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The Effect of Self Organized Learning Environments (SOLE) Approach on Student's Learning Motivation and Achievement in History Lessons

*Ani Satriani, Umar, Fahlia

Innovation Management Study Program, Sumbawa University of Technology, Indonesia *Corresponding Author e-mail: anisatriani83@gmail.com

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Abstract

Crisis education going on Indonesian people now this cause worries, especially for parents and party schools that have trusted as institution education. When Indonesia was hit by the covid pandemic – 19 in the middle March 2020, students study from distance far away (PJJ), and this PJJ the more add crisis education in Indonesia. Study this aim for knowing influence motivation and performance study student to approach learning self organized learning environments (SOLE) at eye lesson history in class X SMAN 1 Sumbawa Besar. This study is a quantitative descriptive study. The type of data used, namely primary data obtained from the deployment questionnaire results to the participants educate. The sample in study are 74 respondents who are participant educate class X majors Knowledge Knowledge Social Studies (IPS) at SMAN 1 Sumbawa Besar Year Lesson 2021/2022. The data analysis method used is multiple linear regression which includes test data quality, test assumption classic, test partial, test simultaneous, and test coefficient determination. Results study show that the application approach to learning self organized learning environments (SOLE) implemented at SMAN 1 Sumbawa Besar is welcome good by students or participants educate, and approach learning self organized learning environments (SOLE) can be an increase in motivation and performance of study students. Besides that, ability variable free in explain variable bound based on score Adjusted R Square by by 81%, the remaining 19% is explained by other variables that are not researched and no discussed in this study.

Keywords: Motivational learning, Achievement Study, and Self Organized Learning Environments (SOLE)

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INTRODUCTION

The education crisis that is currently happening to the Indonesian nation is causing concern, especially for parents and schools who have been trusted as educational institutions. (Mubin, 2021; Novitasari, 2012; Wahono et al., 2018) . its low The level of students' thinking becomes a big challenge for educators. Therefore, teachers as educators are required to be able to design and implement learning programs appropriately, so that students gain knowledge as a whole so that learning becomes meaningful. Meaningful here means that students are able to understand the concepts they learn through direct and real experience. One system that can be applied is that students learn and experience what they learn (Gazali, 2016; Rosita, 2014).

When Indonesia was hit by the COVID -19 pandemic in mid-March 2020, students studied from home taking distance learning (PJJ). Distance learning (PJJ) is certainly adding to the education crisis in Indonesia. For approximately 2 years students do distance learning or study from home. Of course, this situation brings boredom to students. Because, the learning method given by the teacher or school is just that. In fact, there are many methods that can be given so that students remain enthusiastic about learning. Even during the Covid-19 pandemic, students must remain enthusiastic. However, this is a separate problem for the

world of education. Implementing distance learning that is full of creativity and innovation is one way to answer the challenges in the world of education.

There are several factors that are said to be the cause of boredom to give birth to a series of problems in learning. Among them is the lack of student activity in the learning activity itself. Less active learning models still dominate the implementation of PJJ . This has a big enough impact for students not to pay attention to their learning goals. Learning models that are not suitable even further exacerbate the meaning of the learning process which should be developed optimally (Rumahuru et al., 2021; Wahono et al., 2018) .

In order to re- engage students' motivation in learning, as a history subject educator, I want to try to apply the *Self Organized Learning Environments (SOLE) learning approach*. This learning approach refers to an independent learning process carried out by anyone who has the will to learn by utilizing the internet and their smart devices.

