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The Effect of Self Efficacy on the Creative Thinking Ability Learners on Environmental Material

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Abstract: Feelings of inadequacy among learners when facing the problem of environmental damage that occurs in everyday life can create possible conditions and situations that hinder students from doing creative thinking. Lack of self-confidence in students abilities is also an influencing factor in creative thinking abilities. This research aims to determine the effect of self-efficacy on students' creative thinking abilities in grade VIII on environmental damage material. This research is quantitative, with statistical tests using simple linear regression. The research population was grade VIII students of Junior High School 5, Ponorogo, for the 2022–2023 academic year. The samples that were used were grades VIII A and VIII H. Instruments used to collect data in the form of a creative thinking ability test instrument on the material environmental damage and self-efficacy scale questionnaire The results of this study show a significant relationship between self-efficacy and students' creative thinking abilities. Self-efficacy is also perfectly and positively correlated with students' creative thinking abilities, contributing as much as 71.2%, with the remaining 28.8% influenced by other variables that do not exist in this research. Thus, self-efficacy affects creative thinking abilities. This shows the importance of having high self-efficacy, especially in teaching and learning activities.

Keywords: Creative Thinking, Environment, Self-Efficacy

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INTRODUCTION

The learning process is guiding the activities of students or someone who carry out learning activities as well as teachers or someone who is considered to have more knowledge and can carry out teaching activities. Basically learning already taking place in everyday life, but there are still few people who do understand what learning means, because learning has several characteristics that cannot be equated with other activities, if it does not match the characteristics then it cannot be said as a lesson. Not just studying which has the determinants of the process, learning also has factors that influence the process of learning itself, every individual who involved in the learning process must know what these factors are, but in fact many individuals do not know what factors only that can affect the learning process (Festiawan, 2020).

One of the factors that influence the learning process is self-confidence learners. Students' self-confidence influences giving strength in assessing the ability of students and willingness to work on task. Often students are not able to demonstrate their learning outcomes in a practical way optimally according to their abilities because students feel they are not confident that he is able to complete the tasks assigned to him. Most students lack confidence when completing assignments or show the results of learning when getting subjects that are considered difficult as in IPA subjects. Some students still think and believe that science subjects are difficult subjects so that result in students not enthusiastic and less confident in learning (Pangestu & Sutirna, 2021).

Natural Sciences or IPA is a field of study that is widely taught in various fields level of education at school. Science or science subjects demand intellectuality relatively high. Therefore, it appears that science subjects are still considered unpleasant subjects that are often avoided by participants educate. The inability of students to solve eye problems science lessons are clearly visible when there are still many who have difficulty answering questions relating to story problems, as a result children do not have ideas that can be used in solving the problem. In addition, many students who still lack confidence with symptoms such as feeling embarrassed when told to go to school front of the class, the feeling of tension and fear that suddenly comes at the time of the test, students not sure of his ability to cheat even though basically students have learned the material being tested, and are not excited at the time participate in the learning process (Suciawati, 2019).

Basically, students are expected to have a tendency to look natural science or IPA as something that can be understood, to feel IPA as something that useful, believe in diligent and

tenacious effort in learning it will produce results and act as an effective learner. However, in reality many students experience difficulties in science lessons caused by their lack of self-confidence (Yuniar & Ramlah, 2021). Though self-confidence is an important aspect for owned by students. Confidence is important to cultivate courage students in showing their abilities regardless opinions from others. If students tend to have self-confidence is low, it will affect the learning process because it will avoid many tasks, especially tasks that are challenging and considered difficult because they do not have a sense of courage in showing the results that have been obtained (Oktariani, 2018).

