

BENCHMARKING

JURNAL MANAJEMEN PENDIDIKAN ISLAM

PENGARUH MINAT BELAJAR DAN *SEL EFFICACY* SISWA SMP TERHADAP KEMAMPUAN BERPIKIR KRITIS DALAM MENYELESAIKAN MASALAH MATEMATIKA

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Abstract

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This study aims to find out whether there is an influence of learning interest and self-efficacy of junior high school students on critical thinking skills. This study uses a type of quantitative research, which was conducted at SMPN 48 Surabaya on SPLDV material. The research subjects were 32 students in grade VIII B. This research instrument consisted of a learning interest questionnaire, a *self-efficacy questionnaire*, and a critical thinking ability test. The data analysis technique uses two stages, namely assumption test and hypothesis test. The assumption test is in the form of normality test, multicollinearity test and heteroscedasticity test. After conducting the assumption test, modeling of the regression was carried out and continued with a simultaneous test, namely the F test and partial test, namely t test. The data analysis in this study used the help of SPSS version 30.0. The results of the study showed that there was a significant influence of the learning interest and *self efficacy* of junior high school students on the ability to think critically as shown by the significance value of $< 0,001 < 0,05$.

Keywords: interest in learning, self efficacy, critical thinking skills.

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INTRODUCTION

In the current era of technology, the development of innovation has spread to all fields of life, including in the realm of education. It requires teachers and students to have teaching skills that are appropriate for the 21st century to remain relevant in today's age of knowledge and information. 21st century education has the goal of achieving the nation's desires by building a community that involves quality individuals, namely independent individuals, in order to create a prosperous and prosperous Indonesia, feel achievements and be commensurate with other countries, willing and have the ability to carry out the ideals of their country. Although it has only entered the 21st century, significant changes have occurred in the world of education that have an important impact on aspects of philosophy, direction, and purpose (Anggraini et al., 2021). This is in line with the goals of National Education as stated in Law number 20 of 2003 concerning the National Education System, article 3 which states that to be able to improve students' abilities so that they can develop into individuals who have faith and piety in God Almighty, healthy, virtuous, knowledgeable, competent, independent, innovative, and develop into citizens who uphold democracy and responsibility (Pristiwanti et al., 2022).

The Ministry of Education and Culture (in Sriyanto, 2021) said that 21st century skills are known as the 4C, which include critical thinking and problem-solving skills, communication, collaboration, and creativity and innovation. Mathematics as the foundation for all branches of science, is a discipline that includes abstract concepts. Thus, the approach in the delivery of mathematics material during the learning process is always

connected through situations in our daily lives. Students' ability to think critically and mathematics is an interrelated aspect, where the understanding of mathematics material is influenced by critical thinking, which can also be developed with mathematics learning activities (Shanti et al., 2018).

Regulation of the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia Number 5 of 2022 concerning Graduate Competency Standards for Early Childhood Education, Basic Education, and Secondary Education is expected to be able to reason using mathematical concepts and procedures to solve problems relevant to life. Thus, students must have the ability to think critically.

According to Facione (2015), critical thinking is a style of thinking that aims to solve problems, interpret meanings, and prove something. Meanwhile Paul & Elder (2006), expressing critical thinking is the ability to examine and re-examine the mind with the aim of improving it. In the context of mathematics education, critical thinking is the foundation for students to understand concepts, strategize solutions, and draw rational conclusions.

However, various international studies show that the critical thinking skills of Indonesian students are still relatively low. The results of the implementation of PISA (*Program for International Student Assessment*) for seven periods between 2000 and 2008 show that Indonesian students are classified as poorly ranked Stacey (2011). Therefore, it is hoped that students will be able to strengthen their skills in thinking critically.

Low critical thinking is influenced by many factors, namely students' interest in learning and *self-efficacy* (Ismayanti et al., 2022). Interest in learning can affect critical thinking skills. Students with a high interest in learning, the higher their critical thinking and vice versa (Kencanawaty, 2016). Thus, interest in learning is very important for students to improve their critical thinking skills. According to Hidayat & Widjajanti (2018) learning interest, it is defined as interest and arousing enthusiasm when carrying out an activity that can be assessed by passion, liking, having involvement and attention in the learning process.