METHOD

Research on the influence of student motivation and learning achievement on the Self Organized Learning Environments (SOLE) learning approach in history learning in Class X Social Sciences of SMAN 1 Sumbawa Besar was conducted at SMAN 1 Sumbawa Besar which is located at Garuda Street No. 01 Bugis Village, Sumbawa District, Sumbawa Regency, West Nusa Tenggara Province. Time of research conducted from 17 May to June 18, 2022. The data collection process is carried out for 30 days. Meanwhile, observations on the students studied have been carried out from January 2022. Considering that the researcher also teaches history lessons in Class X Social Sciences SMAN 1 Sumbawa Besar. The type of research conducted by the researcher is quantitative research with descriptive research nature. This research includes collecting data to test hypotheses or answer questions about the current status of the research subjects. The most commonly used type of descriptive research includes attitudes or opinions of individuals, organizations, circumstances or procedures that are collected through a list of questions in a survey, pretest and posttest or observation (Kuncoro, 2013:12). This study aims to determine the attachment of independent variables including learning motivation and student achievement which has an influence on the dependent variable, namely the Self Organized Learning Environments (SOLE) learning approach. There are two types of data used in this study, namely primary data and secondary data. While the research data sources were collected with data collection techniques based on observation, a questionnaire that focuses on learning motivation, and the value of student learning outcomes. The type of data in this study consists of primary data and secondary data. The primary data in this study was obtained from data from a questionnaire about learning motivation distributed to class X students of the Social Sciences Department (IPS) for the 2021/2022 academic year. For student learning outcomes, the data obtained from the results of the pretest and posttest. The pretest was carried out before the Self Organized Learning Environments (SOLE) learning approach, while the posttest carried out after the Self Organized Learning Environments (SOLE) learning approach was applied. Secondary data in this study were obtained from the results of a literature study conducted by researchers. The population in this study were all students of class X SMAN 1 Sumbawa Besar in the academic year 2021/2022, totaling 283 students. The sampling technique used in this study uses a slovin approach so that sampling can be carried out correctly and can represent the population (Riyanto & Hatmawan, 2020:12). Slovin-based sampling approach is formulated as follows:

$$n = \frac{N}{1 + Ne^2}$$

Information:

n = Number of samples

N = Total population

e = Error rate in sampling (10%)

Based on this formula, the sample that can be taken in the study of the influence of student motivation and learning achievement on the *Self Organized Learning Environments (SOLE) learning* approach in history learning in class X majoring in Social Sciences SMAN 1 Sumbawa Besar as follows:

$$n = \frac{283}{1 + (283 \times 0.1^2)}$$

$$n = \frac{283}{1 + (283 \times 0.01)}$$

$$n = \frac{283}{1 + 2.83}$$

$$n = \frac{283}{3.83}$$

$$n = 73.89 = 74$$

73.89 rounded up to 74

The research instrument is a tool used by researchers to collect research information about the variables studied including learning motivation, learning achievement, and *SOLE learning approach*. The instrument used in this study was a questionnaire which was distributed and filled out by class X students of the Social Sciences Department (IPS) of SMA Negeri 1 Sumbawa Besar who received the *Self Organized Learning Environments* (*SOLE*) learning approach . This questionnaire aims to determine student motivation after the *Self Organized Learning Environments* (*SOLE*) learning approach is applied. Meanwhile, to determine learning achievement, the researcher conducted a pretest and posttest. The pretest was carried out before the *Self Organized Learning Environments* (*SOLE*) learning approach applied to students, while the posttest was carried out after the application of the *Self Organized Learning Environments* (*SOLE*) approach. applied in the classroom. Based on the type of research, namely descriptive quantitative research, then after data collection, researchers need to conduct several data tests. The following are some of the data tests carried out in this study, among others:

a) Validity test

The validity test is used to measure the quality of the questionnaire used as a research instrument so that the instrument used is said to be valid and the questionnaire is able to reveal something that is being measured (Ghozali, 2013: 231). For the validity test criteria, if the r count is in a positive position, the statement item is valid. Meanwhile, if r is negative, the statement item is invalid.

b) Reality Test

The reliability test is used to measure variable indicators from a questionnaire with a *reliable* or reliable questionnaire if the answers to the statements are consistent from time to time (Mailoor et al., 2017). The reliability test used is *one shot* or one-time measurement using SPSS *software* which provides facilities for measuring reliability with the static *Cronbach Alpha test*. A variable is said to be reliable if it gives Cronbach *Alpha* > 0.60 or 0.60.

