



# The Effectiveness of Online Learning Through Google Classroom to Improve the Learning Achievement

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## ABSTRAK

Di masa pandemi COVID-19, aplikasi populer yang digunakan dosen adalah aplikasi yang disediakan oleh pihak kampus serta aplikasi pihak ketiga seperti Whatsapp, Google Classroom, atau Webex. Penggunaan aplikasi Google Classroom memiliki beberapa kelemahan antara lain hanya dapat diakses oleh akun google dan tidak adanya pemberitahuan bahwa materi yang disampaikan telah dibaca secara lengkap oleh siswa sehingga efektivitas Google Classroom masih diragukan. Penelitian ini bertujuan untuk menganalisis efektivitas pembelajaran online melalui google classroom untuk meningkatkan prestasi belajar kewirausahaan siswa kelas V SD Negeri. Jenis penelitian ini adalah penelitian kuantitatif dengan analisis data deskriptif kuantitatif. Populasi penelitian ini adalah 70 siswa SD Negeri. Teknik pengumpulan data yang digunakan adalah kuesioner. Teknik pengujian hipotesis menggunakan analisis linier sederhana, linieritas regresi dan koefisien determinasi. Hasil penelitian menunjukkan bahwa pembelajaran online melalui google classroom efektif dalam meningkatkan prestasi belajar kewirausahaan siswa kelas V SD Negeri tahun Pelajaran 2020/2021. Artinya diketahui 60 % pembelajaran online melalui google classroom efektif untuk meningkatkan prestasi belajar kewirausahaan, sedangkan 40% sisanya pembelajaran online melalui google classroom tidak efektif dari faktor lain yang tidak diteliti dalam penelitian ini.

## ABSTRACT

During the COVID-19 pandemic, popular applications used by lecturers were applications provided by the campus as well as third-party applications such as Whatsapp, Google Classroom, or Webex. The use of the Google Classroom application has several weaknesses, among others, it can only be accessed by a Google account and there is no notification that the material submitted has been read in full by students so that the effectiveness of Google Classroom is still in doubt. This study aims to analyze the effectiveness of online learning through Google Classroom to improve achievement. learning entrepreneurship for fifth grade elementary school students. This type of research is quantitative research with quantitative descriptive data analysis. The population of this research is 70 students of public elementary school. The data collection technique used is a questionnaire. The hypothesis testing technique uses simple linear analysis, regression linearity and the coefficient of determination. The results showed that online learning through google classroom was effective in improving the entrepreneurship learning achievement of fifth grade elementary school students. This means that it is known that 60% of online learning through google classroom is effective for improving entrepreneurial learning achievement, while the remaining 40% of online learning through google classroom is not effective from other factors not examined in this study.

## 1. INTRODUCTION

Education is a character formation carried out by a person to improve his standard of living towards a better one. So it can be said that education is very important for a person to be able to build a more positive self-character (Njui, 2017; Rusilowati & Wahyudi, 2020). Through education a person can build a better self-character, broad insight, good attitudes and behavior, personality, intelligence and have good religious character (Dewantara et al., 2021; Farozin et al., 2020). The National Education System which states that good education is a conscious and planned effort in realizing learning and the learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, noble character and skills needed by themselves, society, nation and country (Gaol & Sitepu, 2020; Rusilowati & Wahyudi, 2020). The purpose of education is to develop oneself to become a human being who is faithful, pious, has noble character, healthy, knowledgeable, capable, creative and become independent and responsible human beings both at school and in the community (Martono, 2019). Educational goals can be achieved if teaching and learning activities can be carried out properly (Kurniawan et al., 2019; Urh et al., 2015). Where teachers and students must be able to work together to obtain a good

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learning process. In carrying out its activities, it must be in accordance with the expected goals so that it will create effective learning (Widodo & Al Muchtar, 2020).

Based on the current Covid-19 situation minister of Education and Culture of the Republic of Indonesia regarding circular letter No. 4 of 2020 regarding the implementation of education policies in the emergency period of the spread of the virus disease (Covid-19). This situation forces teachers to adapt in using technology media in providing distance learning (Coman et al., 2020; Suryaman et al., 2020). The most common device used are cellphones and laptops/computers that are connected to the cellular network. Applications that can be used in online learning include *Google Classroom*, *Zoom*, *Google Meet*, and *WhatsApp* messaging applications and so on (Aswir et al., 2021; Setiadi et al., 2021). The material provided is in the form of PPT files, videos and reading materials. There are so many learning media that use online learning systems. Therefore the teacher must be able to choose which media is really suitable to be applied to students in the learning process in order to provide meaningful learning process (Azlan et al., 2020).

