

# The Effect of Using Game Based Learning Quizizz Media on Increasing Student Motivation and Learning Outcomes of 6<sup>th</sup> grade in science subjects at 125 Taruna Karya Elementary School Bandung

Aris Mustaqim<sup>✉1</sup>

<sup>1</sup>Primary Education, UPI, Bandung, Indonesia

✉ Arismustaqim17@upi.edu

**Abstract.** This study aims to determine the effect of using Quizizz on the motivation and learning outcomes of 6<sup>th</sup> grade students at SDN 125 Taruna Karya Kota Bandung in science subject by using Quizizz media based on game based learning. The research method in this study is the a Pre-Experimental method which observes a main group and intervenes throughout the study without a control class. The subject of this study was 6<sup>th</sup> grade which consisted of 30 students. This research was conducted in two meetings before and after being given treatment by filling out a motivational learning questionnaires and evaluating learning outcomes. The instruments used are questionnaires and learning outcomes tests. The method used in data analysis is the quantitative description analysis method. The results showed that there was an increase in motivation and learning outcomes of 6<sup>th</sup> grade in science subjects at SDN 125 Taruna Karya Kota Bandung by using Quizizz media. This can be proven by using the Paired Sample T Test, there is an increase in learning motivation from an average of 41.60 to 48.93, meaning an increase of 7.33. As for learning outcomes in the cognitive aspect, there was an increase from an average value of 64.37 to 75.57, meaning an increase of 11.2.

**Keywords:** Quizizz, motivation, learning outcome,(3 words).

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## INTRODUCTION

One application in applying technology that can be used as a learning medium is using the Quizizz application. Quizizz is an application. One application in the application of technology that can be used as a learning medium is using the Quizizz application. Quizizz is an educational game application that can support the learning process significantly (Sitorus and Santoso, 2014). This application was initially often used to measure or assess the learning process. Quizizz provides various types of questions that can be done by anyone, but users can also create their own questions. Users can add images and videos to questions, the question format can be multiple choice, polls, essays, and users can also create questions where the answer is in the form of an image. There is a time setting so that each question can be done with a different time limit according to the difficulty level of the question. Presenting questions in the form of games has several benefits in learning, including the following: 1) Motivating and involving all students in learning, 2) Training students' abilities such as literacy skills and numeracy skills, 3) As a therapeutic medium for overcoming learning difficulties, 4 ) Practicing certain roles or professions in real life, 5) Making students more creative.

Teachers have a very important role in the learning process, a teacher has the right to use various learning models in order to encourage the realization of the learning objectives and this is easy to achieve if students have good motivation to learn. It requires a very large teacher role to motivate student learning. The factors that influence student learning success are divided into two, namely internal factors and external factors. Internal factors are all factors that come from within the student himself, including the level of intelligence, motivation, interest, initial abilities and so on. Meanwhile, external factors are all factors from outside the student that can increase the child's enthusiasm for learning.

These factors include the environment where the child lives, the socio-economic situation of the family, the curriculum implemented by the school, the learning facilities they have, the methods used by teachers in teaching and so on. In the teaching and learning process, motivation is one of the factors that can influence learning activities. The learning process will run smoothly if it is accompanied by motivation. Motivation as a driver of business and achievement. A person undertakes a business because of motivation. Having good motivation in studying will show good results with diligent effort and especially based on motivation, then someone who studies will be able to produce good achievements. The intensity of a student's motivation will greatly determine the level of learning achievement.