c) Normality test

The normality test is part of the classical assumption test which aims to assess the distribution of data conducted by researchers on a variable or group of data under study so that it can be used to determine whether the distribution of a data follows or approaches the normal distribution. The normality test can be seen with *a probability plot* provided that if the data spreads around the diagonal line and follows the direction of the line, it shows the normal distribution pattern of the research conducted. However, if the data spreads away from the diagonal line and does not follow the direction of the line, it indicates an abnormal distribution of the research conducted (Mailoor et al., 2017) . In addition, the normality test can be carried out with one sample Kolmogorov-Smirnov as evidenced by a significance value of > 0.05.

d) Heteroscedasticity Test

The heteroscedasticity test is the third test in the classical assumption which aims to test whether in the regression model there is an inequality of *variance* from the residuals of one observation to another observation. If the *variance* from the residual of one observation to another observation remains, it is called *homoscedasticity* and this model is a good regression model (Andriani, 2017). According to (Andriani, 2017), the glejser test is one way to detect the presence or absence of heteroscedasticity in a regression, where the glejser test proposes to regress the absolute residual value of the independent variable. To detect the presence or absence of heteroscedasticity, it can be done by looking at the presence or absence of certain patterns on the scatterplot graph between SRESID and ZPRED. This can be proven by the points that spread randomly and are spread both above and below the number 0 on the Y axis.

e) Multiple Regression Analysis

Hypothesis testing to be carried out in this research is to use multiple regression equation model. This regression model is used to test the effect of two or more independent variables on the dependent variable with a ratio or interval measurement scale in a linear equation. The independent variable consists of motivation and learning achievement, while the dependent variable consists of the *Self Organized Learning Environments (SOLE)* learning approach.

f) Partial Test (t Test)

Partial test is a test used to show how far the influence of one independent variable partially or individually in explaining the dependent variable. The steps used to test the hypothesis are to determine *the level of significance* and which is used in this study is 5% or (a) = 0.05. If sign. t > 0.05 then the working hypothesis (Ha) is rejected. If the sign t < 0.05 then the working hypothesis is accepted and there is a significant effect between the independent variable and the dependent variable (Sulyanto, 2011).

g) Simultaneous Test (F Test)

According to Suliyanto (2011), the simultaneous test essentially shows that all independent variables are included in the regression model and have a joint influence on the dependent variable. If the significant value is < 0.05 then the working hypothesis (Ha) is accepted and if the significant value is > 0.05 then the working hypothesis (Ha) is rejected.

h) Coefficient of Determination Test (R2)

The coefficient of determination test (R2) aims to measure how far the model components explain the variation of the dependent variable. The value of the coefficient of determination is between zero and one. If the value is small, it means that the ability of the independent variables in explaining the variation of the dependent variable is limited. While a value close to one means that the dependent variables provide almost all the information needed to predict the variation of the dependent variable (Andika, 2018).

RESULTS AND DISCUSSION

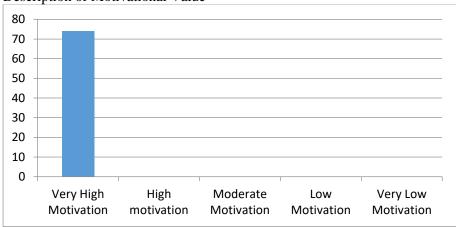
After conducting research on the influence of students' motivation and achievement on learning approaches to *self-organized learning environments* in history subjects in class X SMA Negeri 1 Sumbawa Besar, the following research results were obtained:

Table 1. Variable description

	Pretest Score	Posttest score
Minimum Value	74	76
Maximum Value	96	100
Average value	83.86	88.73
Amount of data	74	74

Based on the table above, it can be seen that the average value of the pretest is 83.86, and the average value of the posttest is 88.73. The minimum score limit for the pretest is 74 and the maximum is 96. As for the posttest, the minimum score is 76 and the maximum score is 100.