In addition, the influence of students' low level of critical thinking ability is *self-efficacy* (Putra et al., 2021). According to, Badura (1995) *self-efficacy* is a student's confidence in his skills that influences him to solve problems. In line with Liu et al., (2009). *self-efficacy*, it refers to students' confidence in their skills, progress, and perseverance in learning and solving math problems. Furthermore, Gibson et al., (2012). it is said that *self-efficacy* is a person's belief that he has positive abilities in various things. In the field of mathematics, *self-efficacy* refers to an individual's confidence regarding his or her skills in solving many problems, ranging from delving into the material to solving mathematical problems (Masitoh & Fitriyani, 2018).

A number of relevant studies that have been conducted include research by Vachova et al., (2023) showing that academic *self-efficacy* predicts all three dimensions of critical thinking, although the number of variances described ranges from 8,1 to 12,2%. Which shows that *self efficacy* functions as one of the predictors for critical thinking in college students. Research by Nugroho & Riyanto (2019) shows that: (1) students' *self-efficacy* has a 78,14 fairly good average; (2) students' mathematical critical thinking skills have improved based on *the results of pre-test and post-test*; (3) there is an increase in students' ability to think critically after learning based on students' *self-efficacy*, which means that there is a difference in mathematical critical thinking skills before and after learning with the *discovery learning model* in grade VII B SMP Negeri 8 Cirebon. Research by Tong et al., (2023) the results of this study shows that critical thinking is a significant mediator in the relationship between learning interest and care. Research by Lutfi et al., (2024) shows that learning interest and *self-efficacy* have a positive and significant effect on students' mathematics learning outcomes through self-regulation in grade X students of SMAN 1 Tumpang for the 2023/2024 school year. Research by Hari et al., (2018), the results of this

study found that *self-efficacy* makes a positive contribution to mathematical critical thinking skills of 56,4%, while the rest is influenced by other variables outside 43,6% of *self-efficacy*.

Based on the study that has been described earlier, the researcher is interested in conducting a study entitled "The Influence of Learning Interest and *Self Efficacy* of Junior High School Students on Critical Thinking Skills in Solving Mathematical Problems".

RESEARCH METHOD

This study is a quantitative study to find out whether there is an influence between learning interest and *self efficacy* of junior high school students on critical thinking skills. The research population is all grade VIII students at SMP Negeri 48 Surabaya on the material of the Two-Variable Linear Equation System (SPLDV). The selection of SMP Negeri 48 Surabaya as a population is based on the characteristics of students, learning patterns, and academic culture in the school, which is relevant to the research to be conducted. The sample in this study used a *simple random sampling* technique (draw), and the results of the selected lottery of class VIII B as a sample, consisting of 32 students, with 14 male students and 18 female students.

In this study, two variables were used, namely variables in the form of interest in learning and *self efficacy* and bound variables in the form of critical thinking skills. There are two instruments used, namely test questions and questionnaires. Test questions consist of an essay form consisting of one question to measure students' critical thinking skills. Indicators of students' critical thinking ability can be seen in Table 1 below.

Table 1.
Facione Critical Thinking Indicators

Indicators	Sub Indicators	Source
Interpretation	Understand the problem by writing down the information that is known and asked from the question precisely.	Facione (2015)
Analysis	Explain the relationships between concepts used to solve problems.	Facione (2015)
Evaluation	Evaluate whether there are errors in solving problems.	Facione (2015)
Inference	Make the right conclusions based on what is asked.	Facione (2015)

Adaptations of Facione (1994)

To obtain data on students' mathematical critical thinking skills, the researcher used a scoring rubric that was carried out on students' answers to each question item. This rubric is adapted from a test conducted by Karim (2015) .

Table 2.