Motivation can be caused by both internal and external factors. Internal motivation to function does not need to be stimulated from outside, because within each individual there is an urge to do something. Meanwhile, external motivation functions because of external stimuli. Student motivation can be seen or inferred from their constant effort, their tendency to continue learning even though they are no longer under supervision, or their willingness to voluntarily maintain learning activities towards completing a task. Learning is basically a cognitive process that is supported by psychomotor aspects of function which include listening, seeing and speaking activities. Based on the opinion expressed by Bloom in (Rusmono, 2014: 22), learning outcomes are changes in behavior that cover three domains, namely the cognitive, affective and psychomotor domains. Evaluation of learning outcomes is the process of giving grades to the learning outcomes achieved by students using certain procedures and criteria to determine how far students can achieve the learning goals that have been set. (Dirman and Juarsih, 2014: 32-33)

Science subjects are lessons that discuss natural phenomena around students. Therefore, learning science is a subject that is considered quite difficult for students. Science lessons are learning in schools that have a role in providing direct knowledge so as to form experiences for students (Putri et al., 2020). Meanwhile, according to (Sarwinda, 2019), science (Natural Science) subjects in elementary school can make a meaningful contribution to students. In the learning process, it is often seen that students have less attention when presenting the material, this is due to the students' lack of attention or interest in learning.

## **METHOD**

This study used a quantitative approach. According to Darmawan (2019), explained that the quantitative approach focuses on symptoms that have certain characteristics in human life which he named as variables. In the quantitative approach, the nature of the relationship among variables is analyzed using objective theory.

This research is a type of Pre-Experimental research, where researchers observe a main group and intervene throughout the research. In this design there is no control group to compare with the experimental group, which is called a pre-experimental design. According to Sukmadinata (2006), this design is called Pre-Experimental, because at first glance the model looks like an experiment but it is not, why is it called pre-experimental, because there is no equalization of characteristics (random) and no variable control. In this research design model, groups are not taken randomly or in pairs, nor is there a comparison group, but are given a pre-test and post-test in addition to the treatment.

### **Research design**

This research is pre-experimental research with the aim of increasing motivation and learning outcomes in cognitive aspects in class VI science subjects at the 125 Taruna Karya State Elementary School in Bandung. The research design uses a one group pretest-posttest design, namely a design that is used by giving treatment for a certain period of time, and measuring with tests before and after the treatment is carried out (Darmawan, 2019: 241). This design can be described as follows:

- O1 = Pretest Score (before treatment)
- X = Treatment
- O2 = Posttest value (after treatment)

This research design paradigm includes a pretest before being given treatment so that the results of the treatment can be known more accurately, because they can be compared with the situation before being given treatment. Darmawan (2019:137) "Population is a source of data in certain research that is large and extensive." Thus, the population in this research is class VI students of 125 Taruna Karya Bandung State Elementary School. The sample is determined by the researcher based on considerations of problems, objectives, hypotheses, methods and research instruments, in addition to considerations of time, energy and financing (Darmawan, 2019: 138). For sampling, researchers used a purposive sampling technique. Purposive sampling is a technique for determining samples with certain considerations. The sample for this research was class VI, totaling 30 students.

Research variables are basically anything in the form determined by the researcher to be studied so that information about that matter is obtained and then conclusions are drawn (Darmawan, 2019: 108). In accordance with the research title chosen by the author, namely the Effect of Using the Quizizz Application on Increasing Motivation and Learning Outcomes in Cognitive Aspects, the researcher grouped the variables used in this research into independent variables (X) and dependent variables (Y1 and Y2).

## RESULTS

Before this research was carried out, the instrument was first tested. Namely Validity Test and Reliability Test. In this technique of testing questionnaire questions, the author uses SPSS version 25 for Windows software through Bivariate Pearson correlation analysis. In writing this research, the basis for decision making in the Validity Test is:

$$R_{count} > R_{table} = \text{Valid}$$

$$R_{table} = N = 30 = 0.3494$$

Use of the Quizizz Application is the dependent variable in writing this research and has fourteen questions in the questionnaire. To find out the level of validity of variables using the Quizizz application during the PreTest, you can see the table.

