



The Influence of Online Learning Quality on Students' Learning Stress

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Keywords

effectiveness; laboratory equipment; IPAs

Abstract

The research objective of this scientific article is to find out whether there is an effect of the quality of online learning on the learning stress of students at MIN 03 Central Lombok. This research uses a quantitative approach with the type of ex post facto. The instruments used in this research are observations and questionnaires. The population and sample in this study were all students of Class V MIN 03 Central Lombok, a total of 50 students. The results of this study indicate that there is an effect of the quality of online learning on the learning stress of students at MIN 03 Central Lombok. This is based on the results of data analysis, it is known that the F_{count} value = 165.79, with a significance level of 0.05, it can be used to predict the variable quality of online learning (X) and the learning stress variable (Y). The magnitude of the correlation value (R) is equal to 0.881. From this output, the coefficient of determination (R Square) is 0.775 which implies that the effect of the independent variable on the dependent variable is 77.5%. Then the magnitude of the contribution or balance of online learning and learning stress is 75%. The remaining 25% is determined by other variables. So the results of this study indicate that there is an effect of the quality of online learning on learning stress.

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INTRODUCTION

The transmission of the Covid-19 outbreak, totally making the implementation of online learning in Indonesia and even in all countries in the world starting in 2020, is between effective and forced to be the essence of this online learning concept. The Minister of Education and Culture (Mendikbud) Nadiem Makarim decided that the entire learning process for school -age children was carried out through distance learning (online learning) during the Covid-19 emergency. Therefore, teachers are required to be creative in carrying out these online learning activities. There are several results of previous research related to the use of social media in online learning. The results of this study indicate that the quality of online learning increases by using several social media platforms, including using two social media at once, namely WhatsApp and YouTube.

Ibrahim and Suardiman's research showed that there was a positive effect of the use of e-learning on the motivation and learning achievement of students at SD Negeri Tahunan Yogyakarta. Research conducted by Shafira Aulia Br Purba with the title of stress levels in students who attend school with online media at Madrasah Aliyah Negeri 2 Model Medan shows that most students experience moderate stress (34.1%), and as much as mild stress (25%), severe stress (20.5%), and normal stress (20.5%).

According to teachers or teaching staff, online learning is less effective because it focuses more on assignments, moreover, not all students have technology that supports this online learning method. The government adopts a learning policy carried out through distance learning with online media using either a cellphone, computer device, or laptop.

Some of the complaints that can be felt by all students are the lack of signal, limited data packets, difficulties in controlling the group work system, even online learning is only carried out for a few days already complaining about the many assignments, to the point where stress will pursue tasks that must be prioritized first. The psychological impact of affected students includes weakening the body's immunity, effectiveness in learning, reduced interaction with the environment is also reduced. Weakened immunity results in a reduced focus on learning and resulting in decreased achievement from before.

The problems faced by students consist of financial and psychological problems. Psychologically, students experience pressure in participating in this online learning totally, there are many things that cause it, such as the many assignments given by the teacher with a very limited timeframe. Students also do not fully understand the material provided .

Based on the results of observations of fifth grade students at MIN 03 Central Lombok, several problems were found in the situation and conditions due to the Covid-19 pandemic that we are currently facing. Many students feel pressured in implementing online learning, where students feel pressured because there are too many assignments given by the teacher, without any explanation of how to do the assignments themselves.

In online learning teachers tend to give assignments to their students and demand that students usually collect them in a relatively fast time, because there are too many assignments given, students feel lazy and don't want to do these assignments, feel that the assignments given by the teacher are too many and difficult to complete. understood by students, because most of the assignments given are assignments of question exercises without any explanation by the teacher. Although some of the tasks given by the teacher are to train or hone students' independence in understanding the material provided. Due to the Covid-19 pandemic which causes limited time and difficulties in social interaction, teachers tend to give a lot of practice assignments contained in student books to maximize student learning outcomes regarding the material being taught.