Guidelines for Scoring Students' Mathematical Critical Thinking Skills

Indicators	Information	Score
Interpretation	Students do not understand the problem by not writing down the information that is known and asked from the question.	0
	Students understand the problem by writing down the known and inaccurate information asked from the question.	1
	Students understand problems by writing down only the information that is known correctly or only the one that is asked correctly.	2
	Students understand the problem by writing down the information known and asked from the question precisely but incompletely.	3
	Students understand the problem by writing down the information known and asked from the question accurately and completely.	4
Analysis	Students do not explain the relationship between the concepts used to solve problems.	0
	Students explain the relationship between concepts that are used to solve problems but are not precise.	1
	Students without providing explanations make connections between concepts used to solve problems.	2
	Students explain the relationship between concepts used to solve problems appropriately but there are errors in the explanation.	3
	Students explain the relationship between concepts used to solve problems appropriately and completely.	4
Evaluation	Students do not evaluate whether there are mistakes in solving problems.	0
	Students are not precise and incomplete in evaluating whether there are mistakes in solving problems.	1
	Students evaluate whether there are errors in solving problems appropriately, but incompletely, or evaluate whether there are errors in solving problems inappropriately, but completely.	2
	Students evaluate whether there are mistakes in solving problems correctly and completely, but make mistakes in explaining them.	3
	Students evaluate whether there are errors in solving problems precisely, completely, and correctly in making explanations.	4

Indicators	Information	Score
Inference	Students do not draw conclusions.	0
	Students are not right in drawing conclusions and have not based on the context of the problem in the problem.	1
	Students are not right in drawing conclusions even though they have been adjusted to the context of the problem.	2
	Students draw conclusions appropriately, which are in accordance with the context of the question, but are not complete.	3
	Students draw conclusions appropriately, which are in accordance with the context of the question and complete.	4

Adapted from . Karim and Facione (2015)

The method of calculating the percentage value is as follows:

$$Nilai\ Persentase = \frac{Skor\ Perolehan}{Skor\ Maksimal} \times 100\%$$

The following is the percentage value of critical thinking skills obtained from the calculation and then categorized according to the following table:

Table 3.
Category of Critical Thinking Ability Percentage

Scale (%)	Category
80 – 100	Excellent
70 – 79	Good
60 – 69	Keep
50 – 59	Less
0 – 49	Very Less

In this study, the questionnaire used was in the form of a questionnaire of learning interest and *self efficacy*. The response to learning interest consists of 4 categories, namely Strongly Disagree (STS), Disagree (TS), Agree (S), and Strongly Agree (SS). Meanwhile, the *self-efficacy* response consists of 5 categories, namely Strongly Disagree (STS), Disagree (TS), Neutral (N), Agree (S), and Strongly Agree (SS).

Table 4.
Interest in Learning Instrument Grid

No.	Indicators	Question Items	
		Positive	Negative
1	Have a sense of joy in learning.	1,3	2,4
2	Showing a liking for something.	5,7,9	6,8,10
3	Expressing interest in something.	11,13,15	12,14,16
4	Have objects of activity that you like.	17	18
5	Have a type of activity to have fun.	19	20

Table 5.
Self Efficacy Instrument Grid

Dimension	Indicators	Number of Instruments
<i>Level</i>	An interest in tackling complex task challenges and a commitment to overcoming them.	1,2,3,4,5,6
<i>Strength</i>	The strength and weakness of students to their abilities.	7,8,9,10,11,12
<i>General</i>	Confidence in one's own ability to handle all situations.	13,14,15,16,17,18,19,20
Sum		20

The validation of these research instruments was carried out by a lecturer from the Mathematics Education Study Program, State University of Surabaya and a mathematics teacher at SMP Negeri 48 Surabaya. The validation procedure uses an assessment standard that refers to the validation sheet that has been created. Before using the instrument, a validity, reliability, and readability test is carried out. To measure the validity of the question item, a correlation formula is used *Product moment*, If the value $r_{hitung} \geq r_{tabel}$, then the question item is valid (Sugiyono, 2015), while reliability used formula *Alpha Cronbach*, $0,61 \leq 0,80$ if it is said to be reliable. Meanwhile, the readability test was carried out to find out the extent to which the research instrument, both questionnaires and tests, could be understood by respondents well and in accordance with their level of cognitive development.

