

## **Chapter Four**

### **Results and Discussion**

This chapter discussed the result of the research including the discussion. In the results, the researcher explained the results of the gathered data including the means of the pre-test and post-test, testing of hypothesis by t-test analysis, and significant difference of using English song to improve students' vocabulary knowledge. Additionally, normality and reliability were also discussed.

#### **Results**

This study was conducted at SMP Muhammadiyah 2 Yogyakarta. This research used an experimental research design. In this experiment, the researcher used two groups which are control group and experimental group. In every group, the researcher gave pre-test and post-test. Pre-test was used to see students' vocabulary knowledge before the treatment. After that, the researcher gave a treatment using English song in their English learning in experimental group, whereas the control group was not given a treatment. In experimental group, the treatment included identifying the noun and pronoun, adjective, and the use of verb. In control group, the researcher did not give a treatment. The researcher only taught the students using word list, in which the researcher also taught noun and pronoun, the use of adjective and verb. The researcher taught four meetings which allocated 45 minutes in every group. After that, the researcher did post-test to experiment and control group.

**Result 1.** To answer the research question “How is the students’ vocabulary knowledge in pre and post test of experimental group”, the researcher presented the result in the following table:

Table 1 <i>The result of students’ vocabulary before and after using English song in experimental group</i>				
No	Name	Pre-test	Post-test	Gained Score
1	E1	52	80	28
2	E2	48	84	36
3	E3	50	70	20
4	E4	45	80	35
5	E5	55	70	15
6	E6	56	84	28
7	E7	56	84	28
8	E8	50	76	26
9	E9	52	78	26
10	E10	50	80	30
11	E11	55	75	20
12	E12	52	70	18
13	E13	56	75	19
14	E14	50	75	25

15	E15	52	80	28
16	E16	56	90	34
17	E17	58	80	22
18	E18	58	80	22
19	E19	60	85	25
20	E20	44	72	28
21	E21	50	80	30
22	E22	50	90	40
23	E23	55	85	30
24	E24	58	80	22
25	E25	60	88	28

From Table 1 above, we can see the students' vocabulary knowledge in pre-test and post-test of experimental group. From pre-test the highest score is 60 and the lowest score is 44. From the post-test the highest score is 90 and the lowest score is 70.

From Table 2 below, the mean score from pre-test was 53.12, whereas the mean score from the post-test was 79.64. It means that the mean score of post-test was higher than the mean score of pre-test. Then, it indicated that the students have increased their score in post-test. In Zahros' study (2010) about the effectiveness of song in vocabulary learning, the post-test also revealed the improvement from pre-test.

Table 2			
<i>Mean score of pre and post test</i>			
<i>Experimental</i>			
Statistics			
		pretest	posttest
N	Valid	25	25
	Missing	2	2
Mean		53,12	79,64
Median		52,00	80,00
Mode		50	80
Minimum		44	70
Maximum		60	90

**Result 2.** The results of the research question “How is students’ vocabulary knowledge in pre-test and post-test of control group” were shown in the following:

Table 3				
<i>The result of pre-test and post-test in control group</i>				
No	NAME	Pre-test	Post-test	Gain score
1	C1	51	70	19
2	C2	60	70	10
3	C3	55	65	10
4	C4	60	70	10
5	C5	50	65	15
6	C6	65	75	10
7	C7	60	70	10
8	C8	65	70	5

9	C9	62	80	18
10	C10	59	80	21
11	C11	59	70	11
12	C12	55	70	15
13	C13	63	65	2
14	C14	65	70	5
15	C15	54	60	6
16	C16	60	70	10
17	C17	50	65	15
18	C18	62	65	3
19	C19	59	60	1
20	C20	50	70	20
21	C21	63	65	2
22	C22	52	65	13
23	C23	62	75	23
24	C24	58	80	24
25	C25	62	75	13

From the table above, we can see the score in pre-test and post-test of control group. The highest score of the pre-test is 65 and the lowest score is 50. In post-test, the highest score is 80 and the lowest score of post-test is 60.

Table 4 describes the result of the mean score of pre-test and post-test in control group. The mean score in pre-test was 58.44 and post-test 69.60. It means that the mean score from the post test was higher than the mean score from the pre-test. It also indicated that the students' score was increased although they did not have a treatment. The improvement of control group was come from their effort in memorizing the vocabulary.

		Statistics	
		pretest	posttest
N	Valid	25	25
	Missing	0	0
Mean		58,44	69,60
Minimum		50	60
Maximum		65	80
Sum		1461	1740

**Result 3.** To answer research question three “Is there any significant difference between experimental group and control group”. The researcher should make sure the test was normal and homogeneous.

