The Effect Of The Use Of Google Classroom Media On Online Science Learning On Environmental Pollution Materials On The Students' Interest And Learning Achievement Of Class Vii Smp

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Abstract

Keywords:
google classroom, interest in learning, learning achievement, online learning.

This research was aimed to (1) determine the effect of using google classroom media on th eonline science learning on environmental pollution material towards the learning interest of class VII junior high school students (2) know the effect of using google classroom media on the online science learning on environmental pollution material towards seven grade students of junior high school students achievement (3) know the correlation between interested in learning and learning achievement in online science learning on environmental pollution material for seven grade students of junior high school. The design used in this study was a quasi-experimental type with Posttest-Only Control Design. The population of this study was the entire seventh grade of SMP Negeri 6 Magelang for the academic year 2020/2021 with the total of 6 classes. The sampling technique used was probability sampling technique with the type of simple random sampling. The sample in the study was class VII E and VII F. The results showed that there was an effect of using google classroom media on the online science learning about environmental pollution material on towards the learning interest of seventh grade junior high school students with a high category, there was an effect of using google classroom media on the online science learning environmental pollution material towards learning achievement of seventh grade students. Middle school was in the medium category and there was a correlation between interested in learning and learning achievement on theonline science learning on environmental pollution material for class VII SMP with a strong category.

INTRODUCTION

The world is currently facing the COVID-19 pandemic. These conditions bring changes in various fields of life, including the world of education. The world of education is an important aspect of the early formation of quality human resources. Quality human resources will eventually create the next generation who are ready to compete with the outside world. So, in its implementation, education must continue even during a pandemic emergency.

The COVID-19 pandemic has restricted human movement. This is done to prevent and break the chain of the spread of COVID-19. Various interactions between humans are directly limited, including in the learning process. Which then brings the transition from face-to-face learning to online learning. Online learning is considered the best solution so that learning continues to run well in the current pandemic conditions.

Online learning is still carried out with various limitations. The limitations in online learning arise from teachers, schools, and students. Various limiting factors in supporting learning affect the process and learning outcomes. The fewer limitations that affect the learning process, the more maximal the learning outcomes will be.

In the learning process, student learning achievement is one indicator that shows the achievement of predetermined learning objectives. The learning achievement will be used by the teacher as material to determine the extent to which students understand the learning material. Learning achievement will be used as an evaluation material by the teacher where good learning will bring good learning achievement. While learning achievement is still low, it is necessary to make improvements in the learning process.

According to Maesaroh (2013, p.11), learning achievement is the result of learning activities or the results of efforts, exercises and experiences carried out by someone, where these achievements will not be separated from the influence of factors outside of the learner. Learning achievement is influenced by two main factors, namely internal factors, and external factors. Internal factors are factors that come from within students such as interest in learning, ability, and students' health conditions. While external factors are influences from outside the students themselves that influence them such as learning facilities, media, and learning strategies used by teachers.

Interest in learning is the tendency to always pay attention and remember something continuously, this interest in learning is closely related to feelings of pleasure because it can be said that interest in learning occurs because of a happy attitude to something, people who are interested in learning something mean their attitude is happy about something. In addition to playing a role in guiding students, teachers also play a role in building interest in learning. A good interest in learning will bring an active and fun learning process (Sabri, 1995, p.84).

Being able to stimulate interest in learning in every lesson is important, especially in science learning. Science is a subject whose learning material will be very useful in experience and solving problems in everyday life. Knowing the importance of these science subjects has not been able to bring maximum online learning. Online learning is considered ineffective for delivering science learning which many students consider to be an abstract and difficult subject to understand.

The use of Google Classroom is a promising option to overcome problems in online learning during the current pandemic. In addition to its easy use, Google Classroom is also supported by various adequate learning support features. So it can be said that Google Classroom can be an online learning media that can be used by various levels of education.

Based on the results of observations of science learning at Junior High School 6 Magelang during educational practice (PK), in learning science, the used of google classroom learning media was less. The main learning

media chose to be used in the science learning process was WhatsApp. In addition to its ease of access and use, WhatsApp media also had drawbacks.