Data collection starts from collecting data on critical thinking skills through the provision of critical thinking ability test instruments and data collection on learning interests and *Self-efficacy* through the provision of instruments of interest in learning and *self-efficacy*. After the data was obtained, quantitative data analysis was carried out to test the research hypothesis, namely that there was a significant influence of learning interest and self-efficacy of junior high school students on critical thinking skills. For this reason, the data analysis techniques used include assumption tests and hypothesis tests.

In the assumption test, there is a normality to see the data in this study is distributed normally or not. The regression model is said to be good when it has a normally distributed residual value. To find out, test *Kolmogorov-Smirnov* used and the research data are said to be normally distributed if the significance value of . In addition, a multicollinearity test was carried out to test whether there was a significant correlation between independent variables, which could affect the validity of the regression analysis results. The test criteria used is when the tolerance value $> 0,1$ and VIF value < 10 , it can be concluded that there is no multicollinearity. After all the classical assumption tests have been met, the next step is to form a multiple linear regression model to determine the influence of independent variables, namely learning interest (X_1) and *Self-efficacy* (X_2) to the dependent variable, namely the ability to think critically (Y). The regression equation model is described by:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \epsilon$$

Information:

- y = bound variable (critical thinking ability of junior high school students)
- β_0 = constant (*intercept*) intersection of lines on the axis X_1
- β_1 = learning interest regression coefficient
- β_2 = regression coefficient *Self-efficacy*
- X_1 = independent variable (learning interest)

X_2 = independent variable (*Self-efficacy*)
 ϵ = error/residue

After the regression coefficient value is known, then hypothesis testing is carried out through the F test and the t test. The simultaneous test in this study is the F test using SPSS 30.0 to find out whether the variable of learning interest and *Self-efficacy* together it has a significant effect on the variables of the critical thinking ability of junior high school students. If the significance value $< 0,05$ then the interest in learning and *Self-efficacy* simultaneously affects the critical thinking skills of junior high school students. Next is done partial test, which is a t-test to measure the extent of each independent variable, namely learning interest and *self-efficacy* individually affects the critical thinking ability of junior high school students, by controlling (controlling) other variables. If the significance value $< 0,05$, then H_0 was rejected, it means that the interest in learning or *self-efficacy* individually affects the critical thinking ability of junior high school students. Next, a residual analysis will be carried out to ensure the suitability of the regression model obtained. Residual analysis is carried out through residual normality tests and homocedasticity tests. These two tests are important so that the regression model used does not violate the basic assumptions and the results of the estimates can be validly interpreted.

RESEARCH RESULTS AND DISCUSSION

Results

Descriptive Analysis

Descriptive analysis was carried out to obtain a general view of the research subject based on the research data obtained. Output Results as shown in Table 6.

Table 6.
Descriptive Data on Learning Interest, *Self Efficacy*, and Critical Thinking Skills

Yes	Statistics	Interest in Learning	<i>Self Efficacy</i>	Critical Thinking Skills
1	Number of Respondents (N)	32	32	32
2	Range	29,00	41,00	38,00
3	Minimum Score (<i>Min</i>)	51,00	54,00	56,00
4	Maximum Score (<i>Max</i>)	80,00	95,00	94,00
5	Total Score (<i>Sum</i>)	2205,00	2410,00	2408,00
6	Average Score (<i>mean</i>)	68,91	75,31	75,25
7	Baku Junction (<i>std. Deviation</i>)	9,02	11,27	9,98
8	Variance	81,44	126,93	99,55

