

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter presents the findings as the result of analyzing the data. Therefore, this chapter discusses the finding, hypothesis testing and discussion.

A. Finding

In this research, the purposes of the researcher are firstly to investigate the student's vocabulary achievement before taught using WhatsApp as media, secondly to investigate the student's vocabulary after being taught using WhatsApp as media, and thirdly to investigate the significant difference of student's score before and after being taught using WhatsApp as media for teaching vocabulary in fourth grader students at SDN 1 Bandung.

To obtain the data, the test as instrument was given to the students of SDN 1 Bandung that consist of 23 students as sample. The researcher used three step in doing the study. Those were pre-test was used to know students' vocabulary achievement, treatment that was the research taught by using WhatsApp as teaching media, and post-test that was administered to know the students' vocabulary achievement after treatment. To describe the data, the researcher presents score's criteria, students' score both pre-test and post-test, frequency of students' score and so on.

First, related to the research problem number one that how is the students' vocabulary achievement before being taught using WhatsApp as

media, the researcher founded that the result of students' vocabulary achievement before being taught using WhatsApp as media as follow :

Table 4.1 The students's vocabulary score before they were by using WhatsApp as media

No	Subject	Score
1.	RP	45
2.	RK	35
3.	KFA	65
4.	RF	60
5.	AD	30
6.	SA	80
7.	VA	75
8.	BN	70
9.	KA	75
10.	LHF	75
11.	AYM	60
12.	MA	70
13.	MBA	65
14.	BM	75
15.	JA	65
16.	AN	70
17.	DN	85
18.	KL	35

19.	SH	45
20.	SF	80
21.	VA	60
22.	YN	50
23.	AG	35

After conducted research the researcher got data and the data was analyze d using SPSS16.0 and the result can be seen the table bellow :

Table 4.2 Frequency Statistic of students'Pre-test Scores

Statistics

nilai pretest

N	Valid	23
	Missing	0
Mean		61.09
Std. Error of Mean		3.443
Median		65.00
Mode		75
Std. Deviation		16.511
Range		55
Minimum		30
Maximum		85
Sum		1405

From the table above, it can be seen that the lowest score is 30 and the highest score is 85. Besides, the mean of pre-test is 61.09, the standard error of mean is 3.443, the median is 65, the mode is 75, and the standard deviation is 16.511.

To make the data easy to interpret, the researcher made the table distribution of student's pre-test scores. It can be seen in table:

Table 4.3 The Percentages of students vocabulary before using WhatsApp as media

Pretest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30	1	4.3	4.3	4.3
	35	3	13.0	13.0	17.4
	45	2	8.7	8.7	26.1
	50	1	4.3	4.3	30.4
	60	3	13.0	13.0	43.5
	65	3	13.0	13.0	56.5
	70	3	13.0	13.0	69.6
	75	4	17.4	17.4	87.0
	80	2	8.7	8.7	95.7
	85	1	4.3	4.3	100.0

Pretest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30	1	4.3	4.3	4.3
	35	3	13.0	13.0	17.4
	45	2	8.7	8.7	26.1
	50	1	4.3	4.3	30.4
	60	3	13.0	13.0	43.5
	65	3	13.0	13.0	56.5
	70	3	13.0	13.0	69.6
	75	4	17.4	17.4	87.0
	80	2	8.7	8.7	95.7
	85	1	4.3	4.3	100.0
	Total	23	100.0	100.0	

From the table above, it can be seen that there were 4 students got score in range 0-45. There were 7 got score in range 46-69. There were 7 students got score 70-79. There were 3 students got score in range 80-89. And no one student got score in range 90-100.

To answer the research problem number one that how is the students' vocabulary achievement after being taught using WhatsApp as media, the researcher founded that the result of students' vocabulary achievement after being taught using WhatsApp as media as follow :

Table 4.4 The Students' Vocabulary Score after They Were Taught by Using WhatsApp.

