a unidirectional relationship between Metacognitive (X2) and Value (Y). The regression coefficient for the variable

Hypothesis testing

Partial Hypothesis Testing (t Test)

Hypothesis:

H01: Memory does not have a significant influence on grades

H11: Memory has a significant influence on grades

H02: Metacognition does not have a significant influence on value

H12: Metacognition has a significant influence on value

Test criteria

Reject Ho if sig < 0.05 or if - t table > t count > t table

Accept Ho if sig > 0.05 or if - t table < t count < t table

If the sample size (n) is 94 and the number of independent variables (k) is 2, the value of $df_1 = k - 1 = 2 - 1 = 1$ and $df_2 = n - k - 1 = 94 - 2 - 1 = 91$, then the t table value is ± 1.986 .

The following are the results obtained:

Table 2. Uji Hipotesis Parsial

Model	Coefficients ^a			t	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
(Constant)	42.407	5.475		7.746	.000
1 Daya Ingat	.836	.164	.431	5.112	.000
Metacognitiv	.714	.167	.360	4.273	.000

a. Dependent Variable: Nilai

Based on the table above, it can be concluded as follows:

1. The Memory Variable (X1) has a sig value of 0.000 and a calculated t of 5.112. Because the sig value (0.000) < 0.05 and t count (5.112) > t table (1.986), H11 is accepted, meaning that memory power (X1) has a significant influence on value (Y).

2. The Metacognitive variable (X2) has a sig value of 0.000 and a t count of 4.273. Because the sig value (0.000) < 0.05 and t count (4.273) > t table (1.986), H12 is accepted, meaning that Metacognitive (X2) has a significant influence on Value (Y).

Simultaneous Hypothesis Testing

To test the simultaneous effect, the following hypothesis formula is used:

H03: Memory and Metacognition do not have a significant influence simultaneously on grades.

H13: Memory and Metacognition have a significant influence simultaneously on grades.

Test criteria

- Reject Ho if sig < 0.05 or if F count > F table

- Accept Ho if sig > 0.05 or if F count < F table

If the sample size (n) is 94 and the number of independent variables (k) is 2, the value of $df_1 = k - 1 = 2 - 1 = 1$ and $df_2 = n - k - 1 = 94 - 2 - 1 = 91$, then the F table is 3.096.

The following is the F test obtained:

Test criteria

- Reject Ho if sig < 0.05 or if F count > F table

- Accept Ho if sig > 0.05 or if F count < F table

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If the sample size (n) is 94 and the number of independent variables (k) is 5, the value of $df_1 = k = 5$ and $df_2 = n - k - 1 = 94 - 5 - 1 = 88$, then the F table is 2.318.

The following is the F test obtained:

Test criteria

- Reject H_0 if $sig < 0.05$ or if $F \text{ count} > F \text{ table}$
- Accept H_0 if $sig > 0.05$ or if $F \text{ count} < F \text{ table}$

If the sample size (n) is 94 and the number of independent variables (k) is 5, the value of $df_1 = k = 5$ and $df_2 = n - k - 1 = 94 - 5 - 1 = 88$, then the F table is 2.318.

The following is the F test obtained:

Table 3. Uji Simultan

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1013.379	2	506.689	30.256	.000 ^b
	Residual	1523.972	91	16.747		
	Total	2537.351	93			

a. Dependent Variable: Value

b. Predictors: (Constant), Metacognitive, Memory

From the table above, the sig value obtained is 0.000 and the calculated F is 30.256. Because the sig value (0.000) < 0.05 and F count (30.256) $> F$ table (3.096), H_{13} is accepted, meaning that memory and metacognition have a significant influence simultaneously on value.

Multiple Correlation Analysis

The correlation coefficient aims to determine the relationship between two or more independent variables and the dependent variable simultaneously. This coefficient also shows how much the independent variable has a relationship with the dependent variable. The R value ranges from 0 to 1, the closer the value is to 1, the stronger the relationship, conversely, the closer the R value is to 0, the lower the relationship. The following are the results of multiple correlation analysis:

Table 4, Multiple Correlation Analysis

Model Summary

R Square	Adjusted R Square	Std. Error of the Estimate
.399	.386	4.09230

Predictors: (Constant), Metacognitive, Memory

Based on the SPSS software output results above, a correlation coefficient (R) value of 0.632 was obtained. Because it is in the interval 0.60-0.799, this shows that there is a strong relationship between Memory (X1) and Metacognitive (X2) on Value (Y).