Based on Table 6, it shows that the results of the learning interest questionnaire 32 students had a minimum score of 51.00 and a maximum score of 80.00, so the range of scores was 29.00 with an overall total score of 2205.00. The standard deviation value shows a figure of 9.02 while the average value shows a figure of 68.91, meaning that the data is less varied because the standard deviation value is smaller than the average value. Furthermore, the value of the variant shows a figure of 81.44. The results of the *self-efficacy questionnaire* 32 students had a minimum score of 54.00 and a maximum score of 95.00, so the range of scores was 41.00 with an overall total score of 2410.00. The standard deviation value shows the number 11.27 while the average value shows the number 75.31, meaning that the data is less varied because the standard deviation value is smaller than the

average value. Furthermore, the value of the variant shows a figure of 126.93. Then, the results of the critical thinking ability test 32 students had a minimum score of 56.00 and a maximum score of 94.00, so the score range was 38.00 with an overall total score of 2408.00. The standard deviation value shows 9.98 while the average value shows the number 75.25, meaning that the data is less varied because the standard deviation value is smaller than the average value. Furthermore, the value of the variant shows a figure of 99.55.

Assumption Test Normality Test

Table 7.

Kolmogorov-Smirnov Test Results (K-S)		
One-Sample Kolmogorov-Smirnov Test		
N		32
Normal Parameters.b	Mean	0,0000000
	Std. Deviation	4,00771856
Most Extreme Differences	Absolute	0,151
	Positive	0,133
	Negative	-0,151
Test Statistic		0,151
Asymp. Sig. (2-tailed) ^c		0,060
a.	Test distribution is Normal	
b.	Calculated from data	

Based on the test results, a significance value of the amount $0,060 > 0,05$ was obtained, so H_0 was accepted. Thus, it can be concluded that the test data on learning interest, *self efficacy* and critical thinking skills are distributed normally.

Multicollinearity Test

Table 8.

Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constand)		
	Interest in Learning	0,548	1,823
	Self Efficacy	0,548	1,823

Based on Table 8, it is known that the variables of learning interest and *self efficacy* have a tolerance value of 0,548, which means $> 0,1$, and a VIF value of 1,823, which is less than 10. Thus, it can be concluded that independent variables do not show a strong enough correlation. These results confirm that the assumption regarding the absence of multicollinearity has been met, so that multiple regression analysis can be continued.

Once all the classical assumption tests are met, the next step is to form a multiple linear regression model.

Looking for the regression line equation

After meeting the classical assumption test, the value of the multiple linear regression coefficient can be seen in Table 9.

Table 9.
Multiple Linear Regression Test Results
Coefficient

		Unstandardized	Coefficients
Model		B	Std. Error
1	(Constant)	4,295	5,938
	Interest in Learning	0,493	0,111
	Self Efficacy	0,491	0,089
a. Dependent Variable: Critical Thinking			

Based on the results of the regression analysis shown in Table 9, information was obtained with a constant value of 4,295; that is, if the interest in learning and *self efficacy* are 0, then the ability to think critically is 4,295. The regression coefficient of the variable X_1 (learning interest) is 0,493; This means that if other independent variables remain the same and interest in learning increases by one point, then critical thinking ability increases by 0,493. And the regression coefficient of the variable X_2 (*self efficacy*) is 0,491; This means that if the other variables remain constant and *self-efficacy* increases by one point, then the critical thinking ability increases by 0,491. Thus, the regression equation is:

$$y = 4,295 + 0,493X_1 + 0,491X_2$$

Next, hypothesis testing was carried out through the F test and the t test.

Simultaneous Tests

Table 10.
F Test Results
ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2588,084	2	1294,042	75,369	< 0,001 ^b
	Residual	497,916	29	17,170		
	Total	3086,000	31			
a. Dependent Variable: Critical Thinking						
b. Predictors: (Constant), Self Efficacy, Interest in Learning						

Based on the results of the F test shown in Table 10, it can be seen that the significance value obtained is < 0,001 or is below the significance limit 0,05. Thus, it can

be concluded that the variables of learning interest and *self efficacy* simultaneously affect and significantly affect the critical thinking ability of junior high school students.