The purpose of this study was to determine the effect of online learning on the learning stress of students in class V MIN 03 Central Lombok,

METHODS

The research method used is quantitative research while the approach used is an ex post facto type approach . The population in this study were all students of class V MIN 03 Central Lombok. A total of 50 students are divided into 2 classes namely class A and class B.

The instrument used in this study was in the form of questionnaire items according to each indicator to measure online learning and student learning stress. The measurement scale used is the Likert scale where the Likert scale is a scale used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena.

Table 1. Score of Likert Scale Measurement Answers

Answer	Score	
	Items(+)	Items(-)
Strongly agree	4	1
Agree	3	2
Don't agree	2	3
Strongly disagree	1	4

Instruments

1. Instrument Validity Test, Validity means that the instrument can be used to measure what should be measured. The formula used is the product moment formula.
2. Instrument Reliability Test. A reliable instrument is an instrument which, when used several times to measure the same object, will produce the same data
3. The normality test was carried out by the researcher to find out whether the data he examined was normally distributed or not. So this study used the Smirnov columnogrove normality test , in the SPSS 25 program.
4. Linearity Test is a procedure used to determine whether or not a linear distribution of data values results obtained,
5. Simple Linear Regression Test, namely linear regression where the number of predictor variables is only one. In this analysis, variable x is a variable that influences or predicts, and variable y is a variable that is influenced or predicted.

RESULTS AND DISCUSSION

The instrument shows that the instrument items are in accordance with the indicators and are guided to improve the statements in the instrument by using simpler language and changing some of the questions so that they are not ambiguous and easily understood by students and avoid words with multiple meanings.

As for collecting test data for the instrument to calculate the validity and reliability of the instrument, the researcher collected data in class VB MIN 03 Central Lombok

Validity test

Test the validity of the online learning questionnaire instrument and student learning stress on June 4, 2021 with 23 respondents. Each student was given two questionnaires with a total of 45 items. The distribution of the questionnaire was carried out by the researcher after the semester exams in class V B MIN 03 Central Lombok.

The researcher conducted a validation test of online learning instruments and student learning stress using the moment product correlation formula, with the criteria said to be valid if $r^{hitung} > r^{tabel}$ and said to be invalid if $r^{hitung} < r^{tabel}$ with a significant level of 5% using SPSS 25.

As for the results of the online learning instrument validation test with a total of 25 questionnaire items that the researcher distributed , it was found that 23 valid questionnaire items and 2 invalid questionnaire items, while from the results of the learning stress questionnaire validity results with a total of 20 questionnaire items that the researchers distributed, found 16 valid questionnaire items and 4 invalid questionnaire items.

Table 2. Results of online learning questionnaire validation trials (X variable)

No Stool Items	r^{hitung}	r^{tabel} (sig 5%)	Information
1	0.430	0.2 79	Valid
2	0.151	0.2 79	Invalid
3	0.321	0.2 79	Valid
4	0.317	0.2 79	Valid
5	0.311	0.2 79	Valid
6	0.364	0.2 79	Valid
7	0.380	0.2 79	Valid
8	0.404	0.2 79	Valid
9	0.343	0.2 79	Valid
10	0.290	0.2 79	Valid
11	0.162	0.2 79	Invalid
912	0.443	0.2 79	Valid
13	0.331	0.2 79	Valid
14	0.368	0.2 79	Valid
15	0.282	0.2 79	Valid
16	0.304	0.2 79	Valid
17	0.417	0.2 79	Valid
18	0.351	0.2 79	Valid
19	0.349	0.2 79	Valid
20	0.465	0.2 79	Valid
21	0.420	0.2 79	Valid
22	0.318	0.2 79	Valid
23	0.511	0.2 79	Valid
24	0.326	0.2 79	Valid
25	0.318	0.2 79	Valid

Table 3. Results of the validation trial of the Learning Stress Questionnaire Instrument (Y-variable)