Based on the problems that have been described, there are previous research that relevant to the problem, such as research conducted with the title "Effectiveness of Biology Learning During the Pandemic Covid-19 Madrasah Aliyah Negeri 1 Medan" (Siahaan et al., 2021). Online learning is learning where between students (students) and teachers (teachers/lecturers) are not in one place at the same time. In this kind of learning, the use of media greatly determines the learning outcomes. The other research study conducted by previous research with the title "Study of the Effect of Online *E-Learning* on Grade IV Mathematics Learning Outcomes" (Sulistyaningsih et al., 2018). Online learning means that students are subjects in the learning process. Students have the basic ability to develop optimally according to their abilities. The teacher only acts as a facilitator and guide for students to provide stimuli that can challenge students to feel involved in the learning process. The data collection in this research is carried out online. The data collection that will be carried out in this study is different from previous research which distributed questionnaires directly, this is what makes the research unique (Budiman et al., 2020; Lobe et al., 2020).

Online learning has become a necessity in the world of education in the midst of the Covid-19 pandemic. With this increasing popularity, students' perceptions of implementing online learning have become a top priority for their education. Learning media is a form of tool that functions as a distributor of information. Media in the learning process is very important to use because it will produce effective learning. Learning media is a tool in the learning process to produce an effective and able to stimulate the minds and skills of students in accordance with learning objectives. The challenge faced in online learning is choosing the best application that can increase student achievement. One of the most possible and widely used online learning media is *Google Classroom*. Therefore, authors are interested in conducting research with the title "Effectiveness of Online Learning Through *Google Classroom* To Improve Social Studies Learning Achievement for Class V Students at SD Negeri in Pematang Raya Academic Year 2020/2021". The purpose of this study was to measure the effectiveness of the learning process using *Google Classroom* on learning achievement.

## 2. METHOD

This method as a scientific method is concrete/empirical, objective, measurable, rational and systematic. This method is also called the *discovery method* (Anderson et al., 2016; Zhang et al., 2019). This method allows finding and developing the latest science and technology. So in this study the researcher did not conduct the comparison of variables to other samples, and looked for the relationship between these variables with other variables. This research is called quantitative descriptive research method. Research Location conducted in SD Negeri Pematang Raya with total Population 70 people and sample research 70 people. The researcher will take a total sample of 70 people, because the sample used is less than 100 people. This research instrument was carried out by collecting data through a questionnaire via *Google Form* (Mawarni et al., 2020). To obtain data and an actual picture of the topic of this research, the authors used instrument testing, namely validity and reliability tests. Data analysis techniques in study this consist from assumption test classic, and testing hypothesis (Vaismoradi et al., 2016). The quantitative descriptive method is divided into several stages, as shown in Figure 1. Then grid of online learning variable questionnaire through *Google Classroom* and Learning Achievement is shown in Table 1.

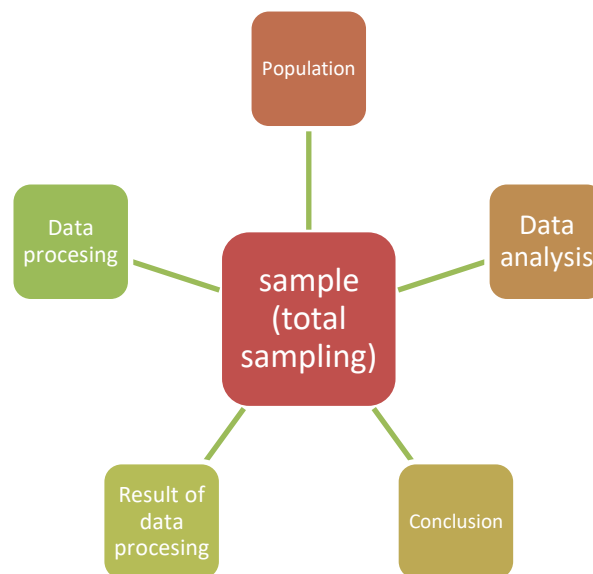


Figure 1. Stages of quantitative descriptive method (Sugiyono, 2016)