Partial Test

Table 11.
Test Results t
Coefficient

Model		t	Sig.
1	(Constand)	0,723	0,475
	Interest in Learning	4,427	< 0,001
	Self Efficacy	5,506	< 0,001
a. Dependent Variable: Critical Thinking			

Based on the results of the partial test (t-test) shown in Table 11, a significance value for the variable of learning interest is obtained $< 0,001$ of less than 0,05, meaning that the variable of learning interest partially affects and significantly affects the critical thinking ability of junior high school students, so that it is accepted H_1 and rejected H_0 . It can also be seen that the significance value of the *self-efficacy* variable is $< 0,001$ also smaller than 0,05, which means that the *self-efficacy* variable partially affects and significantly affects the critical thinking ability of junior high school students, so it is accepted H_1 and rejected H_0 .

After performing multiple linear regression analysis, the next stage is to calculate the determination coefficient (R^2) which aims to find out the extent of the ability of the regression model to explain the variations that occur in dependent variables.

Table 12.
Coefficient of determination

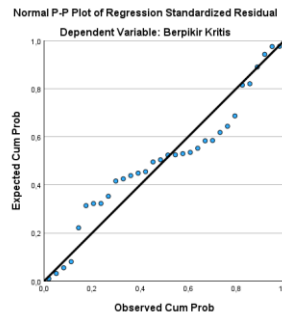
Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,916 ^a	0,839	0,828	4,14361
a. Predictors: (Constant), Self Efficacy, Interest in Learning				

Based on the *output results* in Table 12, it is known that the value (R^2) is 0,839. This means that when completing the critical thinking ability test, the variables of learning interest and *self-efficacy* can have an influence of as much 0,839 or as large as 83,9%, while the rest 16,1% are influenced by other variables that are not further studied in this regression model. So it can be concluded that interest in learning and *self efficacy* are quite high in explaining the critical thinking ability of junior high school students.

After multiple regression analysis is carried out through the F test and the t test, then a residual analysis will be carried out to ensure the suitability of the regression model obtained.

Residual Normality Test

Figure 1.
Normal P-Plot



Based on Figure 1 of the Normal P-Plot graph, it can be seen that the residual points are spread around the diagonal line and follow the direction of the line. Such a distribution pattern indicates that the residual is normally distributed. This is consistent with the results of the Kolmogorov-Smirnov test, which is with a significance value of $0,060 > 0,05$, so that the assumption of normality is fulfilled and the results of the F and t tests are valid.

Homoskedasticity Test

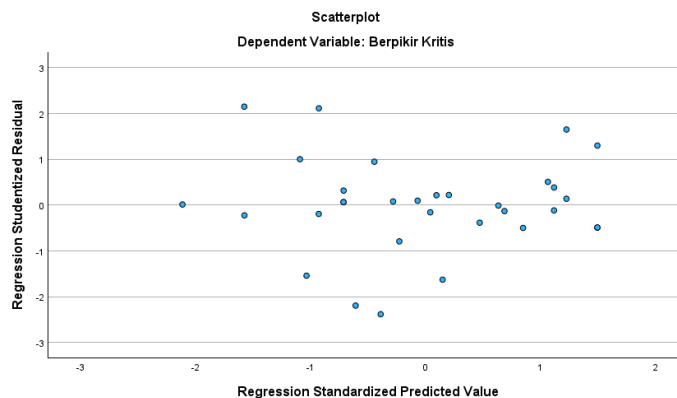


Figure 2.
Residual scatterplot

Based on the *scatterplot* in Figure 2, it can be seen that the residual points are randomly scattered around a horizontal line with a value of zero on the Y axis. The pattern of point distribution does not form a specific pattern, either conical or widening, but rather spreads randomly along the X axis. This shows that the residual variance is constant at each predicted value (*predicted value*)), so that the assumption of homogeneity is fulfilled. This assumption reinforces the reliability of the regression model used in the study. Thus, the results of the F test, which represents the significance of the model simultaneously, as well as the t-test, which shows the partial significance of the regression coefficient, can be declared valid. This allows the results of regression analysis to be interpreted inferentially without any concern about potential bias in *standard error* values caused by heteroscedasticity problems.