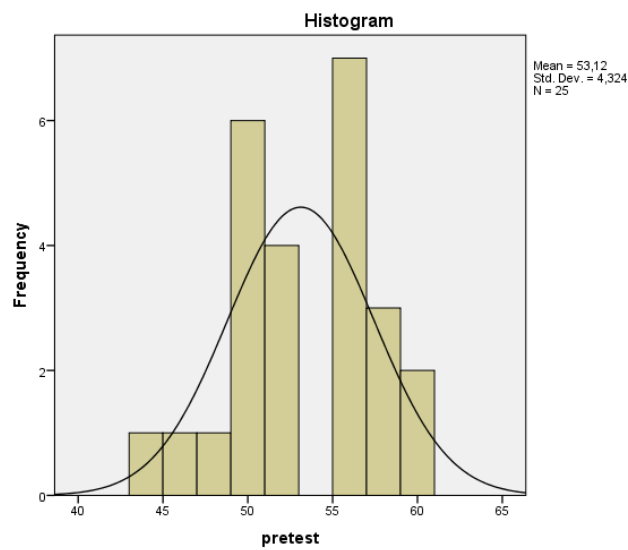
**Normality of experimental group.** From Table 5 below, the significance value was higher than the significance level from pre-test of experimental group ( $0.643 > 0.05$ ). It means that the test of pre -test was normally distributed. Then, the significance value was also higher than the significance level from post-test was ( $0.507 > 0.05$ ). It means that the data distribution from post- test was also normal.

Table 5			
<i>Normality of experimental group</i>			
One-Sample Kolmogorov-Smirnov Test			
		pretest	posttest
N		25	25
Normal Parameters <sup>a,b</sup>	Mean	53,12	79,64
	Std. Deviation	4,324	5,837
Most Extreme Differences	Absolute	,148	,165
	Positive	,125	,155
	Negative	-,148	-,165
Kolmogorov-Smirnov Z		,741	,823
Asymp. Sig. (2-tailed)		,643	,507

a. Test distribution is Normal.  
b. Calculated from data.

In addition, normal distribution was also shown from the histogram below.

*Figure 3* showed normal distribution as the curve showed the bell-shaped curve.



*Figure 3.* Histogram normality test experiment in pre-test

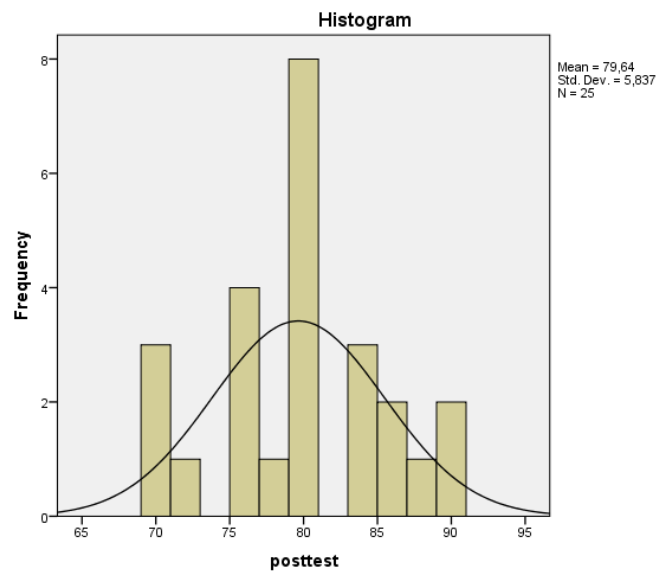


Figure 4. Histogram normality test experiment in post test

**Normality of control group.** The researcher explained the result of normality test from control group. The result show in the table and figure below.

From Kolmogorov-smirnov test below, the researcher conclude that the test distribution in control group was normal. It is seen from the significant value that the significant value in pre-test was 0.358 and the significance value in post-test was 0.137. Those results were higher than 0.05 which means that the test distribution was normal.

Table 6

*Normality test of control group*



One-Sample Kolmogorov-Smirnov Test			
		pretest	posttest
N		25	25
Normal Parameters <sup>a,b</sup>	Mean	58,44	69,60
	Std. Deviation	4,942	5,575
Most Extreme Differences	Absolute	,185	,231
	Positive	,104	,231
	Negative	-,185	-,169
Kolmogorov-Smirnov Z		,926	1,157
Asymp. Sig. (2-tailed)		,358	,137

a. Test distribution is Normal.  
b. Calculated from data.

Besides, the normal distribution was also shown from the histogram below.