Submission of material in science learning was also limited to the use of PowerPoint (PPT). In online learning, students' independent learning abilities support maximum learning goals. Online learning using PPT was felt to have not been able to facilitate students optimally. The PPT delivered is often not used by students as material for learning. Students feel bored when they were required to follow the lesson by reading the material continuously. The use of YouTube videos can bring learning more fun because they can present a more attractive appearance in the delivery of learning materials. By using YouTube videos of learning during the pandemic which was often considered as boring learning, it is hoped that it will be able to bring an atmosphere that encourages the enthusiasm of students in the learning process. Based on the description of the problem, the researcher wanted to know the effect of using google classroom media on online science learning on environmental pollution material on the interest and learning achievement of seventh-grade students of Junior High School.

METHOD
Research Type
This research was a quasi-experimental research with a posttest-only control design used.

Time and Place
This research was conducted on March 15 – April 05, 2021 at *SMP Negeri 6 Magelang for the academic year 2020/2021*.

Research Subject
The population of this study was the entire seventh grade of SMP Negeri 6 Magelang for the academic year 2020/2021 with the total of 6 classes. The sample in the study was class VII E and VII F.

Data, Instruments, and Data Collection Techniques
The study used data collection techniques in the form of tests carried out to determine cognitive aspects. The test to measure the cognitive aspects of students was in the form of multiple choice questions with four alternative answer choices as many as 25 questions.

In this study also used a questionnaire to assess learning interest and affective aspects of students. The affective aspect was part of the assessment of student learning achievement apart from the cognitive aspect. Instruments in the form of questions to measure cognitive abilities and questionnaires used in the study have passed validity testing by expert lecturers as validators

1. Prerequisite Test
   Prerequisite tests that must be carried out were normality test and homogeneity test
2. Hypothesis Test
   The data analysis technique used to test the hypothesis of the effect of using google classroom learning media on students' learning interest and the effect of using google classroom learning media on learning achievement used independent sample t-test analysis techniques and to determine the back and forth relationship between learning interest and learning achievement students used correlation analysis.

RESULT
To describe and test the effect of independent variables and dependent variables in this study, in this section a description of the data obtained from the field will be presented. The description of the data presented includes the Mean (M), Median (Me), Mode (Mo), and Standard Deviation of each variable.

Table 1. Results of Statistical Calculations on Study Interest in Control Class

Statistics

	INTEREST	
N	Valid	21

Missing		0
Mean		64,48
Median		64,00
Mode		61
Std. Deviation		5,546
Range		20
Minimum		54
Maximum		74

Based on data analysis carried out using SPSS version 22 as shown in Table 1, the maximum score for this variable was 74 and the minimum score was 54, so that the data showed a range of 20. From the students' learning interest data obtained, it was then analyzed using SPSS version 22 so that the Mean value was 64.48, Median 64.00, Mode 61, and Standard Deviation 5.546.

Based on the calculation of the learning interest data obtained, it can be seen that 17 students are in a score of more than 60 or the high category with a percentage of 80.00%, 4 students are in the score range of 40 to 60 or the medium category with a percentage of 20.00%. and there are no students who are at a score of less than 40 or in the low category of learning interest.

Table 2. Results of Statistical Calculations on Interest in Learning Experiment Class

Statistics

INTEREST

N	Valid	21
	Missing	0
Mean		69,76
Median		70,00
Mode		77
Std. Deviation		7,582
Range		24
Minimum		56
Maximum		80

Based on data analysis carried out using SPSS version 22 as shown in Table 2, the maximum score for this variable was 80 and the minimum score was 56, so the data showed a range of 24. The data on student interest in learning was obtained, then analyzed using SPSS version 22 to obtain the Mean 69.76,

Median 70.00, Mode 77, and Standard Deviation 7.582.

Based on the calculation of the learning interest data obtained, it can be seen that 17 students are in a score of more than 60 or the high category with a percentage of 80.00%, 4 students are in the score range of 40 to 60 or the medium category with a percentage of 20.00%. and there are no students who are at a score of less than 40 or in the low category of learning interest.

Based on the results of the analysis, it can be seen that the effect of using google classroom media on online science learning on environmental pollution material on the learning interest of seventh-grade junior high school students is in the high category. It is shown in the effect size analysis on the t-test using Cohen's formula with a value of 0.8. This value is included in the high category with a percentage of 79%.