Table 1. Grid of Online Learning Variable Questionnaire through Google Classroom and Learning Achievement

No	Aspect asked	indicator	No. Items/questions	Number of questions
1	Online Learning Through Google Classroom	1. variety of learning resources	1-3	15 questions
		2. variety of learning methods	4-6	
		3. nurturing or mentoring	7-9	
		4. assessment variation	10-12	
		5. Integration and combination of other platforms	13-15	
2.	Learning Achievement Number of Questions	cognitive, affective, and psychomotor	1-15	15 questions 30 questions

### 3. RESULT AND DISCUSSION

#### Result

##### Questionnaire Validity Test

Before the instrument is used as a data collection tool, the instrument must be tested first. So that the instrument gets a valid (legitimate) and reliable (trusted) instrument. However, before testing the instrument, the researcher must determine that the research sample is taken from class V Negeri in Pematang Raya, which is 15 people. This is intended so that instrument trials can be carried out on the research population outside the research sample. The type of instrument used is a questionnaire in the form of a statement with a total of 20 statements on variable X, namely online learning through Google Classroom . Each instrument has five (5) alternative answers, namely: Strongly agree, Agree, Somewhat, Disagree, Strongly disagree. Questionnaires distributed at the time of instrument testing to students of class V SD Negeri in Pematang Raya. This test is done by calculating  $r_{hitung}$  using the Pearson Product Moment formula and then comparing with  $r_{tabel}$ . If  $r_{hitung} > r_{tabel}$  then the data collection tool is valid to be used in measuring the variable, it is better if  $r_{hitung} < r_{tabel}$  then the data collection tool is invalid and not suitable for use in measuring the variable. The researcher's validity test used a significant level of 5%. The value for N=15 at the 5% significance level is 0.514. The results of the validity test of the readiness variable instrument were calculated manually and using excel as shown in Table 2.

**Table 2.** Results of the Validity Test of Online Learning Variables through Google Classroom

Items to	r-count	r-table	To the conclusion
1	0.6842789	0.514	Valid
2	0.5998607	0.514	Valid
3	0.7294696	0.514	Valid
4	0.7854851	0.514	Valid
5	0.6266713	0.514	Valid
6	0.5681656	0.514	Valid
7	0.6349472	0.514	Valid
8	0.662926	0.514	Valid
9	0.5334295	0.514	Valid
10	0.5350954	0.514	Valid
11	0.6397558	0.514	Valid
12	0.6150331	0.514	Valid
13	0.6262134	0.514	Valid
14	0.793716	0.514	Valid
15	0.7780299	0.514	Valid
16	0.7107152	0.514	Valid
17	0.6770068	0.514	Valid
18	0.7065922	0.514	Valid
19	0.6682273	0.514	Valid
20	0.6262134	0.514	Valid

Based on the [Table 2](#) it can be concluded that each  $r_{hitung}$  of each item is  $>$  from 0.514 ( $r_{tabel}$ ) and the significant value of each item is  $<0.05$ . So every question contained in the online learning questionnaire through *Google Classroom* used in this study is valid.

#### Questionnaire Reliability Test

Based on questionnaire reliability test obtained  $r_{count} = 0.922$  and  $r_{table} = 0.514$ . Then  $r_{count} > r_{table}$  and *Cronbach Alpha* (0.922)  $> 0.60$ . From the results of the calculation of the reliability test of online learning through *google classroom*, it can be concluded that the instrument in the research questionnaire used is reliable.

#### Description of Research Data

This research was conducted in the fifth grade of SD Negeri in Pematang Raya. The data from this study consisted of one independent variable and one dependent variable. The independent variable is online learning through *google classroom* and the dependent variable is learning achievement. In order to describe and test the relationship between the independent and dependent variables in this study, this section presents a data description of each variable based on the data obtained. Descriptive quantitative analysis where this approach is taken because the research process can be carried out in a structured manner and uses a large number of research samples. This analysis suggests respondent data such as respondent characteristics. Based on data on student achievement in social studies subjects obtained through tests carried out by fifth grade students at SD Negeri in Pematang Raya for the 2020/2021 academic year. Respondents taken for this study amounted to 70 special students for class V<sup>1</sup> and V<sup>2</sup> in SD Negeri Pematang Raya. The descriptive results of Research Data are shown in [Table 4](#).