Table 1. PreTest Validity Test Results for Using the Quizizz Application

Kode Soal	Rhitung	Rtabel	Signifikansi Hitung	Signifikansi 0.05	Keterangan
Item_1	0,790	>0,3494	0	0,05	Valid
Item_2	0,513	>0,3494	0	0,05	Valid
Item_3	0,856	>0,3494	0	0,05	Valid
Item_4	0,665	>0,3494	0	0,05	Valid
Item_5	0,549	>0,3494	0	0,05	Valid
Item_6	0,574	>0,3494	0	0,05	Valid
Item_7	0,885	>0,3494	0	0,05	Valid
Item_8	0,589	>0,3494	0	0,05	Valid
Item_9	0,458	>0,3494	0	0,05	Valid
Item_10	0,526	>0,3494	0	0,05	Valid
Item_11	0,738	>0,3494	0	0,05	Valid
Item_12	0,412	>0,3494	0	0,05	Valid
Item_13	0,400	>0,3494	0	0,05	Valid
Item_14	0,359	>0,3494	0	0,05	Valid

Table 2. PostTest Validity Test Results for Using the Quizizz Application

Kode Soal	Rhitung	Rtabel	Signifikansi Hitung	Signifikansi 0.05	Keterangan
Item_1	0,652	>0,3494	0	0,05	Valid
Item_2	0,633	>0,3494	0	0,05	Valid
Item_3	0,752	>0,3494	0	0,05	Valid
Item_4	0,612	>0,3494	0	0,05	Valid
Item_5	0,361	>0,3494	0	0,05	Valid

Kode Soal	Rhitung	Rtabel	Signifikansi Hitung	Signifikansi 0.05	Keterangan
Item_6	0,781	>0,3494	0	0,05	Valid
Item_7	0,844	>0,3494	0	0,05	Valid
Item_8	0,431	>0,3494	0	0,05	Valid
Item_9	0,410	>0,3494	0	0,05	Valid
Item_10	0,531	>0,3494	0	0,05	Valid
Item_11	0,420	>0,3494	0	0,05	Valid
Item_12	0,420	>0,3494	0	0,05	Valid
Item_13	0,511	>0,3494	0	0,05	Valid
Item_14	0,430	>0,3494	0	0,05	Valid

The table above is the result of answers to questions regarding the variable use of the Quizizz application in the questionnaire both during the PreTest and PostTest, including the categories of strongly disagree, disagree, doubtful, agree, and strongly agree. The results of category score data processing can be concluded that each question on the Quizizz application usage variable questionnaire is valid. Because the correlation score results in each question have the category  $R_{count} > R_{tabel}$ , the questions regarding the variables for using the Quizizz application pass and are suitable for use in research because they meet the criteria in the Validity Test.

## 2) Learning Motivation

Learning motivation is an independent variable in writing this research and has twelve questions in the questionnaire. To find out the level of validity of the learning motivation variable during the PreTest and PostTest, it can be seen in the table below:

Table 3. Learning Motivation PreTest Validity Test Results

Kode Soal	Rhitung	Rtabel	Signifikansi Hitung	Signifikansi 0.05	Keterangan
Item_1	0,734	>0,3494	0	0,05	Valid
Item_2	0,708	>0,3494	0	0,05	Valid
Item_3	0,797	>0,3494	0	0,05	Valid
Item_4	0,776	>0,3494	0	0,05	Valid
Item_5	0,689	>0,3494	0	0,05	Valid
Item_6	0,744	>0,3494	0	0,05	Valid
Item_7	0,709	>0,3494	0	0,05	Valid
Item_8	0,706	>0,3494	0	0,05	Valid
Item_9	0,651	>0,3494	0	0,05	Valid
Item_10	0,707	>0,3494	0	0,05	Valid
Item_11	0,726	>0,3494	0	0,05	Valid
Item_12	0,722	>0,3494	0	0,05	Valid