No	Subject	Score
.1	RP	65
.2	RK	60
.3	KFA	80
.4	RF	85
.5	AD	55
.6	SA	95
.7	VA	85
.8	BN	85
.9	KA	80
.10	LHF	80
.11	AYM	75
.12	MA	85
.13	MBA	75
.14	BM	90
.15	JA	75
.16	AN	75
.17	DN	90
.18	KL	60
.19	SH	75
.20	SF	90

.21	VA	80
.22	YN	75
.23	AG	65

After conducted research the researcher got data and the data was analyze d using SPSS16.0 and the result can be seen the table bellow :

Table 4.5 Frequency Statistic of students' post-test score

Statistics		
Posttestscore		
N	Valid	23
	Missing	0
Mean		77.39
Std. Error of Mean		2.220
Median		80.00
Mode		75
Std. Deviation		10.646
Variance		113.340
Range		40
Minimum		55
Maximum		95
Sum		1780

From the table above, it can be seen that the lowest score is 55 and the highest score is 95. Besides, the mean of pre-test is 77.39, the standard error of mean is 2.220, the median is 80, the mode is 75, and the standard deviation is 10.646.

To make the data easy to interpret, the researcher made the table distribution of student's pre-test scores. It can be seen in table:

Table 4.6 The Percentages of students vocabulary after using WhatsApp as media

Posttest				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 55	1	4.3	4.3	4.3
60	2	8.7	8.7	13.0
65	2	8.7	8.7	21.7
75	6	26.1	26.1	47.8
80	4	17.4	17.4	65.2
85	4	17.4	17.4	82.6
90	3	13.0	13.0	95.7
95	1	4.3	4.3	100.0
Total	23	100.0	100.0	

From table 4.5 it can be seen that there were 5 students got score in range 46-69. There were 6 students got score in range 70-79. There were 8

students got in range 80-89. There were 4 students got score in range 90-100.

Third, related to research problem that is there any significant difference of students' score before and after being taught using WhatsApp as media, the researcher present the finding below :

Table 4.7 The Students' Vocabulary score before and after They Were taught by using WhatsApp

NO.	Subject	Pre-test	Post-test
1.	RP	45	65
2.	RK	35	60
3.	KFA	65	80
4.	RF	60	85
5.	AD	30	55
6.	SA	80	95
7.	VA	75	85
8.	BN	70	85
9.	KA	75	80
10.	LHF	75	80
11.	AYM	60	75
12.	MA	70	85
13.	MBA	65	75
14.	BM	75	90

15.	JA	65	75
16.	AN	70	75
17.	DN	85	90
18.	KL	35	60
19.	SH	45	75
20.	SF	80	90
21.	VA	60	80
22.	YN	50	75
23.	AG	35	65

Table 4.8 The Score's Criteria of the Students after using WhatsApp as media

No	Criteria of score	Grader	Criteria
1.	90-100	A	Excellent
2.	80-89	B	Very good
3.	70-79	C	Good
4.	46-69	D	Fair
5.	0-45	E	Poor

From the data of student's pre-test and post-test score above, the researcher arranged the frequency and percentage of students score.

B. Normality testing

1. Normality testing

Normality test are used to determine whether a data set is well-modeled by a normal distribution or not to compute how likely and underlying random variable is normally distributed population.

According sujianto (2009:77) normality distribution. In this study, the research used Kolmogorov-smirove test with SPSS 16.0. the hypotheses for testing normality are :

- c) H_a : Data is normal distribution
- d) H_0 : Data is not normal distribution

Table 4.9 Normality Result

One-Sample Kolmogorov-Smirnov Test

		pretest	Posttest
N		23	23
Normal Parameters ^a	Mean	61.09	77.39
	Std. Deviation	16.511	10.646
Most Extreme Differences	Absolute	.169	.194
	Positive	.117	.095
	Negative	-.169	-.194
Kolmogorov-Smirnov Z		.812	.929
Asymp. Sig. (2-tailed)		.524	.354
a. Test distribution is Normal.			