**Table 3.** Descriptive Results of Research Data

	Descriptive Statistics					
	N Statistics	Range Statistics	Minimum Statistics	Maximum Statistics	mean Statistics	Std. Deviation Statistics
Online Learning Through Google Classroom	70	30	59	89	73.13	0.614
Learning achievement	70	30	70	100	89.00	0.725
Valid N (listwise)	70					

Based on Table 3, identification of the tendency or high and low learning achievement of students in entrepreneurship subjects in this study from the test test scores obtained by fifth grade students of SD Negeri in Pematang Raya for the 2020/2021 Academic Year. In accordance with the data above, it can be obtained that all students get a score of 70, so all students have a complete social studies subject value.

### Classic Assumption Test Results

#### Data Normality Test

The normality test was conducted to determine whether the research data to be analyzed was normally distributed or not. This test was carried out using the *Kolmogorov-Smirnov test* with a significant level of 0.05 provided that if  $D_{max} < D_{\alpha}$  then the data was normally distributed. The normality test results are shown in Table 4.

**Table 4.** Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
N		70
Normal Parameters	Mean	0.0000000
	Std. Deviation	7.90794082
Most Extreme Differences	Absolute	0.135
	Positive	0.135
	Negative	0.122
Kolmogorov-Smirnov Z		1.129
Asymp. Sig. (2-tailed)		0.156

Based on the Table 4, the Asytotic Significance is 0.156. The value of 0.156 > from 0.05, it can be concluded that the online learning variables through *google classroom* and learning achievement are normally distributed.

### Hypothesis Test Results

#### Simple Regression Test

**Table 5.** Simple Linear Regression Test Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	72.845	14,149		5.148	0.000
	Online Learning Through Google Classroom	0.200	0.190	0.126	1.051	0.297

Base on Table 5, it is known that the constant (a) value is 72.845, while the value of online learning through google classroom (b/ regression coefficient) is 0.200, so the regression equation can be translated: The constant of 72.845 means that the consistent value of the learning achievement variable are 72.845. The regression coefficient of the online learning variable through *google classroom* is 0.200 which states that for every 1% addition of the value of online learning through *google classroom*, the learning achievement value increases by 0.200

#### Linearity Test

The function of the regression linearity test is to determine the form of the relationship between the independent variable and the dependent variable. The meaning of linear is like a straight line relationship. Linearity test results are shown in Table 6.

**Table 6.** Linearity Test Results

Statistics			Sum of Squares	df	Mean Square	F	Sig.
Achievement	Between	(Combined)	984,523	20	49,226	0.709	0.797
Learning *	Groups	Linearity	70,134	1	70,134	1.011	0.320
Online Learning		Deviation from Linearity	914,389	19	48.126	0.693	0.807

Statistics		Sum of Squares	df	Mean Square	F	Sig.
Through Google Classroom	Within Groups	3400,563	49	69,399		
	Total	4385.086	69			

Base on [Table 6](#), the results of the linearity test are known to be *Sig. Deviation from linearity* is  $0.807 > 0.05$ , it can be concluded that there is a linear relationship between Online Learning through *Google Classroom* and Learning Achievement. Based on the results of the linearity test, it is known that the value  $F_{hitung} = 0.693 < F_{tabel} = 2.23$ . So, it can be concluded that there is a linear relationship between Online Learning Through *Google Classroom* and Learning Achievement.

### Coefficient of Determination Test ( $r^2$ )

The basic concept of the coefficient of determination ( $R^2$ ) aims to measure how far the model's ability to explain the dependent variables is. The coefficient values ranged between zero and one. A value close to sati means that the independent variable (X) provides almost all the information needed to predict the dependent variables (Y). Determination test results show that the *output* is obtained the value of R *Square* (coefficient of determination) is 0.600 or 60%, which means Online Learning Through *Google Classroom* is Effective for Improving Social Studies Learning Achievement for Class V Students SD Negeri in Pematang Raya for the 2020/2021 Academic Year. And the remaining 40% is influenced by other variables not included in this study.