Table 4. Learning Motivation PreTest Validity Test Results

Kode Soal	Rhitung	Rtabel	Signifikansi Hitung	Signifikansi 0.05	Keterangan
Item_1	0,797	>0,3494	0	0,05	Valid
Item_2	0,613	>0,3494	0	0,05	Valid
Item_3	0,734	>0,3494	0	0,05	Valid
Item_4	0,646	>0,3494	0	0,05	Valid
Item_5	0,449	>0,3494	0	0,05	Valid
Item_6	0,457	>0,3494	0	0,05	Valid
Item_7	0,588	>0,3494	0	0,05	Valid
Item_8	0,895	>0,3494	0	0,05	Valid
Item_9	0,422	>0,3494	0	0,05	Valid
Item_10	0,652	>0,3494	0	0,05	Valid

Kode Soal	Rhitung	Rtabel	Signifikansi Hitung	Signifikansi 0.05	Keterangan
Item_11	0,378	>0,3494	0	0,05	Valid
Item_12	0,366	>0,3494	0	0,05	Valid

The table above is the result of answers to questions from the motivation variable in the questionnaire both during the PreTest and PostTest, including the categories of strongly disagree, disagree, doubt, agree, and strongly agree. The results of the category score data processing can be concluded that each question on the learning motivation variable questionnaire is valid. Because the correlation score results in each question have the category  $R_{count} > R_{table}$ , the questions regarding the learning motivation variable pass and are suitable for use in research because they meet the criteria in the Validity Test.

### Reliability Test Results

In this technique of testing questionnaire questions, the author uses SPSS version 23 for Windows software through Cronbach Alpha correlation analysis. In writing this research, the basis for decision making in the Reliability Test is:  
Cronbach Alpha coefficient  $> 0.6 =$  Reliable

Table 5. Variable Reliability Test Results

Nama Variabel	Koefisien Cronbach Alpha	Kriteria	Keterangan
Penggunaan Aplikasi Quizizz	0,863	$>0.6$	Reliabel
Motivasi Belajar	0,652	$>0.6$	Reliabel

### Liliefors Test Results

Based on the Normality Test results, a significance value was obtained using the Shapiro-Wilk method on the PreTest value of the independent variable Learning Motivation (Y1) of 0.529 and Learning Outcomes (Y2) of 0.437 and the dependent variable use of the Quizizz application (X) of 0.437. In addition, a significance value was obtained using the Shapiro-Wilk method on the PostTest value of the independent variable Learning Motivation (Y1) of 0.299 and Learning Outcomes (Y2) of 0.529 and the dependent variable use of the Quizizz application (X) of 0.131. It can be concluded that the PreTest and PostTest significance values all have higher values than the 5% (0.05) or sig significance level.  $> 0.05$ , then this gives an idea that the data is normally distributed.

### Linearity Test Results

The Linearity Test is used to determine whether the linear relationship between the independent variable (X) and the dependent variable (Y) is significant or not. The basis for making Linearity test decisions is:

If the value of Deviation from Linearity Sig.  $> 0.05$  then there is a linear relationship between the independent variable (X) and the dependent variable (Y)

If the value of Deviation from Linearity Sig.  $< 0.05$  then there is no linear relationship between the independent variable (X) and the dependent variable (Y)

Based on the significance value (Sig.) of the output results above, the Deviation from Linearity Sig value is obtained. is  $0.451 > 0.05$ . So it can be concluded that, there is a significant linear relationship between Learning Motivation (Y1) and Learning Outcomes (Y2) before and after using the Quizizz (X) application in class VI science students at the 125 Taruna Karya Bandung state elementary school.

