CHAPTER IV

RESEARCH FINDING AND DISCUSSION

In this chapter, the researcher presents the research finding, and the discussion. The four main topics which is discussed in this part are research finding, hypothesis testing, and the discussion about the result of data analysis.

A. Research Finding

In this subchapter, the data of the students' score between before and after being taught using Quizizz application were presented. There was one class of students as the subject of this research. They were VIII-B. The purpose of this research was to find out whether Quizizz application is effective towards students' grammar understanding among the eighth graders at SMPN 1 Sumbergempol or not. The data were collected from the students' score of pre-test and post-test. Then, the results of mean score from both the students' score were used as the comparison to determine whether using Quizizz application was effective or not.

The research data is obtained from the results of the test. The test conducted before being taught by using Quizizz application, which is called pre-test. After the treatment was applied, the researcher conducts test. That was post-test, to know students' score after being taught by using Quizizz application. The students' score on pre-test and post-test consisted of 30 students. The form of test was multiple-choice questions which consisted 20 test items, with time allocation

40 minutes. The students got 5 score every item for the correct answer, and 0 score for every incorrect answer. The data pre-test and post-test could be seen on the table below:

Table 4.1 Students' Grammar Scores before and after Being Taught by Using Quizizz Application

No.	Students' Name	Score of Pre-test	Score of Post-test
1	AH	70	80
2	AENB	55	80
3	AZRN	45	60
4	AA	90	95
5	ASU	55	70
6	APS	65	70
7	ANR	75	70
8	BJA	40	50
9	BDS	60	75
10	CK	50	55
11	DIS	65	75
12	DFRP	70	80
13	FANR	70	65
14	GOP	60	70
15	IYA	70	80
16	LDN	65	75
17	MBS	45	60
18	MR	55	65
19	MAB	60	75
20	MCP	65	80
21	MSA	90	100
22	NS	65	75
23	NAS	55	65
24	PW	55	70
25	RS	65	70
26	RA	60	65
27	RA	55	70
28	SMMNS	75	75
29	YRA	80	75
30	ZNR	75	80

The tables are students' grammar score before and after being taught by using Quizizz application. However, the result of the test was analyzed by IBM SPSS Statistic 25 for program windows to know the descriptive statistics and the percentage of the students' score before being taught. The result of the students' score pre-tests' can be seen in the table below:

Table 4.2 The Descriptive Statistics of Pre-Test

Statistics		
Score Pretest		
N	Valid	30
	Missing	0
Mean		63.50
Median		65.00
Mode		55[a]
Std. Deviation		11.973
Minimum		40
Maximum		90
Sum		1905
a. Multiple modes exist. The smallest value is shown		

Based on the table above, it showed that the mean of this test was 63,50. The median was 65. The mode was 55. The standard deviation was 11,973. The minimum score of pre-test was 40, and the maximum score of pre-test was 90. Then, the sum of the data was 1905.

Table 4.3 The Descriptive Statistics of Post-Test

Statistics		
Nilai_posttest		
N	Valid	30
	Missing	0
Mean		72.50
Median		72.50
Mode		70[a]
Std. Deviation		10.234
Minimum		50
Maximum		100
Sum		2175
a. Multiple modes exist. The smallest value is shown		

Based on the table above, it showed that the mean of this test was 72,50.

The median was 75,50. The mode was 70. The standard deviation was 10.234.

The minimum score of post-test was 50, and the maximum score of post-test was

100. Then, the sum of the data was 2175.

Table 4.4 Frequency of Pre-Test Score

		Score_pretest			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40	1	3.3	3.3	3.3
	45	2	6.7	6.7	10.0
	50	1	3.3	3.3	13.3
	55	6	20.0	20.0	33.3
	60	4	13.3	13.3	46.7
	65	6	20.0	20.0	66.7
	70	4	13.3	13.3	80.0
	75	3	10.0	10.0	90.0
	80	1	3.3	3.3	93.3
	90	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

As the result of table above, it showed the frequency distribution of students' score and the percentages from 30 students. Then, from the result could be described as 1 student (3.3%) get score 40, 2 students (6.7%) get score 45, 1 student (3.3%) get score 50, 6 students (20%) get score 55, 4 students (13.3%) get score 60, 6 students (20%) get score 65, 4 student (13.3%) get score 70, 3 students (10%) get score 75. 1 student (33%) get score 80, and 2 student (6.7%) get score 90.

Table 4.5 Frequency of Post-Test Score

					Cumulative
Score_posttest					
		Frequency	Percent	Valid Percent	Percent
Valid	50	1	3.3	3.3	3.3
	55	1	3.3	3.3	6.7
	60	2	6.7	6.7	13.3
	65	4	13.3	13.3	26.7
	70	7	^{23}.3	23.3	50.0
	75	7	23.3	23.3	73.3
	80	6	20.0	20.0	93.3
	95	1	3.3	3.3	96.7
	100	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

As the result of table above, it showed the frequency distribution of students' score and the percentages from 30 students. Then, from the result could be described as 1 student (3.3%) get score 50, 1 student (3.3%) get score 55, 2 students (6.7%) get score 60, 4 students (13.3%) get score 65, 7 students (23.3%) get score 70, 7 students (23.3%) get score 75, 6 students (20%) get score 80, 1 student (3.3%) get score 95, and 1 student (3.3%) get score 100.