No Question Items	r^{hitung}	r^{tabel} (sig 5%)	Information
1	0.537	0.2 79	Valid
2	0.349	0.2 79	Valid
3	0.258	0.2 79	Invalid
4	0.287	0.2 79	Valid
5	0.391	0.2 79	Valid
6	0.440	0.2 79	Valid
7	0.447	0.2 79	Valid
8	0.35 3	0.2 79	Valid
9	0.323	0.2 79	Valid
10	0.416	0.2 79	Valid
11	0.612	0.2 79	Valid
12	0.462	0.2 79	Valid
13	0.255	0.2 79	Invalid
14	0.365	0.2 79	Valid
15	0.289	0.2 79	Valid
16	0.505	0.2 79	Valid

17	0.533	0.2 79	Valid
18	0.117	0.2 79	Invalid
19	0.325	0.2 79	Valid
20	0.251	0.2 79	Invalid

Reliability Test

After testing the instrument, reliability testing was carried out first before the question was used. Because in addition to having valid questions, they also have to be reliable. Reliability refers to the notion that the instrument used can measure something that is measured consistently from time to time. Where the reliability test was carried out with the SPSS 25 application with the Cronbach's alpha value below:

Table 4. Results of the Reliability Test for the quality of Online Learning

Reliability Statistics	
Cronbach's Alpha	N of Items
.917	25

Based on the table above statistical tests using SPSS, Cronbach's alpha value was $0.917 > 0.60$, so that online learning instruments were said to be reliable. The details of calculations using SPSS 25 can be seen in the attachment.

Table 5. Results of the Learning Stress Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
.844	20

Based on the table above statistical tests using SPSS, Cronbach's alpha value was $0.844 > 0.60$, so the learning stress instrument was said to be reliable. The details of calculations using SPSS 25 can be seen in the attachment. Following are the results of the validity test . The validity of the questionnaire for the quality of online learning and student learning stress is as follows:

Presentation of Research Data

The data collection in this study used the technique of distributing online learning quality questionnaires and the learning stress questionnaire was distributed to the research sample, namely class V MIN 03 Central Lombok, totaling 50 students.

The number of questions from the online learning stress questionnaire is 25 items and learning stress is 20 items. There are choices for positive answers, namely strongly agree, agree , disagree and strongly disagree with weights 4, 3, 2 and 1

Linearity Test

Table 6. Linearity Test Results

ANOVA Table			Sum of Squares	df	MeanSquare	F	Sig.
learning stress * quality of online	Between	(Combined)	581,867	18	32,326	7,790	.000
	Groups	Linearity	550,981	1	550,981	132,784	.000

learning	Deviation from Linearity	30,885	17	1817	.438	.962
	Within Groups	128,633	31	4,149		
	Total	710,500	49			

Linearity results using SPSS 25.0 show that the Deviation From linearity value is $0.962 > 0.05$, so there is a linear relationship between the independent variables and the dependent variable.

Normality test

Table 7. Normality Test Results
One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residuals
N		50
Normal Parameters ^{a,b}	Means	.0000000
	std. Deviation	1.80429616
Most Extreme Differences	absolute	.099
	Positive	.071
	Negative	-.099
Test Statistics		.099
asympt. Sig. (2-tailed)		.200 ^{c,d}

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. This is a lower bound of the true significance.

The results of the normality test using SPSS 25.0 show a significance value of $0.200 > 0.05$, it can be concluded that the residual values are normally distributed.

Simple Linear Regression Hypothesis Test

Table 8. Hypothesis Test Results
ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	550,981	1	550,981	165,793	.000 ^b
residual	159,519	48	3,323		
Total	710,500	49			

a. Dependent Variable: learning stress

b. Predictors: (Constant), online learning

From this output it can be seen that the value is $F_{hitung} = 165.79$, with a significance level of $0.000 < 0.05$, so it can be used to predict the quality variable of online learning (X) and the learning stress variable (Y). Furthermore, to determine the level of influence between the variables x and y will be interpreted in the table below.