### Homogeneity Test Results

The Homogeneity Test is carried out to find out whether variations in several data from the population have the same variance or not. This test generally functions as a requirement for conducting comparative analysis. In this study, the Homogeneity test was carried out before the independent sample t-test was carried out. Based on the output results above, the Sig value is

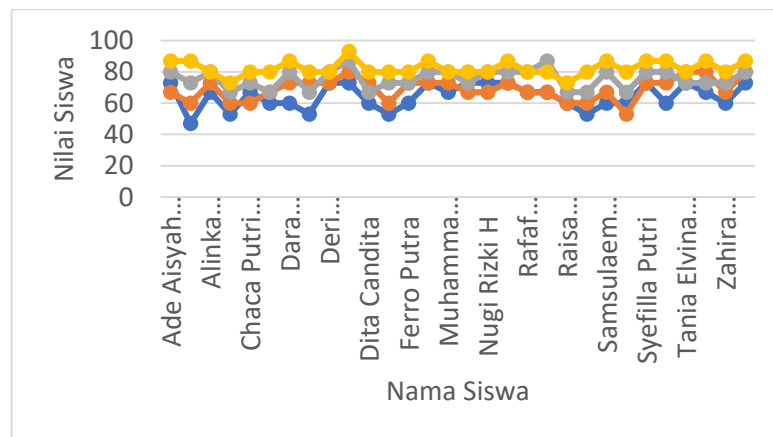
obtained. Based on the Mean for the PreTest and PostTest values for all variable components is 0.216. Because the Sig value.  $0.216 > 0.05$ , so it can be concluded that the data variance of class VI science students at the 125 Taruna Karya Bandung state elementary school before using the Quizizz application and after using the Quizizz application is homogeneous.

### Research Hypothesis Testing

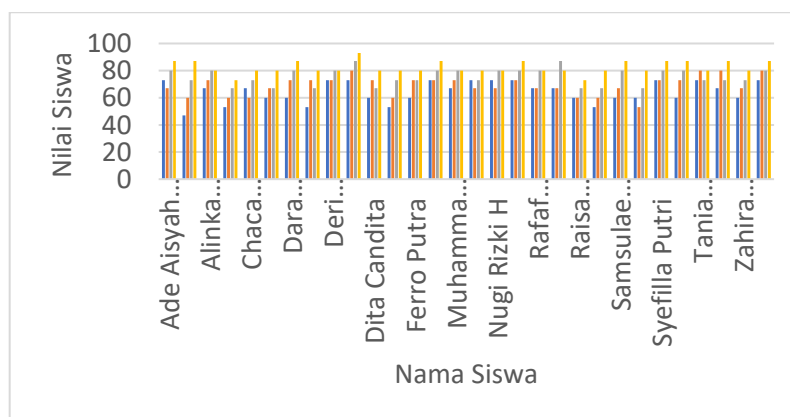
Testing the research hypothesis uses the Paired Sample T Test to compare the difference between the two means of two paired sample conditions with the assumption that the data is normally distributed. Paired samples come from the same subject for each variable taken during different situations.

### The Effect of Using the Quizizz Application on Learning Motivation

The following are the results of the PreTest and PostTest for class VI science students at the 125 Taruna Karya Bandung public elementary school. When collecting data, the author carried out the PreTest once and the PostTest three times. The reason the author carried out the PostTest three times was to ensure that after students used the Quizizz application, this could have an effect on improving learning outcomes.



Graphic 1. Results of Manual PreTest and PostTest Testing



Graphic 2. Results of Change

Based on the data obtained by the author, it can be concluded that before and after using the Quizizz application there are differences in learning outcomes for class VI science students at the 125 Taruna Karya Bandung state elementary school. To be able to see differences in results descriptively, the author also used a data processing application. The author only entered the 2nd PreTest and PostTest data on 08/10/2023.

Table 6. Results of PreTest and PostTest Test Scores on Learning Motivation

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
1	Pre Test_X1	41.60	30	3.233	.590
	Post Test_X1	48.93	30	2.545	.465

Based on the results of descriptive analysis, the average PreTest score for class VI science students at the 125 Taruna Karya Bandung public elementary school was 41.60 and the average PostTest score was 48.93. This means there is an increase in learning motivation after using the Quizizz application. Thus, it can be concluded that the use of the Quizizz application in the learning method has a significant effect on increasing the learning motivation of grade VI science students at the 125 Taruna Karya Bandung state elementary school.