B. Hypothesis Testing

The hypothesis in this study was stated as follows:

1. Null Hypothesis (H_0)

   There is no significant difference score between the students before and after taught by using Quizizz application among the eighth graders at SMPN 1 Sumbergempol.

2. Alternative Hypothesis (H_1)

   There is significant difference score between the students before and after taught by using Quizizz application among the eighth graders at SMPN 1 Sumbergempol.

The criteria for testing the hypothesis in this study are as follows:

1. If the value of sig. < 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. It means that there is a significant difference in scores between students before and after being taught using the Quizizz application among the eighth graders at SMPN 1 Sumbergempol.

2. If the value of sig. > 0.05, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected. It means there is no significant difference in scores between students before and after being taught using the Quizizz application among the eighth graders at SMPN 1 Sumbergempol.

Before proceeding with the appropriate statistical procedure to test the hypothesis in this study, it is necessary to test the normality and homogeneity of the data from the pre-test and post-test.

Normality Testing

Normality test is a one of specification to analyze the data. Normality test is used to determine whether the data to be analyzed is normally distributed or not. The researcher counted the score of pre-test and post-test to get the result of normality testing. The testing normality used Shapiro-Wilk formula in IBM SPSS Statistic 25 for program windows by significant value (α) = 0.05. The result of normality testing can be seen in the table below

Table 4.6 The Result of Normality Testing

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Score_pretest	.117	30	.200[*]	.966	30	.440
Score_posttest	.165	30	.036	.939	30	.083

Tests of Normality

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

a. H_0 :   The data were distributed normally

b. H_1 :   The data were not distributed normally

The find out the data were distributed normally or not can be seen from the result of normality testing data. It can be seen from the table above that significance of pre-test was 0.440 and the post-test was 0.083. The sig/p value of pre-test and post-test was bigger than 0.05. The sig/p value of pre-test is 0.440. It is bigger than 0.05 (0.440>0.05). The sig/p value of post-test is 0.083. It is bigger than 0.05 (0.083>0.05). The data from pre-test and post-test was normally distributed because H_0 is accepted and H_1 is rejected

Homogeneity Testing

As in other statistical tests, the homogeneity test is used as a material to determine the decision of the next statistical test. The homogeneity test aimed to determine whether from the population has the same variance or not. The researcher counted the score of pre-test and post-test to get the result of homogeneity testing. The testing homogeneity used Levenes' in IBM SPSS Statistic 25 for program windows. The result of homogeneity testing can be seen in the table below:

Table 4.7 The Result of Homogeneity Testing

Test of Homogeneity of Variances			
Levene Statistic	df1	df2	Sig.
.926	1	58	.340

a. H_0 : The data were homogeny

b. H_1 : The data were not homogeny

As seen on the result above, the significance value for all data on homogeneity was 0,340. The significance value was $0.340 > 0.05$. It was larger than 0.05. It could be conclude as homogeneity testing because the variance of the pre-test and post-test data has homogeneous distribution data.

Hypothesis Testing

In this case, hypothesis testing is calculated by using Paired Sample Test formula. It has been stated that the proposed hypothesis, there was a significant

difference in student scores between before and after being taught with the Quizizz application. To test the hypothesis, the researcher carried out data analysis with using IBM SPSS Statistic 25 for program windows. Based on SPSS output, shown in the table following:

Table 4.8 Descriptive Statistic of Pre-Test and Post-Test

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Test_pretest	63.50	30	11.973	2.186
	Test_posttest	72.50	30	10.234	1.869

As seen on the table above, the sample of this study was 30 students, which has mean of score pre-test was 63.50, the standard deviation was 11.973 and the standard error mean was 2.186. Meanwhile, the mean of score post-test was 72.50, the standard deviation was 10.234 and the standard error mean was 1.869. It can be concluded that the mean of score pre-test was different with the mean of score post-test. The mean of score post-test was higher than the mean of score pre-test (63.50 < 72.50). It means, there was increasing score in post-test, or can be assumed there was significant different the students' score after the students were taught by Quizizz application. The researcher also used the Paired Sample Test. The goal of this test is to determine the effectiveness of Quizizz application in students' grammar understanding. Before calculating the Paired Sample Test, the homogeneity test was carried out. The result of Paired Sample Test can be seen in the table below:

Table 4.9 TheResult of Paired Sample 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	Test_pretest - Test_posttest	-9.000	6.747	1.232	-11.519	-6.481	-7.307	29	.000

Based on the result of paired sample test, it shows both pre-test and post-test mean was 9.000. The standard deviation was 6.747, and the standard error was 1.232. Lower difference was 11.519 and upper difference was 6.481. Then, t_{count} result was 7.307, df result was 29 and the significance was 0.000.