Self-confidence or self-efficacy of an individual is much influenced by level of abilities and skills possessed. Confident individuals will always confident in every deed he does, feel free to do things according to his wishes and be responsible for his deeds. Of course these conditions can be a trigger, so it will facilitate the learning process. However, not all individuals have adequate self-confidence. Feelings of inferiority or shame, reluctance and others, are obstacles a learner in the learning process at school and in their environment, because with this feeling of inferiority students will often feel do not believe in the abilities and skills they have, so it becomes more closed and less receive as much information as desired. Individuals who always think that they have no ability, feel themselves worthless, is a characteristic of individuals who have low self-confidence. This can be seen in the way individuals behave unreasonable. Differences in the level of self efficacy owned by students will certainly be affect the level of learning outcomes in schools and will also affect the inside daily life (Oktariani, 2018).

According to Susanto & Susanta (2020) students' self-confidence in learning can affect the achievement of learning outcomes. It is aligned with the results of research conducted by Husna et al. (2018) obtained results that there is a positive relationship between self-efficacy and participant test scores educate. In accordance with the research conducted Suharsono & Istiqomah (2014) that self-efficacy is a person's belief in the ability to succeed in certain situations. The same opinion that self-efficacy is individual beliefs in order to master certain activities, situations or aspects of own psychological and social functioning. Self-efficacy makes someone believe with the ability to overcome and solve obstacles that hinder the achievement of their goals. They always believe they can achieve the target them, their dreams, and their goals in an effective way (Mukhtari et al., 2019).

Self-efficacy can affect students' actions in achieving goals as desired, besides that as a driving force for students during the learning process takes place so as to improve learning outcomes and also the ability to think 4 creative (Wulansari et al., 2019). Because basically

the problem solving stage In science subjects, it takes the creativity of students, the creativity of participants students need self-confidence because students have feelings self-confidence then it will be able to support in developing the idea in learning (Susanto & Susanta, 2020).

The lack of creative thinking ability experienced by students when facing science lessons can arise due to a lack of self-confidence solve IPA questions. As a result, students are not able to optimize capabilities. Creativity in science is termed ability Mathematical creative thinking or briefly called the ability to think creatively. Creative thinking ability is one of higher order thinking (Tuzzahra et al., 2023). The ability to think creatively is one thinking skills that drive new insights, new approaches in understand something. This can happen when triggered through tasks or challenging problems so that students can discover new things in solving a problem, one of which can be obtained through the process learning (Suciawati, 2019). From these problems, students will find many possible answers with an emphasis on quantity, accuracy and variety of answers. If the higher the ability to think creatively students, the more possible answers to a problem will arise (Novia et al., 2022; Segitiga & Segiempat, 2011).

In contrast to previous research, this study used various tests to test the results of the research that had been conducted from instruments in the form of questionnaires at one of the schools in Ponorogo. Based on this, researchers are interested in studying more deeply about self-efficacy on the ability to think creatively. The aim of this research is to find out whether there is a relationship/influence and measure how much contribution between self-efficacy and students' creative thinking abilities middle school/MTs level.

METHOD

This research was conducted at Junior High School 5 Ponorogo, located Jl. Dr. Sutomo No. 11, Bangunsari, Ponorogo Regency on May 30th 2023. This research using quantitative research methods with a purposeful correlation approach to find out whether there is a relationship/influence and to measure how much large contribution between the two variables (self-efficacy with the ability to think creatively). The respondents used in this study were students of Junior High School 5 Ponorogo grade VIII, totaling 61 people. This research method was chosen to answer research questions packaged in the form of a questionnaire. In preparation of instruments or data collection tools for the variables that become the main reference for researchers in compiling a questionnaire. The instruments used in this study, namely in the form of a questionnaire to measure the level of self-efficacy of participants students and test instruments for students' creative thinking abilities. Students are requested to answer by putting a check mark (√) on one of the correct answer choices available. Giving a

score to each answer choice is guided by the Likert scale with alternative answers "Strongly Agree (SS)", "Agree (S)", "Neutral (N)", "No Agree (TS)" and "Strongly Disagree (STS)". Meanwhile, the test to measure the ability to think creatively consists of 10 questions about the ability to think creatively. The analysis steps used include the normality test, correlation pearson test, multicollinearity test, heteroscedasticity test, autocorrelation test, t test, F test, and determination coefficient. The research design can be described as **Figure 1**.