Table 9. Model Summary Results

Summary models				
Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.881 ^a	.775	.771	1823

a. Predictors: (Constant), online learning

The table 9 explains magnitude of the correlation value (R) is equal to 0.881. From this output, the coefficient of determination (R Square) is 0.775 which means that the effect of the independent variable on the dependent variable is 77.5%.

The results of this study aim to determine the effect of the quality of online learning on student learning stress at MIN 03 Central Lombok, so that data is collected for the purposes this research . Measurement for the variable quality of online learning is based on indicators about the quality of online learning. Data on learning stress was obtained through data collection using an instrument in the form of a questionnaire. Data collection instruments were given to students to be filled in according to the instructions for filling out the questionnaire.

The questionnaire has gone through validation pores to the validator related to the instrument that has been compiled by the researcher, namely the online learning instrument has 25 items and student learning stress has 20 items and the total of these instruments is 45 items. The instrument shows that the instrument item items are in accordance with the indicators and are guided to improve the statements in the instrument by using simpler language and changing some of the questions so that they are not ambiguous and easily understood by students and avoid words with multiple meanings.

As for collecting test data for the instrument to calculate the validity and reliability of the instrument, the researcher collected data in class V MIN 03 Central Lombok. As for the results of the validity test of the online learning instrument with a total of 25 questionnaire items that the researcher distributed, it was found that 25 valid questions and 0 invalid questions, while the results of the validity of the learning stress questionnaire with a total of 20 valid questionnaire items and 0 invalid questionnaires.

After testing the validity, then test the reliability first before the question is used. Because in addition to the questions being valid, they also have to be reliable where the reliability test in online learning obtained a Crobach's alpha value of $0.729 > 0.60$, so that online learning instruments are said to be reliable. As for the Learning Stress instrument, it obtained a Crobach's alpha value of $0.675 > 0.60$, so that the learning stress instrument was said to be reliable.

The normality test was carried out by the researcher to find out whether the data he examined was normally distributed or not. So this study used the Smirnov columographic normality test , in the SPSS 25 program. By looking at the significance value (sig) found in the Shaapiro-walk column and in the Smirnov column. The criteria taken are based on a probability value (sig) < 0.05 , so the data is not normally distributed. And vice versa if the probability value is > 0.05 then the data is normally distributed. Based on the results of the normality test, it is known that the significance value is $0.200 > 0.05$, so it can be concluded that the residual values are normally distributed.

Linear regression is linear regression where the number of predictor variables is only one. In this analysis, variable x is a variable that influences or predicts, and variable y is a variable that is influenced or predicted.

If $F_{count} > F_{table 5\%}$, the conclusion of the regression line equation is accepted, or variable X can affect or predict variable Y. if $F_{count} < F_{table 5\%}$, the conclusion of the regression line equation is not accepted, or variable X cannot affect or predict variable Y. Based on the results of the simple linear regression hypothesis test, a value of $F_{hitung} = 165.79$ was obtained, with a significance level of $0.000 < 0.05$, so it can be used to predict the quality variable of online learning (X) and the learning stress variable (Y).

The magnitude of the correlation value (R) is equal to 0.881. From this output, the coefficient of determination (R Square) is 0.775 which means that the effect of the independent variable on the dependent variable is 77.5%. This can happen because the instrument used for data collection in this study has already

carried out the validation stage and the results meet the requirements to be used as a valid and reliable data collection instrument where online learning influences learning stress.