The table above shows that the value of significance (2-tailed sig) is 0.000. Based on the hypothesis testing rule, if the significance value is less than 0.05, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted. However, if the value is significantly greater than 0.05, the null hypothesis (H_0) is received and the alternative hypothesis (H_1) is rejected. As seen in Table 4.9 that the value of significance (2-tailed sig) is 0.000 and less than 0.05 (0.000 <0.05). That was H_0 rejected and H_1 accepted. Therefore, it can be interpreted that there is a significant difference in scores between students before and after being taught using the Quizizz application among the eighth graders at SMPN 1 Sumbergempol.

C. Discussion

This research was conducted with the aim of knowing the effectiveness of Quizizz application towards students' grammar understanding among the eighth graders at SMPN 1 Sumbergempol. In this study, the samples were 30 respondents, from class VIII B. The procedure carried out by researchers in this study aims to provide learning using teaching media in students' grammar understanding. At the first stage of the study, the researcher gave a pre-test that aims to determine the understanding student about grammar especially simple present tense. Then after the pre-test was given to the students, they began to explain the material accompanied by teaching media in the form of giving quiz in the Quizizz application. In the next stage, the researcher gave post-test questions. According to the teaching material presented, the results of the pre-test and post-test was made by the researcher to determine the effectiveness of Quizizz application towards students' grammar understanding before and after treatment in research class.

Based on the previous chapter, the students' grammar score between before and after being taught by Quizizz application produced different. The mean pre-test score obtained before being taught using the Quizizz application was 63.50. Meanwhile, the students who have been taught using the Quizizz application get 72.50 as the mean post-test score. There is a significant difference in scores between before and after being taught by the Quizizz application. Thus, it can be said that the post-test score is higher than the pre-test score.

In addition, the finding of this study supports the finding of previous studies. The first, a research was written by Siti (2018) represent that the use of Quizizz application improved the reading ability at the students. It made the students very enjoyable in the learning process. It found and proved that this kind of media is effective in improving reading ability. The second, a research was administered by Sugihartini (2020) found that the Mobile Language Learning strategy through Quizizz application gave significant effect towards students' grammar mastery. The third, the research was written by Rahayu (2018) described the use of Quizizz application has successfully improved students' grammar understanding. The next, the research was organized by Dian (2021) described that the implementation of Quizizz application could enhance the students' grammar achievement especially in learning relative pronouns. She found the implementation of Quizizz application in the teaching and learning process can increase students' learning motivation. The students showed a positive attitude towards the use of the Quizizz application. Besides that, through using Quizizz application the students are more active in answering teachers' questions and can focus on materials well.

Meanwhile, the similarity between this study and previous study is on the use of "Quizizz application" that, there is a difference in terms the implementing. This study implements Quizizz application towards students` grammar understanding at the eighth graders junior high school and the previous studies were implemented Quizizz application towards students` grammar understanding for college students and students in senior high school.

The use of appropriate teaching media in the learning process is important. Teachers must identify appropriate teaching media in the learning process. The teaching media must be suitable for the students and based on the situation. Teachers can also take advantage of a variety of learning media that can improve the students' grammar understanding. One of suitable media is internet-based teaching media (Quizizz application). Quizizz is a web tool for creating interactive quiz games used in classroom learning. The Quizizz application described as a web tool to create interactive quiz games that can be run using mobile phones. By using games in learning, students feel more motivated in participating in learning, and increase curiosity. The students also become enthusiastic in participating in learning process and increasing student attention to participate in learning activities. This happens because students are informed at the beginning of learning, if at the end of learning there will be games and practice questions related to the material will be discussed.

The students feel challenged to answer every question in the Quizizz application and they are finally improved to think critically. It happens because they want to get high scores and thus get a good ranking in the game. Answering questions through the Quizizz application makes students more motivated to learn, because students can find out their abilities related to the material discussed at the meeting. The use of rankings to solving questions in Quizizz application makes students more competitive. It is also to measure their abilities and compare with other students. The high motivation and competitiveness, students will study harder to obtain satisfactory academic results.

Furthermore, concerning to the research question in this study, the result is there was significant difference score between students' score before and after being taught by using Quizizz application. In addition, the Quizizz application as a learning medium has succeeded in increasing students' understanding of grammar. Provide activities for students to be more active in learning the material provided by the teacher because it can be accessed directly. This method can also be applied to make online-based learning and help students understand learning because the Quizizz application is supported by various features that help students better understand the lesson. Therefore, Quizizz application as a teaching media is recommended for teachers to use it as an alternative medium for teaching language, especially grammar.