a. Description of Motivational Value

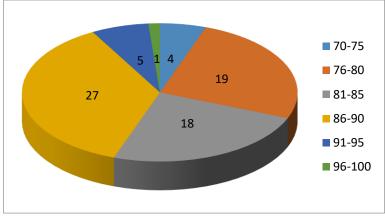


Motivation Value Diagram

Information:

120 – 150: Very high motivation 91 – 119: High Motivation 83 – 90: Moderate Motivation 75 – 82: Low Motivation < 75: Very low motivation

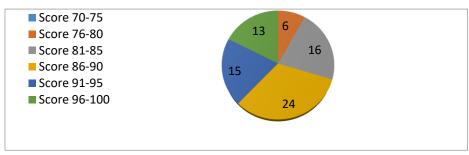
b. Description of Pretest Score



Pretest Value Chart

From the diagram above, it can be seen that the sample that received a value of 70-75 was 4 samples, a value of 76-80 was 19 samples, a value of 81-85 was 18 samples, a value of 86-90 was 27 samples, a value of 91-95 was 5 samples and the value of 96-100 is 1 sample.

c. Description of Posttest Score



Posttest Value Chart

From the diagram above, it can be seen that the samples that get a value of 70-75 are 0 samples, the value of 76-80 is 6 samples, the value is 81-85 is 16 samples, the value is 86-90 is 24 samples, the value is 91-95 is 15 samples and the value of 96-100 is 13 samples. From the presentation of the pretest and posttest data obtained from the respondents, the researchers got an average score of 83.86 for the pretest, and 88.73 for the posttest value. Posttest scores were obtained after the *self-organized learning environment* (*SOLE*) *learning approach*.

Test the quality of the data in the study entitled the effect of motivation and student achievement on the application of the *self-organized learning environments* (*sole*) *learning approach* in history learning in class X SMA Negeri 1 Sumbawa Besar is divided into several tests which will be described below:

a. Validity test

Validity test is a stage carried out to determine and ensure the research questionnaire used is valid or not. The questionnaire is said to be valid on the condition that the questions contained in the questionnaire are able to prove something that is being measured. In this study, a validity test was conducted on 74 respondents.

	Number of Samples	Percentage (%)
Valid Data	74	100

Table: Validity Test Results

The *case processing summary table* shows that the total sample tested is 74 samples and the number of valid samples is 74 or 100% valid. This proves that each question item used in the research is declared valid.

b. Reliability Test

Reliability test is used to test the level of data consistency in a certain period of time repeatedly, so that it can find out the extent to which the measurements used are reliable. The variable used in research with Cronbach's alpha has a value of > 0.50, then the instrument can be used as reliable data collection and the instrument can be said to be reliable. The results of reliability testing on variables can be seen in the following table:

Statistical Reliability Test		
Tested variables	Reliable value	
Motivation to learn	0.513	

Table: Reliability Test Results

From the results of the reliability test above, it shows the results of the analysis of the reliability test with the value of Cronbach' alpha = 0.513. The reliability value of 0.513 variable is greater than 0.50 so that it is stated to be in a moderate value. Thus, it can be concluded that all research instruments are reliable.

Description of reliable limit:

< 0.50 low reliability

0.50 < alpha < 0.70 moderate reliability

Alpha > 0.70 sufficient reliability

Alpha > 0.80 strong reliability

Alpha > 0.90 perfect reliability

c. Normality test

The normality test was carried out to determine the residual value was normally or not normally distributed. To find out the residual data is normally distributed or not, it can be known by statistical tests called the *Kolmogorov-Smirnov sample test*. This normality test can produce more detailed numbers to find out a regression equation in the study that passes normality with a *Kolmogorov-Smirnov significance value* greater than 0.05. The following are the results of the classical assumption test with *Kolmogorov-Smirnov*:

Kolmogov-smirnov . Normality Test		
	Pretest	Posttest
Number of Samples	74	74
Normality value (assumed value of bidirectional significance)	.062	.056

Table: Kolmogorov-Smirnov . Normality Test Results

The implementation is that if the Asymp value. Sig. (2-tailed) for the pretest t 0.62 and for the post-test t 0.56 where the results are greater than the 0.05 significance level. So it can be concluded that the *Kolmogorov-Smirnov normality test* in this study is normally distributed.

d. Heteroscodastisity Test

The heteroscedasticity test aims to test the variance of the residual variance from one observation to another observation with a regression model. The regression model is said to be good if there is no heteroscedasticity and to detect the presence of heteroscedasticity can be done by observing the *scatterplot graph*. The heteroscedasticity test using a *scatterplot graph* is to observe the pattern of points that spread above and below the Y axis. The following are the results of the heteroscedasticity test using a *scatterplot*:

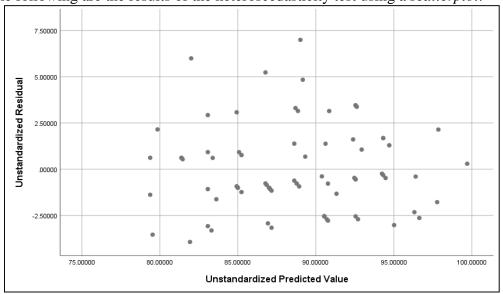


Figure: Graph of heteroscedasticity test scatterplot

The results of the heteroscedasticity test from the *scatterplot graph* between SRESID and ZPRED show a distribution pattern, where the points of distribution are randomly distributed both above and below the Y axis. Thus, it can be concluded that there is no heteroscedasticity in the regression model.

e. Multiple Linear Regression Test

The multiple linear regression test in this study was to examine the effect of student motivation and achievement on the application of the *self-organized learning environment* (*sole*) *learning approach*. This multiple linear regression test is a method or research hypothesis analysis technique to test whether there is an influence between one variable and another variable which is expressed in the form of a regression equation. Multiple linear regression analysis serves to find the effect of two or more independent variables (motivation and pretest) on the dependent variable (posttest). The results of the multiple linear regression testing carried out are:

Variables Entered/Removed ^a

Model	Variables Entered	Variables Removed	Method
1	motivation, pre test ^b		Enter

a. Dependent Variable: post test

Table: Multiple Linear Regression Test Results

From the table above, the output of the values of the *entered* and *removed variables* provides information about the research variables and the methods used in the regression analysis. The independent variables used in this study are motivational variables and pretest. While the dependent variable is the achievement variable taken from the posttest score. Regression analysis using the entered method. No variables are removed so that the *variables removed column* has no numbers or is empty.

f. Partial Test (*T-test*)

Partial test or t test is a test used to show the effect of one independent variable on the dependent variable. The table below is the processed t test data:

Statistical t- test		
	Value t count	Significance figures
Variables tested (pretest value to posttest)	17,747	.000

Table: Partial Test Results (*T-test***)**

The pretest value has a positive and significant effect on the posttest value. This can be seen from the significance value of the pretest 0.000 < 0.05. With this analysis, it can be an indicator for maintaining a *self-organized learning environment* (*SOLE*) *learning approach*, so that it can increase students' post-test scores in history subjects in class X Social Sciences at SMAN 1 Sumbawa Besar.

g. Simultaneous Test (f-Test)

Simultaneous test (f-test) is used to determine whether or not there is a joint or simultaneous influence between the independent variables on the dependent variable.

Simultaneous Test (f Test)			
F Value Count		Significance	
		value	
Variables tested (motivation and	156,970	0.000	
achievement towards SOLE)			

Table: Simultaneous test results (f-test)

Based on the table above, it can be concluded that the value of calculated F is 156.970, while the resulting significance value is 0.000 which is smaller than 0.05. Thus, this multiple regression model is feasible to use, and the variables of learning motivation and learning achievement have a simultaneous influence on the application of the *self-organized learning environment (SOLE) learning model*.

h. Coefficient of Determination Test (R2)

The determination test (R2) aims to measure the components of the model in explaining the variation of the dependent variable.

