

# The Effect of Using “Gojek” to Improve Learning Outcomes Ratio and Scale for 5<sup>th</sup> Grade

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**Abstract.** This study discusses the use of the Gojek application as a medium learning of mathematics, learning materials of ratio and scale, during learning from home activities by online. Gojek is an application owned by 29.2 million users in Indonesia. This means that the Gojek application is owned by almost all students or their parents. Based on the observations result, during learning from home by online, teacher’s rarely used learning media that involved students directly. This limitation can be overcome by using Gojek, whose presence is familiar to students. The research method used is quantitative-descriptive. Gojek can be used to improve student learning outcomes. In the research data in the paired sample test which shows the results that  $\text{Sig } 0.013 < 0.05$ , then  $H_0$  is rejected and  $H_a$  is accepted, so there is a difference between the pre-test and post-test learning outcomes. It can be concluded that there is an influence of Gojek learning media on learning materials of ratio and scale at grade 5 elementary school students in Kediri.

**Keyword:** Gojek; mathematics; Ratio and Scale; 5<sup>th</sup> Grade

## 1 Introduction

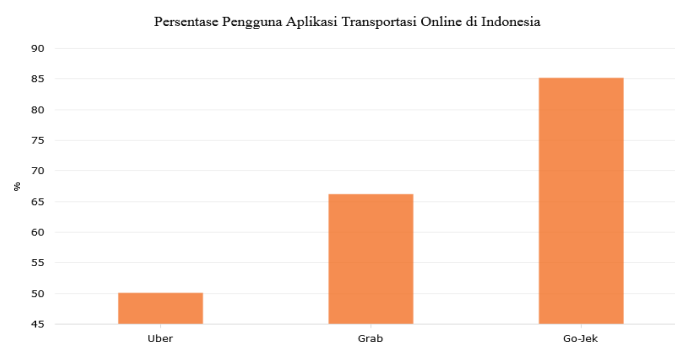
The condition of education during the past year has experienced many changes after the Covid-19 pandemic. Learning activities that were originally carried out face-to-face, through the Circular of the Ministry of Education and Culture Number 4 of 2020 concerning Implementation of Education Policies in an Emergency for the Spread of Coronavirus Disease (Covid-19), were replaced by learning from home through online. Teachers as the determining pillars of learning activities must be able to innovate by utilizing various facilities such as television, video, voice messages, and YouTube as a medium to help achieve learning goals.

The success of learning can be supported by selecting the right media and according to the characteristics of the students. [1] states that media is the distribution of messages from the sender to the recipient in any form where the process is able to stimulate students’ thoughts, feelings, attention and interests so that the learning process occurs. Online learning offers a change in learning media towards online media.

Indonesia is currently in the 4.0 industrial revolution where at this time many people use technology and the internet to help their activities in their daily activities, for example, namely gadgets and the internet. Almost all Indonesians today have gadgets, from small children to adults. [2] stated that internet users as a process of developing technology, both in the use of

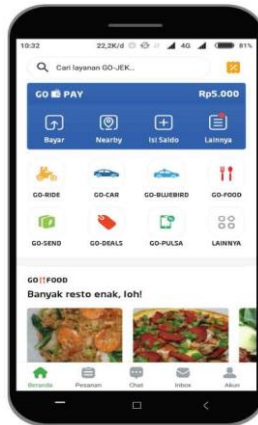
gadgets, have reached 82 million people. By means of this statement, it is said that Indonesia is ranked 8th in the world. The Lokadata Team (beritagar.id, 2017) states that from the BPS micro data on the results of economic and social surveys (Susenas BPS, 2016) that elementary school children use the internet as an object that can be used as a place for games and education. As many as 66.9% of elementary school children use the internet in their daily lives, some of which are for entertainment needs such as games, watching television shows, looking for cartoon on Youtube. The internet can also be used to complete homework and can also be used for social media (Facebook, Twitter, Whatsapp) so that you can communicate easily and keep up with the times. Ministry of Education and Culture (Kemendikbud) say that that 27.3 children of basic age have accessed the internet [3].

The number of basic age children internet accesses can be used as a reference for using Gojek as a learning medium while learning from home. The following is a graph of Gojek users in Indonesia.