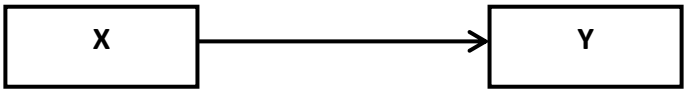

Figure 1. The relationship between the variables X and Y

Figure 1. shows that the relationship between the two variables, namely variable X and variable Y, where variable X is self-efficacy and variable Y is creative thinking ability. Variable X or self-efficacy can affect variable Y or creative thinking skills likewise, namely variable Y or creative thinking skills can affect variable X or self-efficacy.

FINDING AND DISCUSSION

In accordance with the results of the calculation and analysis of the questionnaires that have been collected, the results of how much the percentage of each self-efficacy indicator tested on 61 students. **Table 1.** are the results of the questionnaire calculation of each indicator.

Table 1. Results of self-efficacy questionnaire calculations for each indicator

Average Score per Indicator (%)										Total (%)
1	2	3	4	5	6	7	8	9	10	
81%	83%	71%	70%	72%	84%	69%	70%	70%	75%	75%

It can be seen in **Table 1.** that the average per indicator of the 61 students is 75%, which means that the average level of self-efficacy ability of students is in the H or High category. According to Engko (2008) if an individual has high self-efficacy then he will be confident in his own ability to succeed. Meanwhile, when viewed from the frequency in the self-efficacy category of each individual is as **Table 2**.

Table 2. Results of self-efficacy questionnaire calculations

Category	Frequency
VH (Very High)	16
H (High)	38
M (Medium)	7
L (Low)	-
VL (Very Low)	-

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Total	61

Based on **Table 2.**, it can be seen that as many as 16 learners are in the very high category for self-efficacy, 38 learners are in the high category, and 7 learners are in the medium category. Differences in the level of self-efficacy of learners are influenced by differences in the background of each learner. This is as revealed by (Oktariani, 2018) that each learner has a different background so that it affects the formation of his confidence.

The first test carried out is to analyse the data is a correlative test which is used to determine the statistical description of the data obtained from the results of the self-efficacy questionnaire on the creative thinking ability of grade VIII junior high school students on environmental damage material as **Figure 2**.

Correlations

		Kemampuan Berpikir Kritis	Self Efficacy
Pearson Correlation	Kemampuan Berpikir Kritis	1,000	,844
	Self Efficacy	,844	1,000
Sig. (1-tailed)	Kemampuan Berpikir Kritis	.	,000
	Self Efficacy	,000	.
N	Kemampuan Berpikir Kritis	61	61
	Self Efficacy	61	61

Figure 2. Correlation test

Based on the results of the correlation test, it can be seen that the significance value is 0.000 <0.05 which shows that there is a correlation between self-efficacy and creative thinking skills. The positive pearson correlation value of 0.844 means that the correlation shown is perfectly correlated and positive. The pearson correlation value which is greater than the r table, namely 0.844> 0.250 also shows that there is a correlation between self-efficacy and students' creative thinking skills. Furthermore, the normality test was carried out in accordance with **Figure 3** and **Figure 4**.

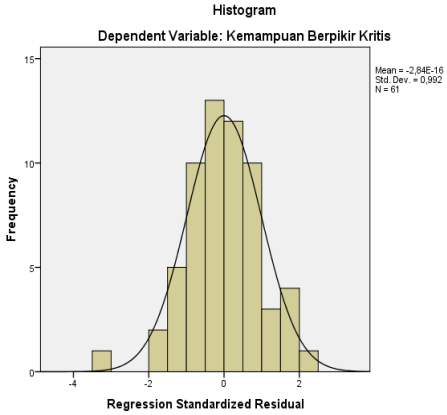

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Figure 3. Histogram of Normality Test