Table 3. Results of Statistical Calculations on Learning Achievement in Control Class

Statistics

PERFORMANCE

N	Valid	21
	Missing	0
Mean		131,38
Median		136,00
Mode		110[a]
Std. Deviation		16,576
Range		62
Minimum		95
Maximum		157

Based on data analysis carried out using SPSS version 22 as shown in Table 3, the maximum score for this learning achievement variable was 157 and the minimum score was 95, so the data showed a range of 62. The student achievement data was obtained, then analyzed using SPSS version 22 to obtain the Mean 131.38, Median 136.00, Mode 110, and Standard Deviation 16.576.

Based on the calculation of the learning achievement data obtained, it can be seen that 14 students are in the score of more than 126.7 or the high category with a percentage of

66.70%, 7 students are in the score range of 26.7 to 126.7 or the medium category. With a percentage of 33.30% and there are no students who score less than 26.7 or in the low category of learning achievement in this environmental pollution chapter.

Table 4. Results of Statistical Calculations on Experimental Class Learning Achievements

Statistics

PERFORMANCE

N	Valid	21
	Missing	0
Mean		141,86
Median		142,00
Mode		152
Std. Deviation		15,186
Range		51
Minimum		119
Maximum		170

Based on data analysis carried out using SPSS version 22 as shown in Table 4, the maximum score on this learning achievement variable was 170 and the minimum score was 119, so the data showed a range of 51. The student achievement data was obtained, then analyzed using SPSS version 22 to obtain the Mean 141.86, Median 142.00, Mode 152, and Standard Deviation 15.186.

Based on the calculation of the learning achievement data obtained, it can be seen that 18 students are in the score of more than 126.7 or the high category with a percentage of 86.00%, 3 students are in the score range of 26.7 to 126.7 or the medium category. With a percentage of 14.00% and there are no students who score less than 26.7 or in the low category of learning achievement in this environmental pollution chapter.

Based on the results of the analysis, it can be seen that the influence of the use of google classroom media on online science learning on environmental pollution material on the learning achievement of seventh-grade junior high school students is in the medium category. This is shown in the effect size analysis on the t-test using Cohen's formula

with a value of 0.7. This value is in the medium category with a percentage of 76%.

Table 5. Normality Test

	CLASS	Kolmogorov-Smirnov[a] Sig.	Shapiro-Wilk Sig.
INTEREST	CONTROL CLASS	,200*	,750
	EXPERIMENT CLASS	,147	,232
PERFORMANCE	CONTROL CLASS	,070	,230
	EXPERIMENT CLASS	,200*	,458

Based on the results of these data (Table 5), it can be seen that the two variables used in the study, namely student interest in learning and student learning achievement are normally distributed. This is shown in the significance value after testing the normal test with the value of student interest in learning and student learning achievement greater than 0.05.

Table 6. Homogeneity Test

Variable	Sig
Interest	0,082
Performance	0,660

Based on the results of these data (Table 6), it can be seen that the two variables used in the study, namely student interest in learning and student achievement come from the same population. This is indicated by the significance value after the homogeneity test was carried out with the value of student interest in learning and student learning achievement greater than 0.05.

Table 7. Independent Sample T-Test

	Sig	t_{hitung}
Interest	0,082	2,578
Performance	0,660	2,136

The use of the google classroom learning media has a significant effect on the variable of

student interest in learning because the sig value generated based on the analysis using SPSS version 22 shows that the sig value of learning interest (X) is 0.014, where the sig value is <0.05. Based on the results of the analysis using SPSS version 22 in Table 7, it was found that the t value was 2.578. While the value of t table for a significant level of 5% df = 40 (db = N – 2 for N = 42) is 1.684.

Based on the results of the analysis and calculations, it can be concluded that t count > t table then H1 is accepted and Ho is rejected. With another intention that rejects the null hypothesis (Ho) and accepts the alternative hypothesis (H1) for testing the two variables. So that there is an effect of using google classroom media on online science learning on environmental pollution material on the learning interest of seventh-grade junior high school students.

The use of google classroom learning media also has a significant effect on students' learning achievement variables because the sig value generated based on the analysis using SPSS version 22 shows that the sig value of learning achievement is 0.039, where the sig value is <0.05. Based on the results of the analysis using SPSS version 22 in Table 7, it was found that the t value was 2.136. While the value of the t table for a significant level of 5% df = 40 (df = N – 2 for N = 42) is 1.684. It means that the value of t count is greater than t table (2.136 > 1.684).