DISCUSSION

Based on the results of data processing that have been explained previously regarding multiple linear regression analysis, the form of regression equations in this study is obtained as follows:

$$y = 4,295 + 0,493X_1 + 0,491X_2$$

In the regression equation above, the variables Y represent the student's critical thinking ability, while X_1 describing the student's interest in learning, and X_2 showing *the student's self-efficacy*. The meaning of the regression equation is as follows:

1. A constant of 4,295

Without interest in learning and *self-efficacy*, the value of students' critical thinking skills is 4,295. This shows that, if the variables of learning interest (X_1) and *self-efficacy* (X_2) are in the value 0 or do not contribute to the model, then the value of the student's critical thinking ability (Y) is in the number 4,295. This value is an interception or regression constant, which reflects the student's critical thinking ability without the influence of the two independent variables.

2. Direction of relationship and regression coefficient

- a. Variables X_1 (learning interests)

The sign of '+' its meaning is that the influence of learning interest on the critical thinking ability of junior high school students is positive or any increase in learning interest by 1 a unit will increase students' critical thinking skills by 0,493.

- b. Variable X_2 (*self efficacy*)

The sign of '+' meaning is that the influence of *self efficacy* on the critical thinking ability of junior high school students is positive or any increase *in self-efficacy* by 1 a unit will increase students' critical thinking skills by 0,491.

The test used to determine whether or not there is an influence of learning interest and *self efficacy* simultaneously (together) on the critical thinking ability of junior high school students is the F test. Based on the results of the F test shown in Table 10, a significance value $< 0,001$ that is less than is obtained 0,05 and then H_0 rejected. Based on this, it can be concluded that there is a significant influence of interest in learning and *self-efficacy* on the critical thinking ability of junior high school students. This shows that the hypothesis that has been proven in the sample can be applied to the population of grade VIII students at SMP Negeri 48 Surabaya. The joint influence of learning interest and *self efficacy* on students' critical thinking skills is also supported by several previous research results (Lutfi et al., 2024) that show that learning interest and *self efficacy* have a positive and significant effect on students' mathematics learning outcomes through *self-regulation* in grade X students of SMAN 1 Tumpang for the 2023/2024 school year.

The results of this study show that there is a significant influence of learning interest and *self efficacy* of junior high school students on critical thinking skills. These findings confirm that increased interest in learning and *self-efficacy* contribute directly to critical thinking skills. Theoretically, this proves that students' internal factors, in the form of intrinsic motivation and self-confidence, are the main factors in the development of critical thinking skills in mathematics learning.

CONCLUSION

Based on the results of hypothesis testing with significance levels $(\alpha) = 0,05$ using the F test and the determination coefficient in multiple linear regression analysis, it was concluded that the learning interest and *self efficacy* of junior high school students together had a significant effect on the critical thinking ability as shown from the significance value in the F test of $< 0,001^b$ which $< 0,05$ with a coefficient of determination is large 0,839 which indicates that critical thinking ability is explained 83,9% by independent variables of learning interest and *self efficacy* and the rest is caused 16,1% by other factors. In addition, the value of the constant obtained from the multiple regression equation is 4,295

which means that if the independent variables, namely learning interest and *self-efficacy* are valued 0 or constant, then the variable of critical thinking ability as a dependent variable is valued 4,295.

SUGGESTIONS/RECOMMENDATIONS

Teachers need to create engaging learning, provide positive reinforcement and adapt challenges to students' abilities. Subsequent researchers who will conduct similar research are advised to consider other variables that have the potential to affect critical thinking skills, such as learning motivation, or creativity, so that the results of the research can make a broader contribution to the development of mathematics learning. This research is still a quantitative research, for the next researcher, qualitative proof can be carried out in seeing how students' critical thinking process in solving mathematical problems is reviewed from learning interest and *self efficacy*.

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