### Discussion

This study describes the effectiveness of online learning through *Google Classroom* to improve the social studies learning achievement of fifth grade students SD Negeri 091316 Pematang Raya for the 2020/2021 Academic Year. Online learning through *Google Classroom* is obtained from instruments in the form of questionnaires distributed online through *Google forms* with good quality because they are valid and reliable. Meanwhile, students' social studies learning achievement is obtained from the test questions that will be done by students. The results of the classical assumption test are the main requirements to be able to proceed to a simple linear regression test with data that are normally distributed and a significant level of  $> 0.05\%$ . On the online learning variable through *google classroom* and learning achievement, the data has a normal distribution between variables with a significance level of  $0.156 > 0.05$ . Effectiveness of online learning through *google classroom* to improve learning achievement can be seen in [Table 4](#) which shows that  $f_{hitung} = 0.693 < f_{tabel} = 2.23$ . So from these results it can be said that  $H_0$  is rejected and  $H_a$  is accepted. So it can be concluded that online learning through *google classroom* is effective in improving social studies learning achievement of fifth graders at SD Negeri in Pematang Raya for the 2020/2021 academic year. From the results of the determination coefficient test ( $r^2$ ) of 0.60, it means that 60% is known that online learning through *google classroom* is effective for improving social studies learning achievement, while the remaining 40% online learning through *google classroom* is not effective for improving social studies learning achievement.

For attendance and essay assignments, it seems that there are obstacles, but they are not too high compared to the three items. Attendance constraints, because the time to take attendance in *Google Classroom* is too short, causing students to be late absent so they are considered absent, this will certainly affect the student's score on the attendance assessment item ([Lima & Isotani, 2021](#)). For essay assignments, too many questions are given, causing students to sometimes need time to work on them and when they want to submit coursework on *Google Forms* there is a signal disturbance that in the end the assignment cannot be submitted again because the time allotted has run out. So that they certainly do not get a score on the assignment assessment item because they are considered not to have submitted assignments ([Isotani & Te-, 2022](#); [Sindi et al., 2021](#)).

It is in line with previous research that describe students assessing mathematics learning using online media as very effective by 23.3%, most of them assessing it as effective (46.7%) and assessing it as average (20%) ([Papadakis et al., 2018](#); [Pratama & Retnawati, 2018](#)). Although there are also students who consider online learning to be ineffective (10%) and absolutely none (0%) who consider it very ineffective. It is also supported by Research that state from a previous concluded that online learning will be effective if it applies Laurillard's essential components which include discursive, adaptive, interactive, and reflective aspects ([Heggart & Yoo, 2018](#); [Prestiadi et al., 2020](#); [Silalahi & Hutaauruk, 2020](#); [Suryaman et al., 2020](#)). However, 76.07% choose a combination of online learning is very important so that innovation in the form of integration with the environment refers to the digital learning component that can accommodate learning styles, flexibility, and learning experiences of students so that it can create positive feelings.

Effective learning is learning which in the process must involve students or students actively, so that learning objectives are achieved properly. Each class created by an educator will get a separate folder in Google products that makes it easier for educators to manage it (Gorghiu et al., 2015; Saputra et al., 2019). Educators can post news or announcements that can be commented on by students directly through virtual classrooms, this makes it easier for two-way interactions between educators and college student (Igwe et al., 2021; Zainuddin & Perera, 2018).

With this research, it is hoped that it can contribute to students, especially students at SD Negeri in Pematang Raya that online learning through Google Classroom has a very important role in achieving learning achievement, especially social studies learning achievement. Therefore, this research is expected to increase the use of online learning through Google Classroom for the better to achieve better learning achievement by trained/encouraged to create students who have good grades in achieving student achievement. Because there are several things that cause Online Learning through Google Classroom to be ineffective, one of which is where students often go in and out of Google Classroom. And some students do not join google classroom. So it is hoped that learning is also carried out through google meet or whatsapp groups, giving assignments or materials briefly and clearly, giving assignments according to the lesson schedule, and giving assignments that must be included with how it works. The results of this study can be used by other researchers who conduct further research.

#### 4. CONCLUSION

Current conditions make teachers as a medium for delivering knowledge able to use facilities, media, and facilities that can support learning and innovate with the media to increase student interest in the midst of this epidemic to keep the spirit of learning at home. Various studies have been developed to be able to provide motivation and innovation to teachers who can use media that have been tested by researchers to be used as online learning tools. Based on the analysis of the discussion above. In accordance with the results of the research that the author did, the writer concluded that the online learning variables through google classroom and learning achievement were normally distributed. Online learning through Google Classroom is very effective in improving social studies learning achievement for fifth grade students.

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