This is in line with research conducted by Iqtina Sabnaha Oktariana, "Academic Stress Levels During online learning amid the Covid-19 Pandemic for BK FKIP Seriwijaya University Students 2021". The results of this research indicate that there is a percentage of academic stress for Guidance and Counseling students at FKIP Seriwijaya University in the high category of 15.71%, the medium category of 65.71%, and the low category of 18.57%, based on cognitive aspects, students are in the medium category. .71% with the highest percentage in one of the indicators of the cognitive aspect, namely experiencing confusion, 21.93% in terms of the affective aspect, students are in the medium category, 65.71% with the highest percentage of affective aspects, namely having poor abilities, 18.74% then in the physiological aspect students are in the medium category 68.57% with the highest percentage in indicators on the physiological aspect, namely experiencing difficulty sleeping 10.98% and on the behavioral aspect students are in the medium category 72.86% with the highest percentage in one of the behavioral aspects indicators of delaying work 11.17% during online learning. From these results it can be seen that online learning during the Covid-19 pandemic can affect student learning stress.

According to Medawati, et al, online learning can be understood as formal education held by schools where students and teachers are in separate locations, requiring an interactive telecommunication system to connect the two and the various resources needed in it. It can be concluded that online learning is alternative learning during this pandemic and has a very strong effect on student psychology, especially student learning stress.

Learning with an online learning system due to the covid-19 pandemic is a suggestion from the government through a circular letter from the Ministry of Education and Culture, Directorate of High Ministry of Higher Education No. 1 of 2020 concerning preventing the spread of the covid-19 virus in tertiary institutions which contains that all schools are to carry out a remote learning process and advise students to learn from their respective homes (stay at home). Different locations from teachers and students during the online learning process support physical distance behavior which is considered one of the efforts to suppress the spread of the Covid-19 virus. The ineffectiveness of the quality of online learning is caused by students who feel that their understanding is independent learning from reading material and mastery is lacking and it is difficult for students to understand, the high cost of buying internet quota, signal interference, there are learning activities outside of the hours it should be, and the teacher's readiness in preparing material and media in online learning.

Stress is the result of an event or series of individual experiences that is interpreted negatively and makes the individual unable to deal with it. The difference between reality and expectations that are faced creates a stressful situation for the individual. Stress is caused by a mismatch of perception between environmental demands and abilities. In learning stress, the emotional tension that students feel in coping with academic demands and has an impact on their physical and mental health.

Learning stress refers to a psychological condition that occurs because expectations in student learning come from parents or teachers, friends and family members. Not only expectations, but stems from parental pressures for academic achievement, the education system, and the burden of homework or independent assignments. Several factors influence learning stress, namely physical, family, school and social factors. Most of the stress experienced by adolescents comes from the school environment. Too many assignments, unsatisfactory quality of learning, lack of interest in subjects, unsatisfactory methods and media used by teachers, as well as demands from parents, teachers and themselves are sources of learning stress.

From the results of research on the quality of online learning on student learning stress using a simple linear regression hypothesis test, a value of $F_{hitung} = 165.79$ is obtained, with a significance level of $0.000 < 0.05$, so it can be used to predict the variable quality of online learning (X) and learning stress variable (Y). The magnitude of the correlation value (R) is equal to 0.881. From this output, the coefficient of determination (R Square) is 0.775 which means that the effect of the independent variable on the dependent variable is 77.5%. It can be concluded that the quality of online learning has a strong influence on student learning stress. Thus it can

be concluded that "there is a significant influence between the quality of online learning on the learning stress of students in class V MIN 03 Central Lombok, ".

CONCLUSION

Based on the results of data analysis and discussion in this study, it can be concluded that "there is a significant influence between the quality of online learning on the learning stress of class V MIN 03 Central Lombok, ". This is evidenced from the results of the simple linear regression hypothesis test, a value of $F_{hitung} = 165.79$ is obtained, with a significance level of $0.000 < 0.05$, so it can be used to predict the quality variable of online learning (X) and the learning stress variable (Y). The magnitude of the correlation value (R) is equal to 0.881. From this output, the coefficient of determination (R Square) is 0.775 which means that the effect of the independent variable on the dependent variable is 77.5%. Which means , the influence of the quality of online learning on student learning stress is very strong .

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