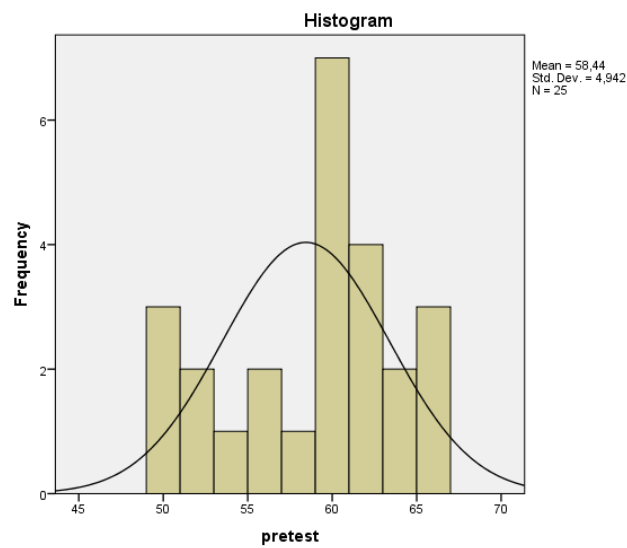


Figure 3. Histogram normality test control in pre-test

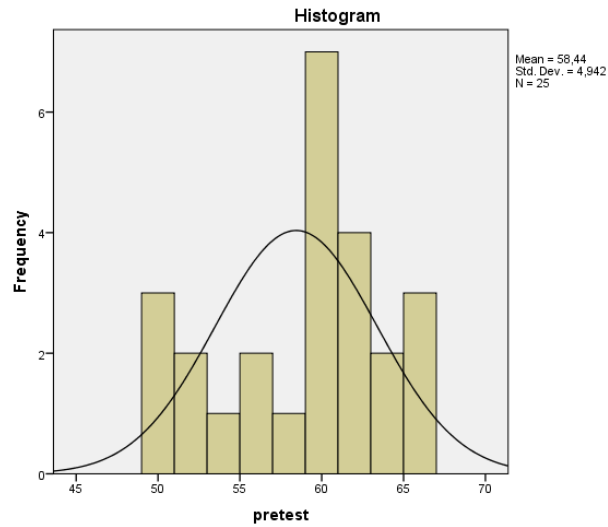


Figure 4. Histogram normality test control in post-test

**Homogeneity test for experiment group.** In this research, after explaining the normality test from experimental and control group, the researcher also tested the homogeneity. The homogeneity test for experiment group was explained in Table 7 below.

Table 7					
<i>Homogeneity test of experiment group</i>					
ANOVA					
Pretest					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	183.265	9	20.363	1.151	.389
Within Groups	265.375	15	17.692		
Total	448.640	24			

From the table above, the significant value from homogeneity test in experimental group was 0.389. The significant value was higher than 0.05. It

means that the test distribution was homogenous. After seeing the result of homogeneity in experimental group, the researcher showed the result of the homogeneity in control group below:

Table 8					
<i>Homogeneity test of control group</i>					
ANOVA					
Pretest					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	102.779	4	25.695	1.063	.401
Within Groups	483.381	20	24.169		
Total	586.160	24			

In Table 8 above, the significant value was 0.401. The significant value was higher than 0.05. It means that the test from control group was homogenous.

From the analysis above, the test distribution in experimental and control group was normal. It also indicated that the test in experimental and control group was taken from homogeneous population. Hence, paired sample t-test can be run in the SPSS program version 20. The researcher explained the results of paired samples t-test in Table 9 and 10 below:

Table 9					
<i>Paired Sample Statistics</i>					
Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Control	11,64	25	6,714	1,343

	Experimen t	26,52	25	5,994	1,199
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From table 9 above, the result from paired samples statistics showed that the mean score of control group was 11.64 and the mean score of experimental group was 26.52. The mean score of experimental group was higher than the mean score of control group. It means that the mean score of experimental group and control group was different. The difference come from the English song, because English song made the students enjoy in learning.

Table 10										
<i>Paired Sample test</i>										
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	Control - Experiment	-14,880	8,805	1,761	-18,514	-11,246	-8,450	24	,000	

Table 10 showed that the significance value was 0.000. The significance value was less than 0.05. It means that the students in experimental group have significant difference than the students in control group. The experimental group has significant improvement because of using English song. English song helps students to increase their vocabulary than the students in control group that used words list.

## Discussion

Based on the the result of students' vocabulary knowledge in experimental group and control group, the researcher concluded that there are same important parts as follows.

The condition of students in experiment and control group in the pre-test was same. The results from the pre-test indicated that the mean score was 56.85 in experimental group and the mean score was 57 in control group. The recent results were consistent with the previous study from Zahro (2010), undertaken in Semarang with 50 respondents from two classes namely Class 8A as experimental group and 8B as control group. In Zahros' study, the students' vocabulary knowledge of experimental group and control group in pre-test showed improvement. In other words, there was no significant difference between students' vocabulary knowledge from experimental group and control group. The students' vocabulary knowledge was same in both groups (experiment and control) because they have same condition or same level.

Based on the result of post-test data, the mean score of control group was 11.64 and experimental group was 26.52. It means that the mean score of experimental group was higher than the mean score of control group. Therefore, the class using English song has higher score than the students who did not use English song in their learning. In line with the recent study, Phisutthangkoon's study (2016) revealed that the score of the post-test in experimental group had significant improvement than the score of the post-test in control group. The students in experimental group have motivation in learning English. Using English song made them interested in learning. English song helps them to increase their vocabulary knowledge because they feel fun in the learning.

Furthermore, the result of the data analysis showed that the significance value was 0.000 which means that the significance value is higher than the value

of significant level ( $0.000 < 0.05$ ). It indicated that there is a significant difference between students using English song in experimental group and control group. Besides, the alternative hypothesis (H1) is accepted which English song effectively improve vocabulary knowledge. English has aspects that made students more motivated in learning English (Burhayani, 2013). Using English song has the rhyme that make students easily receive the vocabulary. Besides, the lyric of English song are sometimes repeated and can be stored in students' mind. The words which the students remember from the lyric can be used in their daily communication. As a result, English song effectively improves students' vocabulary knowledge.