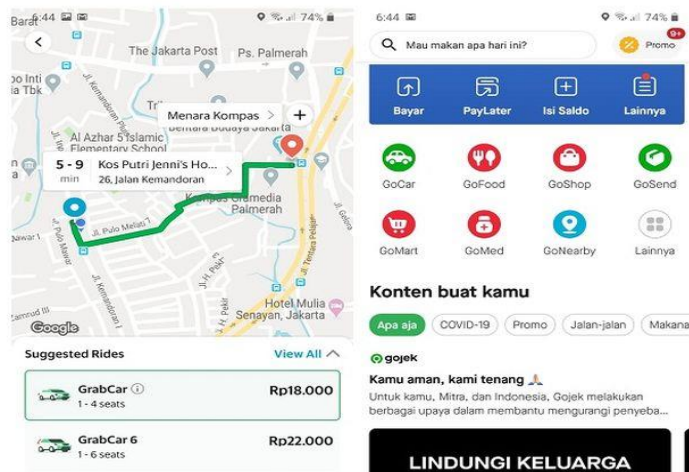
**Figure 1.** Percentage of Online Transportation Users in Indonesia (Source: dailysocial.id, 2018)

From the graph above, it can be seen that Gojek in Indonesia is widely used than other applications. Many adults and even elementary school children use the Gojek application in their daily lives. Using the Gojek application in learning media it is hoped that students can search for information, find problems, and be able to solve problems themselves. There are many features in the Gojek application that can be linked to elementary school materials for both low and high grade students. In this study, the Gojek application was used as a learning medium for 5<sup>th</sup> grade elementary schools. The reason we choose high-class students is because at that age they already have minds that can be taught to think abstractly compared to students in low grades. [4] states that Piaget divides children's cognitive development into 4 main periods, namely 1. sensorimotor period (ages 0–2 years); 2. pre-operational period (ages 2-7 years); 3. concrete operational period (ages 7-11 years); 4. formal operational period (ages 11 years to adulthood). From this data we know that high grade students, 5<sup>th</sup> grade, are included in the concrete operational period where in that age they have the characteristics of having adequate logic. They can use applications in technology, namely gadgets that can be linked to subject matter and require logic to solve a given problem. This application can later be used in any lesson that can link in thematic subjects as needed in the 2013 curriculum. Gojek has several features that can be used as a learning medium for elementary school students. Here's a look at the Gojek features.



**Figure 2.** The Features of Gojek (Source: [www.gojek.com](http://www.gojek.com))

There are several Gojek features including Go-Pay, Go-Ride, Go-Car, Go-Bluebird, Go-Food, Go-Shop, Go-Send, Go-Pulsa, Go-Box, Go-Clean, and many others. In addition, there is also a nearby feature that presents. Among the many Gojek features, Go-Ride or Go-Car features that will be used in this study as a learning medium to improve student learning outcomes in 5<sup>th</sup> grade theme 3 on Comparison and Scale material.



**Figure 3.** Feature Display of Go-Car (Source: [www.gojek.com](http://www.gojek.com))

The use of the Gojek application, especially the Go-Car feature, can make it easier for students to compare two or more values of a similar quantity expressed in a simple way. As shown in Picture 3, the teacher can direct students to compare the distance on the map with the actual distance through the Google Maps displayed by the application. Apart from that, the Go-Car feature can also be used to determine the scale.

## 2 Methods

This research was conducted in two elementary schools in Kediri. The first school is SDN Mojoroto 2 Kediri City and the second is SD NU Plemahan Kediri Regency. This research was conducted in January 2021. The object of this research is learning media in the

online learning process.

**Table 1.** Total Respondents

No.	Responden	Amount
1	5 <sup>th</sup> Graders SDN Mojoroto 2	27
2	5 <sup>th</sup> Graders SD NU Plemahan	14
	<b>Total</b>	41

The research method used is descriptive quantitative research methods. Quantitative research is a research method that is identical to the presence of numbers in research results obtained after conducting research that occurs. According to Winarno Surakhmad [5] is “a tool to measure something that will be examined by researchers conducting research”.

Descriptive is to provide an explanation, describing how the results of the research that have been obtained are in the form of numbers. Mohamad Ali in [5] explains that “Descriptive research methods are used in answering problems that occur today”. [6] states that the descriptive method is a method used to translate or analyze research results but in this case it is not used in general conclusions.

So this method is used to harmonize the results that have been obtained from the numbers then will be explained, described the results according to the actual events. As stated by Sudjana in [5] states “The descriptive research method with a quantitative approach is used when it aims to describe and explain the events that occur in the form of numeric or numeric meaning”.

