

# **THE CORRELATION BETWEEN SMARTPHONE USED AND STUDENTS LEARNING OUTCOMES IN ENGLISH SUBJECT DURING ONLINE LEARNING**

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## **Abstract**

The purpose of this research is to know the significant correlation between smartphone used and student learning outcomes in English subject during online learning. This research method used quantitative research with a correlational research design. Instruments used in the form of questionnaires and documentation. The population of this study were all 10th grade students of SMAN 1 Puri Mojokerto. The sample used in this study were 36 students. Data analysis used in this research is Pearson Product Moment Correlation with prerequisite test for normality test and linearity test. The results of the research that have been carried out state that there is a significant positive correlation between smartphone used and students learning outcomes with a significant value of 0.000 less than 0.05 which means  $H_a$  is accepted and  $H_o$  is rejected.

**Keywords:** Smartphone used, Learning outcomes, Online learning

## **Introduction**

The COVID-19 pandemic has changed the learning system in Indonesia since March 2020. Online learning replaces face-to-face learning, which is usually done in class. Learning tools are needed to support the online learning process, such as smartphones or computers connected to the internet. However the learning tool that is often used in Indonesia is a smartphone. Pandia et al., (2021) stated that the smartphone is one of the learning tools for students in online learning. Smartphones are easier to apply than PCs or computers because they are smaller, so they are easy to carry anywhere, and their uses are almost the same as computers.

Smartphones have a positive impact when used in the teaching and learning process. Dini, (2018) stated that there are many conveniences offered by using smartphones connected to the internet, such as ease of accessing information and

finding various references to support the learning process. Some of these facilities can increase student knowledge so that student learning outcomes will increase. However, smartphones also have a negative impact. Negative impacts like a smartphone can cause users to be anti-social, smartphones become the cause of traffic accidents, smartphones can cause syndromes or crazy, can break concentration while studying, cause undisciplined when learning, dependence on smartphones (Suwa et al., 2020).

Several positive and negative impacts of smartphone use can affect learning outcomes. According to Dini (2018), learning outcomes are indicators of the achievement of students' abilities. The achievement of students' abilities can be seen from the results of the assessment/evaluation carried out by the teacher. According to Slameto (2010), student learning outcomes are not the same because two factors influence their success, namely internal and external factors. Learning tools are one of the external factors that affect student learning outcomes.

Smartphones which are learning tools are expected to increase or decrease student learning outcomes. It can be assumed that the more often students use smartphones as a learning tool, the higher their learning outcomes. Student learning outcomes are reflected in their final examination.

## **Research Method**

This research method used quantitative research with a correlational research design. Correlational research is used to assess the relationship or pattern of relationships between variables in a group of subjects (Rukminingsih et al., 2020). In this study, researcher focuses on the relationship between smartphone used and students' learning outcomes during online learning. Smartphone used in this study focusses on the smartphone used in learning English, especially in the teaching and learning skills and language components during online learning.

The data collection used in this study are primary and secondary data. First, researcher needs to find primary data from variable X (smartphone used) by using a questionnaire. Respondents fill out a questionnaire on the Google form and the questionnaire link distributed by the teacher. Then the researcher obtain secondary

data from the Y variable (student learning outcomes) by taking the final score of students' examination in English subjects. Researcher take the final grades of students obtained during online learning. After getting the data, the researcher analyze the data using SPSS.

In this study, samples is taken using purposive sampling. According to Sugiyono (2013) states that purposive sampling is a sampling technique with certain considerations. The researcher take samples based on recommendations from the English teacher at SMAN 1 Puri Mojokerto. The selected class is class 10 MIPA-1 consist of 36 students.

The researcher used non-test as an instrument in this study, with a focus on the smartphone use questionnaire and final score documentation as data collection techniques for this study. In this study, researcher use Pearson correlation (Product Moment Correlation) to determine the relationship between two variables. The Product Moment Correlation function is used to determine whether there is a significant relationship between smartphone use and English learning outcomes. Before conducting Product Moment Correlation analysis, it is necessary to test prerequisites as a test of the assumptions of correlation research. Prerequisite tests carried out are normality test and linearity test.

## Finding

Before conducting hypothesis test in this research, firstly researcher conducted prerequisite test data analysis covering test of normality and linearity test. The normality test used the Kolmogorov-Smirnov normality, the result of normality test as summarized in the following table:

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		36
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	14.31056035
Most Extreme Differences	Absolute	.126
	Positive	.076

	Negative	-.126
Kolmogorov-Smirnov Z		.759
Asymp. Sig. (2-tailed)		.612

a. Test distribution is Normal.

b. Calculated from data.