Table 7. Results of the PreTest and PostTest Correlation Test on Learning Motivation

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre Test_X1 & Post Test_X1	30	.784	.000

Based on the results of the table above, it shows that there is a relationship between PreTest and PostTest treatment on Learning Motivation (Y1), because the Sig.  $0.000 < 0.05$ .

Table 8. Results of Learning Motivation Decision Making 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	Pre Test_X1 - Post Test_X1	-7.333	2.006	-.366	-8.082	-6.584	-20.026	9	.000	

Based on the t test output results table, the Sig value is obtained. equal to  $0.000 < 0.005$ . Thus  $H_0$  is rejected and  $H_a$  is accepted, which means there is a difference in Learning Motivation (Y1) before and after using the Quizizz (X) application given to class VI science students at the 125 Taruna Karya Bandung state elementary school which is declared accepted.

### The Effect of Using the Quizizz Application on Learning Outcomes

Table 9. Test Results PreTest and PostTest Learning Outcomes

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
1	Pre Test_X2	64.37	30	7.828	1.429
	Post Test_X2	75.57	30	6.112	1.116

Based on the results of descriptive analysis, the average PreTest score for class VI science students at the 125 Taruna Karya Bandung public elementary school was 64.37 and the average PostTest score was 75.57. This means that there is an increase in learning outcomes after using the Quizizz application. Thus, it can be concluded that the use of the Quizizz application in the learning method has a significant effect on improving the learning outcomes of class VI science students at the 125 Taruna Karya Bandung state elementary school.

Table 10. PreTest and PostTest Correlation Test Results for Learning Outcomes

Paired Samples Correlations			
Pair 1	Pre Test_X2 & Post Test_X2	N	Correlation
		30	.615
			.000

Based on the results of the table above, it shows that there is a relationship between PreTest and PostTest treatment on Learning Outcomes (Y2), because the Sig. 0.000 < 0.05.

Table 11. Decision Making Test Results Learning Results

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	Pre Test_X2 - Post Test_X2	11.200	6.305	1.151	-13.554	8.846	9.730	9	.000	

Based on the table of t-test output results, a Sig. value of 0.000 < 0.005 is obtained. Thus, Ho was rejected and Ha was accepted, which means that there is a difference in Learning Outcomes (Y2) before and after using the Quizizz application (X) given to grade VI science students in public elementary schools 125 Taruna Karya Bandung declared accepted.

According to (Salsabila et al., 2020) the use of the quizizz application is a strategy that can be used in involving active student participation. Because quizizz is a learning medium that is good to use and fun without losing the meaning of learning itself. In addition, in relevant research conducted by (Kusumuntara, 2017, Citra & Rosy, 2020) it was found that the use of quizizz educational game-based learning media is effective in improving student learning outcomes.

Based on the opinions of the theory and relevant research that has been explained, then the researcher aligns with the results and discussions that have been done, the researcher can conclude that there is an Influence of the Quizizz Application on the Science Learning Interest of Grade V Students in Elementary School

## DISCUSSION

The use of the Quizizz application in one of the learning methods can increase learning motivation and learning outcomes of grade VI science students in public elementary schools 125 Taruna Karya Bandung, the tests given on the Quizizz application are directly related to students' understanding of the material and after the test is completed, students can see their rankings directly

The findings in this study show that the learning motivation of grade VI science students in public elementary schools 125 Taruna Karya Bandung can be increased by using the Quizizz application as a provision of quizzes related to the material. This is in accordance with Hamzah's opinion (2017) that learning motivation can arise due to intrinsic factors, in the form of desire and desire to succeed and drive learning needs, expectations of ideals. While the extrinsic factor is the presence of rewards, A conducive learning environment, and interesting learning activities. Based on the above opinion that learning motivation is influenced by interinsic and excrinsic factors.