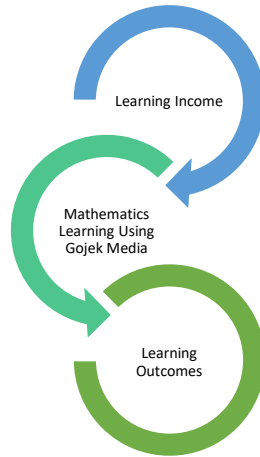
This study uses data collection techniques in the form of scores. Then there are questions that are given in it about questions related to using the Gojek application. From this technique, it is hoped that it can help to determine the increase in student learning outcomes with technology-based learning media.

The data analysis used questions that would later get a score and then processed it in a statistics application, namely SPSS to find out how much student learning outcomes improved in the learning process using Gojek technology-based learning media.

The data collection instrument is a medium that can be used as a tool to prepare materials to be tested later in the study. [6] states that “Measuring instruments in research are usually called research instruments. Researchers prepare materials in the form of questions or questions given then will produce a score which will later be processed using SPSS.

The data that has been obtained is processed using an application in the form of SPSS. The score from the results of the questions given is then processed to get the results.

This research uses a case study design that currently Indonesia is in the era of the 4.0 industrial revolution where the use of gadgets will be tested through online applications that are used as learning media. The appropriate basic competencies are comparison material and scale in class 5 theme 3. The following is the research design:



**Figure 4.** Research Design

This method section must be able to explain the research methods used, including how to implement them. Research tools, materials, media or instruments must be well described. If necessary and important, there is an appendix regarding the grid of the instrument or a piece of material which is used simply to provide an example for the reader.

If there are statistical formulas that are used as part of the research method, it is best if formulas that are commonly used are not written down. For example, there are specific provisions set by researchers in order to collect and analyze research data, which can be explained in this section of the method. The author is advised to provide a reference source for the method used.

### 3 Result and Discussion

The research data will be processed and analyzed through the SPSS application which uses the paired sample T-test. Before the T-test sample is tested, it is tested first using the validity, normality, and homogeneity test. In the validity test the data obtained is valid. Then in the normality test, the data obtained is normal, as well as homogeneity, namely the results obtained are homogeneous or the same. Tabulated data is the result of the scores on the questions given. The details will be explained in the following table.

**Table 2.** Paired Samples Statistic

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pre test	70.57	53	16.221	2.228
	posttest	77.36	53	12.271	1.686

The average value of learning outcomes in the pre-test <post-test, it means that there is a difference in the average learning outcomes. Table 2 shows the descriptive value of each variable in the paired sample. Initial test has a mean value (mean) of 70.57 from 53 data. The data distribution (Std. Deviation) obtained was 16,221 with a standard error of 2,228. The

final test has a mean value (mean) of 77.36 from 53 data. The data distribution (Std. Deviation) obtained was 12,271 with a standard error of 1.686. This shows that the final test on the data is higher than the initial test. To see the truth of the difference, look at the paired sample test table.

**Table 3.** Paired Samples Correlations

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 pre test & post test	53	.114	.417

The output correlation value is 0.114 with a significant 0.417. If the SIG value > correlation with a probability value of 0.05, there is no relationship between the pre-test and post-test variables. To see the effect of learning media on learning outcomes, we look at the interpretation of numbers on the paired sample test.

**Table 4.** Paired Samples Test

**Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	pretest-posttest	-6.792	18.183	2.636	-12.063	-1.502	-2.576	52	.013

The Paired Samples Test table is the main table of output that shows the results of the tests performed. This can be seen from the significance value (2-tailed) in the table. The significance value (2-tailed) of this case example was 0.013 ( $p < 0.05$ ). So that the results of the initial test and the final test experience significant changes (meaning). Based on the descriptive statistics of the initial test and the final test, it is proven that the final test is higher.

## 4 Conclusion

In this study, the results show that using technology-based learning media and often found in daily activities can improve learning outcomes, for example, the Gojek application. We can use applications contained in gadgets because it needs to be remembered that Indonesia is currently in the Industrial Revolution 4.0 so that we can introduce this to elementary school students of course to improve learning outcomes of elementary school students in the learning process.

Based on the results of the data obtained when the research took place in elementary schools. So it can be concluded that to improve student learning outcomes in the learning process of eating, learning media is needed which, especially we often know, one of which is gojek. Gojek can be a technology-based learning media that can improve student learning outcomes by seeing the increase in the results obtained.

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