Ī	Coefficient of Determination Test R ²			_
Γ		R value	R value	Determination of
			squared	R Squared Value
Γ	Variables tested (Pretest scores	0.903	0.816	0.810
	and motivation towards SOLE			

Table : Coefficient of Determination (R2)

Based on the table above, it can be seen that the value of the coefficient of determination contained in the value of determination R squared is 0.810. The value of

b. All requested variables entered.

determination R squared is 0.81 or equal to 81%. This figure means that the ability of the independent variable to explain the dependent variable, namely the application of the self-organized learning environment (SOLE) learning model is 81%, the remaining 19% is explained by other variables not examined and not discussed in this study.

Based on the results of the questionnaire data test on students' learning motivation, it can be stated that students' learning motivation in history lessons uses the Self Organized Learning Environments (SOLE) learning approach. as many as 74 people are at a very high level, because the value of the questionnaire is in the range of 120 - 150. By conducting a simultaneous test, the value of the calculated F obtained is 156.970, while the resulting significance value is 0.000. Based on the significance value (sig.) of the anova output is if the value of Sig. < 0.05, then the hypothesis is accepted. This means that motivation and achievement simultaneously affect the application of the self-organized learning environment learning model. From the SPSS output table above, it is known that the value of sig. 0.000 < 0.05, thus the variables of learning motivation and learning achievement have a simultaneous influence on the application of the self-organized learning environments (SOLE) learning model. The value of the coefficient of determination contained in the Adjusted R square value is 0.810. The value of R square is 0.81 or equal to 81%. This figure means that the ability of the independent variable in explaining the dependent variable, namely the application of the self-organized learning environment (SOLE) learning model, is 81%. This means that the effect of motivation and student achievement on the self-organized learning environments (SOLE) learning approach has an effect of 81%.

CONCLUSION

Based on the results of the analysis and discussion in the previous chapter, the conclusions from the results of research on the effect of motivation and student achievement on the learning approach of *self organized learning environments (SOLE)* in history subjects in class X SMAN 1 Sumbawa Besar , can be concluded as follows:

- 1. After applying a *self-organized learning environment approach* to history subjects in class X majoring in Social Sciences at SMAN 1 Sumbawa Besar, the researchers saw that the students' enthusiasm for learning was very good. The students were led to learn history subject matter independently by using information and communication technology that uses the internet. The curiosity of students or students towards the learning material provided by the teacher is very large. Great curiosity makes the creation of independence in learning.
- 2. The learning approach of *self organized learning environments* in history subjects in class X majoring in Social Sciences at SMAN 1 Sumbawa Besar has an effect on students' learning motivation by 81%. This means that the *SOLE* learning approach has a positive effect on student motivation at SMAN 1 Sumbawa Besar.
- 3. The learning approach of *self organized learning environments* in history subjects in class X majoring in Social Sciences SMAN 1 Sumbawa Besar has an effect on increasing student achievement by 81%. This means that the *SOLE learning approach* applied has a significant effect on student achievement at SMA Negeri 1 Sumbawa Besar.

RECOMMENDATION

Based on the analysis, discussion and conclusions of the research conducted, the following suggestions are given:

1. SMAN 1 Sumbawa Besar as one of the well-known upper secondary education institutions in Sumbawa Regency, of course, needs to improve the quality and quality of educational services provided to its students. One way to develop educational services, it is hoped that the educators will always innovate in the application of learning methods or approaches, in order to improve the quality of students. One thing that can be done is to conduct research in the field of learning innovation.

2. For further researchers, it is possible to add independent variables in research so that they can provide broader research aspects. This can be supported by the addition of learning effectiveness variables, quality of education, educator loyalty, and other variables that affect the use of the *self-organized learning environments (SOLE) learning approach*.

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