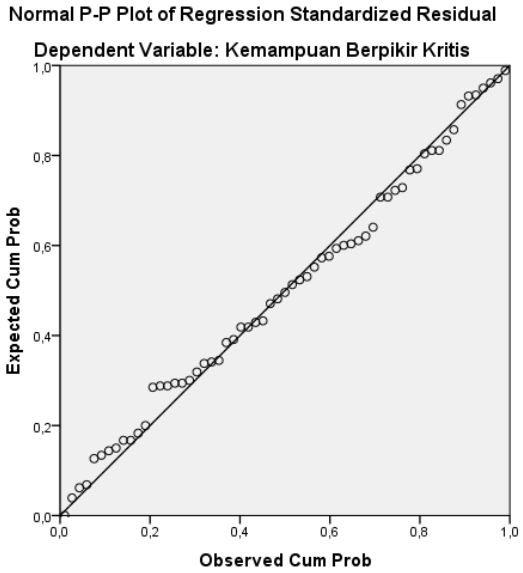

Figure 4. P-Plot Normality Test

Based on the normality test conducted with SPSS, a histogram and P-Plot table were obtained which showed that the data analysed were normally distributed. Furthermore, the multicollinearity test is carried out as **Figure 5**.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	3,390	6,409		,529	,599	-9,435	16,215		
	Self Efficacy	2,056	,170	,844	12,063	,000	1,715	2,397	1,000	1,000

a. Dependent Variable: Kemampuan Berpikir Kritis

Figure 5. Multicollinearity Test Tolerance and VIF

Multicollinearity test is an assumption test for multiple linear regression. The assumption of multicollinearity is that the independent variables must be free from multicollinearity. Test multicollinearity is done by looking at the tolerance value and variance inflation factor (VIF). If using alpha / tolerance = 10% or 0.10 then VIF = 10. If the results obtained VIF count < VIF = 10 and all tolerance of the independent variables above 10%, it can be concluded that there is no multicollinearity. Based on the table above, it is known that there is no multicollinearity between the independent variables because the VIF value < 10 (1 < 10) and the tolerance / alpha value> 0.10 (1> 0.10). Next, the heteroscedasticity test was conducted as **Figure 6**.

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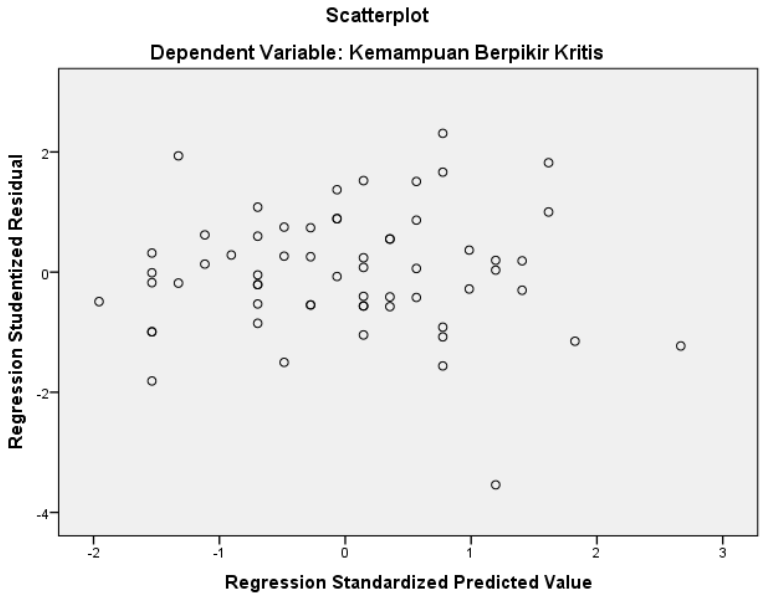