Based on the results of the analysis and calculations, it can be concluded that t count > t table then H1 is accepted and Ho is rejected. With another intention that rejects the null hypothesis (Ho) and accepts the alternative hypothesis (H1) for testing the two variables. So that there is an effect of using google classroom media on online science learning on environmental pollution material on the learning achievement of seventh-grade junior high school students.

Table 8. Correlation Test of Variable X with Variable Y

Correlations

		Interest	Performance
Interest	Pearson Correlation	1	,598**
	Sig. (2-tailed)		,000
	N	42	42
Performance	Pearson Correlation	,598**	1
	Sig. (2-tailed)	,000	
	N	42	42

The learning interest variable has a positive and significant effect on the learning achievement variable because the sig value generated based on the analysis using SPSS version 22 shows that the learning interest sig value (X) is 0.000 where the sig value is <0.05 and based on the data correlation test using SPSS version 22 application assistance with Pearson Correlation analysis for 42 students obtained a correlation value of 0.598.

Based on the results of the analysis and calculations, it can be concluded that t count > t table then H1 is accepted and Ho is rejected. With another intention that rejects the null hypothesis (Ho) and accepts the alternative hypothesis (H1) for testing the two variables. So that there is a correlation between interest in learning and learning achievement in online science learning about environmental pollution in seventh-grade junior high school. Based on the results obtained, it can be concluded that the variables of interest in learning and learning achievement variables have a strong correlation of 0.598.

From the data obtained, it is known that students' interest in learning science using google classroom media during the application of online learning has a tendency of interest in the high category. Based on the results of the effect size analysis on the t test using Cohen's formula, it is known that the effect of using google classroom media on online science learning about environmental pollution material on the learning interest of seventh

grade junior high school students is in the high category with a score of 0.8 with a percentage of 79%. This shows that the student's response to the use of google classroom media is positive. This is in accordance with the results of research by Gunawan and Stefani (2018) explaining that learning using google classroom will slowly make students feel helped to understand the learning material because learning is not limited by time, so students can study at certain times in the sense that they are not confined by time. during class hours, so that the questions that are felt to be difficult can be done in a longer time.

In each activity, an assessment must be carried out to measure the level of success of the activities that have been carried out. No exception with learning activities in schools, it is necessary to know how far the learning achievement has been achieved by students. The achievements of the students obtained will be used as evaluation material in the learning process that has been implemented. Learning achievement can be interpreted as the ability of students which is a form of achievement from the experience and learning activities they do. In this research, learning achievement will be limited to the cognitive and affective aspects only after the implementation of learning using Google Classroom. According to Meda et al (2020, p.06), Google Classroom is a classroom application which is provided by Google, in Google Classroom educators can easily share materials and assignments that have been classified or compiled. Educators can also easily set the limit for collecting assignments so that students are still taught the value of discipline in managing time.

From the data obtained, it is known that the science learning achievement of students using google classroom media during the application of online learning has a tendency of interest in the high category. Based on the results of the effect size analysis on the t test using Cohen's formula, it is known that the effect of using google classroom media on online science learning about environmental

pollution material on the learning achievement of seventh grade junior high school students in the medium category with a score of 0.7 with a percentage of 76%

The use of the google classroom learning media has a significant effect on the variable of student interest in learning because the sig value generated based on the analysis using SPSS version 22 shows that the sig value of learning interest (X) is 0.014, where the sig value is <0.05. Based on the results of the analysis using SPSS version 22 with Independent sample t test, it was found that the t-count value was 2.578. While the value of t table for a significant level of 5% df = 40 (db = N – 2 for N = 42) is 1.684. It means that the value of t count is greater than t table (2,578 > 1,684). Based on the results of the analysis and calculations, it can be concluded that tcount > ttable then H1 is accepted and Ho is rejected. With another intention that rejects the null hypothesis (Ho) and accepts the alternative hypothesis (H1) for testing the two variables. So that there is a significant influence in the use of google classroom media on learning interest in the application of online learning on environmental pollution materials for class VII SMP students