Base on the output of SPSS 16.0 was known that the significant value (2-tailed) is 0.524 and 0.354. As explanation above, that H_a is rejected if the significant value lower than 0.05 ($\alpha = 5\%$). Because the significant value (2 tailed) was bigger than α that were ($0.524 > 0.05$) and ($0.354 > 0.05$), It meant that H_a was accepted and H_o was rejected. So, it could be interpreted that the scores of both pretest and posttest were normal distribution.

C. The significant Difference of Mean Scores Before and After Being Taught by Using WhatsApp as Media

After administered pre-test and post-test the researcher got data. Next, the the data to answer the research question number one, and to test significance different score before and after being taught by using WhatsApp as media by using test paired sample t -test through SPSS 16.0. the outputs were as follows:

Table 4.10 Paired Sample Statistic

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	61.09	23	16.511	3.443
	Posttest	77.39	23	10.646	2.220

From the table above, it can be seen that the mean score of pretest is 61.09, while N for cell there are 23. Meanwhile, standard deviation for pre-test is 16.511. Mean standard error for pretest is 3.443.

Next, the mean score of post-test is 77.39, while N for cell there are 23. Meanwhile, standard deviation for post-test is 10.64. Mean standard error for post-test is 2.220.

Table 4.11 Paired Sample Correlation

Paired Samples Correlations			
	N	Correlation	Sig.
Pair 1 pretest & posttest	23	.909	.000

The table of paired sample correlation above, it can be seen that the large correlation between samples, the numeral of both correlation is 0.909 and numeral significance is 0.00

Table 4.12 Paired Sample T – 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	-16.304	8.149	1.699	-19.828	-12.781	-9.596	22	.000

The Table 4.8 above showed the result of analysis using T-test the mean pre-test and post-test is 16.304, standard deviation is 8.149, mean standard error is 1.699. the lower different is -19.828, while the upper different is -12.781. the result test $t = -9.596$ with df 22 and significance .0.000

D. Hypothesis Testing

The analysis of data and hypothesis testing in this research used paired sample T test stated by SPSS v.16.0. The researcher's assumptions in hypothesis testing but significance level are as follow :

3. If $df = 22$ with the significant level 0.05, the Null Hypothesis (H_0) is rejected and alternative hypothesis (H_a) is accepted. It means there is a significant difference of students' vocabulary achievement before and after being taught by using WhatsApp.

4. If $df = 22$ with the significant level 0.05, the Null hypothesis (H_0) is accepted and alternative hypothesis (H_a) is rejected. It means there is no a significant difference of students' vocabulary achievement before and after being taught by using WhatsApp.

The mean of students; pre-test score before being taught by using Whatsapps as media was 61.09 while after getting treatment the mean of students' score of post-test was 77.39. It showed that the students' score of post-test greater than the students score of pre-test.

Based on the statistical calculation using SPSS 16.00, on the table 4.11, the significance value was 0.000, and it was lower than 0.05 ($0.000 < 0.05$) it could be concluded that there is alternative hypothesis (H_a) was accepted and the null hypothesis (H_0) was rejected it mean that there is different score on the students' vocabulary achievement before and after being taught by using WhatsApp. There was different on *Paired Sample Statistic* that mean before taught using WhatsApp as media is 61.09 and after taught using WhatsApp as media was 77.39, it means that the mean before being taught using WhatsApp as media was lower than after being taught using WhatsApp as media. Thus it can be concluded that WhatsApp is effective used on the students vocabulary achievement in fourth grader of SDN 1 Bandung.

E. Discussion

Based on the hypothesis testing, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. Thus, the finding indicated that the use of the WhatsApp gives significant effect on the students' vocabulary.

The result of the test from teaching vocabulary using WhatsApp as media make the students understand the vocabulary easier and WhatsApp is increasing, why not offer students the possibility to study anytime, anyplace and at their own convenience through their mobile devices. In the treatment process, the students were more interested and enthusiastic in learning vocabulary. The student got many new vocabularies quickly also answered the researcher's question actively. It was suitable with This opinion is in line by the research conducted by Jafari and Chalak(2016) who stated students get longer learning opportunities in learning that usual with Group chat in WhatsApp.