From the results of the study, by processing and analyzing data through the distribution of questionnaires, it showed that the average score of PreTest students was 41.60 and the average score of PostTest students was 48.93. This means there is an increase in learning motivation before and after using the Quizizz application to increase the motivation to learn grade VI science students at 125 Taruna Karya Bandung public elementary school. In addition, based on the results



of the correlation test, it shows that there is a relationship between PreTest and PostTest treatment on learning motivation, because the value of Sig.  $0.000 < 0.05$ .

As for the background why the Quizizz application media increases learning motivation because during the learning process students are more focused and enjoy the features in the application. Students just need to open their respective cellphones linked to the student code, then students can immediately follow the learning using the mobile phone in the Quizizz application.

In essence, teaching and learning activities are a process of communication. The communication process (the process of delivering messages) is created through the activities of delivering messages or information by teachers to students. The use of the Quizizz application in science learning in grade VI SD Negeri 125 Taruna Karya Bandung is designed so that students can understand the material so that it will build their knowledge in the learning process.

At the time of the PreTest, student learning outcomes were still low with an average score of 64.37 due to the fact that there were still many students who were unable to answer questions in the concept category, causing low student learning outcomes. From the data above, it can be seen that students' lack of understanding of science concepts. In general, students are less enthusiastic when studying the subject matter in the book. This is due to learning that only familiarizes students with giving all are dominated by teachers through the lecture method and rely on print media only and teachers tend to take examples from textbooks without other learning sources as alternative sources.

Based on the research results, it can be seen that there are differences in the learning outcomes of class VI science students at the 125 Taruna Karya Bandung state elementary school after being given PreTest and PostTest treatment. During the Pretest, the average student got a score of 64.37. After the PostTest, the average student score was 75.57. This difference in learning outcomes is one of the influences of using the Quizizz application in the learning process. Apart from that, based on the results of the correlation test, it shows that there is a relationship between PreTest and PostTest treatment on learning outcomes because the Sig.  $0.000 < 0.05$ . In this case, the use of the Quizizz application in the learning process is one method that can be used as a regulator of learning progress (Advance Organizations ).

In accordance with the opinion of Hisyam et.al (2005), learning something new will be more effective if students actively ask questions rather than just accepting what the teacher says. One way to make students learn actively is to make them ask questions about the lesson material before the teacher explains it. This strategy can inspire students to achieve the key to learning, namely, asking questions." A creative learning process is needed by students to achieve maximum mastery of concepts. In the learning process students will get a learning experience, where this learning experience is very important (Hamid, 2013).

According to Ananda and Hayati (2020: 51), learning outcomes are the maximum achievements achieved by students. Learning is a process or activity carried out consciously to achieve change, either in the form of knowledge, skills or attitudes. Learning outcomes are achievements achieved by students due to conscious efforts made by students to achieve change, both in the form of knowledge, skills and attitudes. Learning outcomes are the ability to do something according to the knowledge, experience and skills they already have. Thus, the more achievements a student has, the higher the student's level of ability to act in the future.

In working on daily questions with the Quizizz application, students gain a learning climate that is different from previous conventional learning. Using Quizizz as a form of practice questions provides conducive and enjoyable learning conditions for students (Bury, 2017). The interactive questions presented play a role in stimulating students to understand the learning material being carried out. Interactive questions are useful for students in increasing their knowledge of the material that has been presented (Centauri, 2019). The form of practice questions on the quizizz platform is interactive and interesting for elementary school students (Biren and Kocakoyun, 2018).

Teachers as facilitators must be able to implement a learning atmosphere that actively involves students in the learning process. Students will be active in learning which can enable students to carry out activities such as speaking, expressing opinions, reading, writing and interacting with other students and teachers. To understand subject matter, a person must use as

many senses as possible. Therefore, in learning to use the Quizizz application based on presentation of questions, it is very interesting, because it has a combination of text, images, animation and sound, which can make students combine their senses to answer questions. The ears are used to listen to explanations of questions in the Quizizz application, and also use the eye senses to see facts from the material being studied in the Quizizz application, which can indirectly accommodate students who have variations in learning. Thus, the more senses students use in the learning process, the more material they learn can remain in the student's memory.