The use of google classroom learning media also has a significant effect on students' learning achievement variables because the sig value generated based on the analysis using SPSS version 22 shows that the sig value of learning achievement is 0.039 which is the sig value <0.05. Based on the results of the analysis using SPSS version 22, it was found that the t value was 2.136. While the value of the t table for a significant level of 5% df = 40 (df = N – 2 for N = 42) is 1.684. It means that the value of t count is greater than t table (2.136 > 1.684). Based on the results of the analysis and calculations, it can be concluded that tcount > ttable then H1 is accepted and Ho is rejected. With another intention that rejects the null hypothesis (Ho) and accepts the alternative hypothesis (H1) for testing the two variables. So that there is an effect of using

google classroom media on online science learning on environmental pollution material on the learning achievement of class VII junior high school students.

The use of google classroom learning media is able to facilitate teachers in adjusting teaching materials according to their needs because they can be modified in various formats so that they are more interesting and dynamic. Teachers and students can distribute assignments, collect assignments and discuss learning materials anywhere without being bound by the time limit of class hours. This makes the learning process more interesting and more efficient in time management so that there is no reason for students to forget and miss the assignments given by the teacher. In the google classroom, the teacher is also able to add teaching materials in the form of learning videos from youtube that are interesting, easy to understand and can be played by students repeatedly wherever and whenever. The material presented by the teacher through Google Classroom can be accessed by students using cellphones (HP) so that by using these cellphones students are more interested in learning and repeating learning independently at home so that they are able to influence their interest and learning achievement.

While the analysis of the variable interest in learning has a positive and significant effect on the learning achievement variable because the sig value generated based on the analysis using SPSS version 22 shows that the sig value of learning interest (X) is 0.000 where the sig value is <0.05 and based on the data correlation test. With the help of the SPSS version 22 application with Pearson Correlation analysis for 42 students, a correlation value of 0.598 was obtained. Based on the results obtained, it can be concluded that between the variables of interest in learning and learning achievement variables have a strong correlation of 0.598. From these results indicate that the variable interest in learning makes a positive contribution to

learning achievement. So that the higher the interest in learning and the willingness of students to learn, especially using the google classroom media during the current pandemic, the higher the achievement that will be obtained by students, especially in the science subject chapter "Environmental Pollution".

Based on the results of the analysis carried out, it can be seen that there is an influence between the learning interest variable and the learning achievement variable. This is in accordance with Susanto's (2016, p.16) opinion, interest means a high tendency and excitement or a great desire for something. A student who takes great interest in the lesson will focus his attention more than other students, then because of the intensive concentration of attention on the material that allows the student to study harder, and finally achieve the desired results. When obtaining results from the learning process that are in accordance with what students expect, it will lead to satisfaction with the learning achievements they get. The results of the analysis are in accordance with the opinion of Sudjana (2008, p.39-40) which states that the factors that influence learning outcomes according to them are: 1) students' talents and interests; 2) time available for study; 3) the time it takes students to understand the lesson; 4) teaching quality; and 5) individual abilities.

CONCLUSION

Based on the results of research and discussion, it can be concluded that :

1. There is an effect of using google classroom media on online science learning on environmental pollution material on the learning interest of seventh grade junior high school students with a high category. This is evidenced by the value of sig interest in learning of 0.014 where the value of sig <0.05. While the value of t table for a significant level of 5% df = 40 (db = N – 2 for N = 42) is 1.684. It means that the value of t count is greater than t table (2,578 > 1,684).

2. There is an effect of using google classroom media on online science learning on environmental pollution material on the learning achievement of seventh grade junior high school students in the medium category. This is evidenced by the sig value of learning achievement of 0.039, where the sig value is <0.05. While the value of the t table for a significant level of 5% df = 40 (df = N – 2 for N = 42) is 0.312. It means that the value of t count is greater than t table (2.136 > 1.684).

3. There is a correlation between interest in learning and learning achievement in online science learning on environmental pollution material for class VII SMP with a strong category. This is evidenced by the sig value generated based on the analysis using SPSS version 22 showing that the sig value of learning interest (X) is 0.000 where the sig value is <0.05 and based on the correlation test of the data using the help of the SPSS version 22 application with Pearson Correlation analysis. against 42 students obtained a correlation value of 0.598.

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