Figure 6. Heteroscedasticity Test Scatterplots

According to Ghozali (2011) there are no symptoms of heteroscedastistias if there is a clear pattern (wavy, widening, then narrowing) in the scatterplots image, as well as points spreading above and below zero on the Y axis. The next step is to conduct an autocorrelation test as **Figure 7**.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,844[a]	,712	,707	6,283	1,679

a. Predictors: (Constant), Self Efficacy

b. Dependent Variable: Kemampuan Berpikir Kritis

Figure 7. Durbin Watson Autocorrelation Test

According to (Ghozali, 2011) there are no symptoms of autocorrelation if the Durbin Watson value lies between du and 4-du. Based on the Durbin Watson table, the du value used is 1.6540. The 4-du value is 2.3460. So based on the table above, it is known that the Durbin Watson value of 1.679 lies between the du and 4-du values. It can be concluded that there are no autocorrelation symptoms in the data. Next, namely by doing the t test as **Figure 8**.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	3,390	6,409		,529	,599	-9,435	16,215		
	Self Efficacy	2,056	,170	,844	12,063	,000	1,715	2,397	1,000	1,000

a. Dependent Variable: Kemampuan Berpikir Kritis

Figure 8. t-test

Basis for decision making:

a. If the sig value is <0.05 or t count> t table then there is an effect of variable X on variable Y.
b. If the sig value> 0.05 or t count < t table then there is no effect of variable X on variable Y.

t table = t (α/2; n-k-1) = t (0.025; 59) = 2.00247

It is known that the Sig. value for the effect of X on Y is 0.00 <0.05 and the t value is 12.063> t table 2.00100. So it can be concluded that the hypothesis is accepted, which means that there is an influence of X on Y. Further analysis using the F test as **Figure 9**.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5744,443	1	5744,443	145,525	,000[b]
	Residual	2328,967	59	39,474		
	Total	8073,410	60			

a. Dependent Variable: Kemampuan Berpikir Kritis

b. Predictors: (Constant), Self Efficacy

Figure 9. F test

Basis for decision making:

a. If the sig value <0.05 or F count> F table then there is a simultaneous influence of variable X on variable Y.
b. If the sig value> 0.05 or F count < F table then there is no simultaneous influence of variable X on variable Y.

F table = F (k; n-k) = F (1; 60) = 4.001

Based on the output above, it is known that the significance value for the simultaneous influence of X1 on Y is 0.00 < 0.05 and the value of F count 145.525> F table 4.001 so it can be concluded that there is a simultaneous influence of X on Y. The last analysis is by conducting the coefficient of determination test as **Figure 10**.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,844[a]	,712	,707	6,283	1,679

a. Predictors: (Constant), Self Efficacy

b. Dependent Variable: Kemampuan Berpikir Kritis

Figure 10. Test the Coefficient of Determination

Based on the **Figure 10.**, it is known that the R square value is 0.712. This shows that the effect of variable X on variable Y is 71.2%.

Factors that can affect students' self-efficacy are very diverse ranging from internal factors to external factors. Based on the results of interviews with students, the factors that influence their low average scores are that they think that environmental damage material is difficult to learn, learning media that is less interesting, and teaching and learning activities used by teachers, namely the lecture system, which results in no motivation that makes students excited about learning. Teachers are the front gate in motivating students through appropriate learning strategies (Lestari, 2017). This is in line with (Ediyanto et al., 2020) who stated that teachers need to use the right approach to improve students' learning outcomes in learning mathematics. (Subaidi, 2016) also explained that to instil high self-efficacy in students, teachers need to create a pleasant learning atmosphere, activate and develop self-belief and always provide good motivation. For this reason, teachers must be able to provide guidance to their students to generate a high desire to learn environmental damage material so that this can improve the learning outcomes of the students themselves (Nurhasanah & Sobandi, 2016).

CONCLUSION

Based on the results of the research and discussion that has been carried out in the study above, it can be concluded that self-efficacy affects creative thinking ability, where self-efficacy is perfectly and positively correlated with creative thinking ability by contributing 71.2% which is quite a lot while the remaining 28.8% is influenced by other variables not included in this study. This shows the importance of having high self-efficacy, especially in teaching and learning activities. For this reason, very high self-efficacy is needed to achieve maximum learning outcomes.

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