Based on table it can be seen that the value of Asymp. Sig. (2-tailed) 0.612 is more than 0.05, it can be concluded that the data distribution was normal.

The next step is calculation the linearity test. This test aims to determine whether two variables have a significant linear relationship or not. In SPSS 21 this test is called the linearity test with a significance level of 0.05. The result of linearity test as summarized in the following table:

**ANOVA Table**

			Sum of Squares	Df	Mean Square	F	Sig.
(Combined)			8242.939	24	343.456	1.116	.443
Final_score * Smartphone_used	Between Groups	Linearity	4461.914	1	4461.914	14.492	.003
		Deviation from Linearity	3781.025	23	164.392	.534	.901
	Within Groups		3386.700	11	307.882		
Total			11629.639	35			

Based on the table, the researcher can interpret that the data for the two variables above are linear. This can be seen in the deviation from linearity of the SPSS 21 for windows output which is higher than significance 0.05. The significant deviation from the linearity of the variable X (smartphone used) and variable Y (student learning outcomes) is 0.901. Thus, it means that there is a significant linearity correlation between smartphone used and student learning outcomes calculated by statistical analysis.

After ensuring that the data is normally and linearly distributed, the researcher tested the hypothesis using the Pearson Product Moment Correlation. Hypothesis test result uses Pearson product moment can be seen in the table below:

**Correlations**

		Smartphone_used	Final_score
Smartphone_used	Pearson Correlation	1	.619**
	Sig. (2-tailed)		.000
	N	36	36
Final_score	Pearson Correlation	.619**	1
	Sig. (2-tailed)	.000	
	N	36	36

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Hypothesis test correlation coefficient value or Pearson correlation obtained number = 0.619 with a significance value (p) of 0.000 less than  $<0.05$  means that the alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_o$ ) is rejected.

## Discussion

Based on data analysis of the hypothesis testing in this research, could be known that there was any significant correlation between smartphone used and student learning outcomes in English subject during online learning. This was proven by the results of the significant value of X and Y is 0.000 which is lower than 0.05. The result of correlation coefficient in this research is 0.619, means that there is strong correlation between smartphone used and student learning outcomes. It showed that smartphone used has contribution to student learning outcomes.

The result of the research obtained from this calculation in accordance with the theory that has been presented by Slameto (2010) of factor that affect student learning outcomes, is external factor. One of them is from the school that is learning tool. Pandia et al. (2021) stated that the smartphone is one of the learning tools for students in online learning.

The finding of this study is relevant with the research conducted by Shofiyah (2016) found that there is a positive effect of using android/smartphone,

Dini (2018) and learning motivation on learning outcomes. In an experimental design, this research is in line with the research conducted by Pandia et al. (2021) found the use of the smartphone in a class makes students performed better than their counterparts. It means that the higher the android/smartphone is used for learning, it can help student to increase knowledge so that student learning outcomes also increase. It is relevant with the finding of the present research which showed that the more students use smartphones for learning English, the better their learning outcomes will be. This shows that there is a relationship between smartphone use and student learning outcomes.

Then the findings of this study have differences with research conducted by Ng et al. (2017) found that the more students utilized their smartphones for university learning activities, the lower their academic achievement. The results of the study concluded that smartphones has a negative effect on students' academic performance. This is because the information that students get through smartphones is transmitted in one way because there is no direct teaching involved. Meanwhile, in this study, the teacher was involved as a teacher and monitored students during online learning. The teacher provides materials related to learning skills and language components such as explaining material in the form of videos and giving students assignments through quizzes that can be accessed via smartphones.

The advantages of smartphones can make it easier for students in online learning, one of which is the ease of obtaining information. If students are accustomed to using smartphones in learning, the information and knowledge obtained will be more and more, so that student learning outcomes will also increase.

## **Conclusion**

Based on the results of the research and discussion that have been described, it can be concluded that there is any significant correlation between smartphone used and student learning outcomes in English subject during online learning. This is supported by the results of hypothesis testing using the SPSS test with a significance value of  $0.000 < 0.05$ . It was found that correlation coefficient value or Pearson

correlation obtained number = 0.619, which means it has a positive relationship with the criteria for a strong correlation (0.600-0.799).

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