Grade VI elementary school students are at the concrete operational stage. At this stage the student's understanding process is dominated by what can be observed, done, or experienced. When practicing questions using the Quizizz application, students not only see the questions as text, but can observe the shapes, colors and animations that appear to accompany the practice questions presented (Cahyani, 2016). The variety of displays presented plays a role in building memory in students' minds. The presence of variations in display stimulates the right brain to be involved in information processing. Various descriptions of practice questions using the Quizizz application have a positive influence on elementary school students' learning outcomes.

By using questions via the Quizizz application in science learning, all the question indicators that have been designed at the beginning of the learning process can be achieved. The use of the Quizizz application in science learning influences the learning outcomes of students in class VI of SD Negeri 125 Taruna Karya Bandung. With a variety of sounds, images, animations, colors, letters, videos, students understand the material from the information obtained, there is a process of storing information from the material displayed on the multimedia-based interactive Quizizz application, so that students are able to recall the material taught, make generalizations and the occurrence of feedback on the learning process using the question and answer method. So that students not only know the material, but through these facts students are trained to think to find answers to questions given by the teacher regarding the material being studied. By getting students used to carrying out learning like this, students' thinking patterns develop more.

The advantages of learning by giving questions with the Quizizz application are that the questions become more interesting, students become enthusiastic in answering because there are awards for the best students, at other times students can repeat looking for the answers. This again makes them enthusiastic about following the lesson, because the display of pictures on the media interactive will attract students' attention, which indirectly raises students' interest and motivation to learn.

Research carried out by administering PreTest and PostTest will improve learning methods which currently still use old methods. Classes that are given PreTest and PostTest treatment will have better readiness and abilities

## **CONCLUSION**

After carrying out research at SD Negeri 125 Taruna Karya Bandung, conclusions can be drawn, namely:

Researchers used a research instrument in the form of a questionnaire that had been prepared, namely 26 questions. Students' learning motivation is influenced by interesting activities in learning which are shown by students' enthusiasm for implementing the Quizizz media application. Students who have high motivation can achieve the desired achievements. The way to create conditions that encourage the learning process is as explained by Muhibbin (2017), namely by giving awards and by using learning methods or media that are fun and enthusiastic in the learning process. Based on the research results, it can be seen that there is a positive response to the use of the Quizizz application in the online learning process. Without realizing it, the Quizizz application makes students learn while playing so that students feel happy and find it easier to understand the material being taught. Understanding from students, the Quizizz application is an interesting learning media by presenting a new learning atmosphere, making it easier for students to understand learning material, and having various conveniences that increase students' learning motivation.

Providing Pre-test and Post-test methods in the teaching and learning process, this method is used by teachers as a regulator of learning progress (Advance Organizations) which is useful as a bridge that connects what students are learning "currently" with what they will learn, so that students will more able to understand learning materials easily, which can measure the extent of students' readiness for the material to be taught and also see the extent of the results or abilities that students have achieved in learning. According to Sudijono (1996:69-70)." "Pre-test or initial test is a test carried out with the aim of finding out to what extent the material or lesson materials to be taught have been mastered by students." Meanwhile, the post-test or final test according to Sudijono (1996:70)." is a test carried out with the aim of finding out whether all material that is classified as important has been mastered as well as possible by students. By using questions via the Quizizz application in science learning, all the question indicators that have been designed at the beginning of the learning process can be achieved. The use of the Quizizz application in science learning influences the learning outcomes of students in class VI of SD Negeri 125 Taruna Karya Bandung. With a variety of sounds, images, animations, colors, letters, videos, students understand the material from the information obtained, there is a process of storing information from the material displayed on the multimedia-based interactive Quizizz application, so that students are able to recall the material taught.

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