Coefficient of Determination (R²)

The magnitude of the influence of the Memory (X1) and Metacognitive (X2) components on the value (Y) can be shown by the R square value (coefficient of determination) based on the table below:

Table 5. Coefficient of Determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.632 ^a	.399	.386	4.09230

a. Predictors: (Constant), Metacognitive, Memory

Berdasarkan tabel diatas, nilai Adjusted R square adalah 0.399 atau 39.9%. Artinya variabel Daya Ingat (X1) dan Metakognitif (X2) memberikan pengaruh sebesar 39.9% terhadap Nilai (Y). Sedangkan sisanya sebesar 60.% merupakan kontribusi variabel lain selain Daya Ingat (X1) dan Metakognitif (X2).

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Contribution of variable X to variable Y

To see the magnitude of the influence of each Memory Component (X1) and Metacognitive (X2) variable on the Value (Y) variable, it can be seen by multiplying the beta value by the zero order value as follows:

Table 6. Contribution

Variabel	Beta	Zero-order	Kontribusi	Persentase
Daya Ingat	0.431	0.528	0.228	22.8%
Metacognitiv	0.360	0.476	0.171	17.1%
Total			0.399	39.9%

Based on the table above, it can be seen that the highest contribution is from the Memory variable with a contribution of 22.8%, then the Metacognitive variable at 17.1%.

Partial Correlation Analysis

Hypothesis:

H0: there is no significant relationship

H1: there is a significant relationship

Test criteria: Reject Ho if sig < 0.05, Accept Ho if sig > 0.05

To analyze the correlation coefficient obtained, refer to the following table:

Table 7 The following are the results obtained:

Table 7 Correlation Test

Correlations

		Daya Ingat	Metacognitiv	Nilai
Daya Ingat	Pearson Correlation	1	.269**	.528**
	Sig. (2-tailed)		.009	.000
	N	94	94	94
Metacognitiv	Pearson Correlation	.269**	1	.476**
	Sig. (2-tailed)	.009		.000
	N	94	94	94
Nilai	Pearson Correlation	.528**	.476**	1
	Sig. (2-tailed)	.000	.000	
	N	94	94	94

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the table above, it can be concluded as follows:

1. A positive relationship occurs between: Memory Variables with Metacognitive variables. Namely, there is a unidirectional relationship between the Memory and Metacognitive variables; meaning that if memory increases then metacognition will increase, Memory Variable with Value variable. That is, there is a unidirectional relationship between the Memory and Value variables. meaning that if memory increases then value will increase. Metacognitive variables with Value variables. That is, there is a unidirectional relationship between Metacognitive variables and Values. meaning that if Metacognition increases then Value will increase.
2. A significant relationship (sig value < 0.05) occurs between: Memory Variables with Metacognitive and Value. Metacognitiv Variables with Values.
3. Low level of relationship (r is in the interval 0.20-0.399) occurs between: Memory Variables with Metacognitiv; with a correlation coefficient value of 0.269
4. A sufficient level of relationship (r is in the interval 0.40-0.599) occurs between: Memory Variables with Values; with a correlation coefficient value of 0.528. nMetacognitive Variables with Values; with a correlation coefficient value of 0.47

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CONCLUSION

Based on the results of the research that has been carried out, the conclusions that can be drawn are as follows: 1) Memory contributes positively and significantly to the grades of third grade elementary school students when they move up to grade 4. This means that if a student's memory is high, their grades will also increase. In this research, it is known that memory influences students' grades to a greater extent than metacognitive variables. 2) Metacognitive contributes positively and significantly to the grades of third grade elementary school students when they move up to grade 4. This means that if metacognitive is high, the grades will also increase. 3) Memory and Metacognitive variables simultaneously / together have a positive and significant influence on the grades of third grade elementary school students when they move up to grade 4. This means that if students' memory and metacognitive skills are managed well, then the students' grades will also increase

After conducting research, there are several suggestions that can be conveyed, namely: 4) It is recommended for school management to be able to manage the learning behavior of elementary school students in particular, in order to increase students' achievement of grades at the end of the study period. 5) Because this measurement is carried out on grade 3 students, management of learning behavior by paying attention to Memory and Metacognitive components must be carried out consistently and continuously, so that grades can be maintained until graduation from elementary school and continuing to the next level of basic education. 6) In this research it was found that the learning behavior that has the weakest influence on grade achievement is the metacognitive component. Under these conditions, school management must formulate strategies to train elementary school students' metacognitive abilities. Students' metacognitive abilities can be trained by including learning concepts that can stimulate students to reflect on the things they have learned. The learning strategy that can be applied is by paying attention to metacognitive learning indicators, namely planning, monitoring and assessment indicators.

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