Based on this study, it can be said that a WhatsApp as alternative media was effective in teaching vocabulary at elementary school, especially at fourth grader of SDN 1 Bandung.

Regarding on the result of data analysis above, it is also strongly with previous study as stating that the use WhatsApp is effective for teaching vocabulary. Angga Wirayuda, Patuan Raja, Flora, The objectives of this research were to find out whether 1) there was a statistically significant improvement of students' vocabulary 2) which aspects of vocabulary improve the most after the students were taught through group

chat discussion. The approach of the research was quantitative. This study employed one group pre-test and post-test design. The subjects were 28 students of the third grader of SMP. The data were collected using the vocabulary test. The data were analysed using Paired Sample t-test. The result showed that there was a statistically significant improvement of the students' vocabulary achievement with the significant level $0.00 < 0.05$. This suggests that teaching vocabulary using group chat discussion facilitates the students to find meaning from the text easily. It means that the mean of this research is higher than this previous study.

Arash Hashemifardina, Ehsan Namazidost, and Fariba Rahmi Esfahani (2018). This study investigated the effects of using WhatsApp on Iranian EFL learners' vocabulary learning. To fulfil this objective, 50 Iranian female participants were selected among 80 students from Adiban English language institute, Baghmalek, Khuzestan, Iran. They were at the intermediate level of English proficiency based on the results of Oxford Quick Placement Test (OQPT). The selected participants were then randomly divided into two equal groups; one experimental group and one control group. Afterwards, the researcher gauged their proficiency level of English vocabulary knowledge by a vocabulary pre-test. Then, the English words were instructed to the experimental group through WhatsApp; they used WhatsApp in order to practice the selected words outside of the L2 classroom. In fact, the researcher formed a group in WhatsApp and through the channel he sent the words to the participants in the experimental group. The results of paired samples and an independent

samples t-tests indicate that there was a significant difference between the post-tests of the experimental and the control groups. The findings reveal that the experimental group significantly outperformed the control group ($p < .05$) on the post-test. it can be concluded that using WhatsApp significantly developed Iranian EFL learners' vocabulary learning. Its mean that the mean of this research is higher that this previous study.

In the other previous study as stating that the use WhatsApp is effective for teaching writing. Kafidah, Risca Nur from UNISKA Kediri (2018) The result of this study show that the mean of experimental group is higher than the control one ($83.91 > 80.44$) while the analysis of *independent-samples t-test* reveals that the experimental group outperforms the control group in writing achievement ($P = 0.002$). Furthermore, the value of t_{observed} is higher than t_{table} ($3.309 > 2$). Therefore, there is significant difference between both groups. Thus, it can be concluded that *WhatsApp Messenger* is effective to be used in teaching writing especially in hortatory exposition text. Its mean that the mean of this research is higher that this previous study.

Furthermore, previous study as stating that the use WhatsApp is effective for teaching speaking. Aras Nur Ahmad T from English Language Education Department Halu Oleo University. The results of this study showed that there were differences in the speaking achievement of the students in the experimental class and the control class. This difference was in favor of the experimental class. The value of Chi-Square count is 28.486 and the Chi-Square Table is 19.675. So the H_1 accepted and H_0 is

rejected. The differences between the two classes indicated that integrating the WhatsApp application in teaching English language improved speaking achievement of the students of the experimental class. Its mean that the mean of this research is higher than this previous study.

Based on all the result from previous study. It can be prove that WhatsApp have the other use, it can be a media of teaching vocabulary, writing and also speaking to be more effective, creative and increase students' achievement in English. Furthermore, teaching vocabulary by using WhatsApp is effective to increase students' achievement in the level of fourth grader students of SDN 1 Bandung in academic year 2019/2020.