CHAPTER IV
RESEARCH FINDINGS AND ANALYSIS

A. Description of the Research

Findings of this research described that there were different vocabulary achievement between experimental class by which students taught using song and control class which was taught without using song. The research was conducted in SMPN 16 Semarang which is located at Jalan Prof. Dr. Hamka Ngaliyan Semarang on second semester of the seventh grade students in the academic year 2011/ 2012.

The activity of the research started on 7th January 2012 by choosing the sample used cluster random sampling. To get the representative sample, the researcher wrote the names of the classes on small piece of paper. And then, the papers were rolled and put into a lot of box. The last, the researcher got class VII B which consisted 40 students as try-out group, class VII A which consisted of 40 students was as experimental group, and class VII C which consisted of 40 students was as control group. The number of students was gained from the documentation of the related school by the help of the English teacher.

The documentation presented in the syllabus, lesson plan, sketch of the school, the number of students' development which were related the researcher's need to be done the research in the academic year of 2011/ 2012.

Before items were given to the students, the researcher gave tryout test for try-out class on 7th January 2012 to analyze validity, reliability, difficulty level and also the discrimination power of each item. The researcher prepared 30 items as the instrument of the test. Test was given to know the validity, reliability, degree of test difficulty, and discriminating power of test items of try-out test in control class that was provided by the researcher.

In this research finding of try out test, the researcher used *product-moment* formula to analyze validity. The researcher applied the *spearman-brown* formula which was combined with *product- moment* formula to analyze

reliability instrument. The degree of test difficulty used difficulty level formula by considered five levels of difficulty. The last analysis of try-out test was discriminating power by divided into two groups; lower group and upper group.

The researcher gave pre-test on 24th January 2012 in control group and 14th January 2012 in experimental students. The questions consisted of 25 items were stated valid according to try-out analysis. After giving pre-test, the researcher determined the materials and lesson plans of learning activities. Pre-test conducted to both groups to know that two groups were normal and homogeny.

After knowing the control group and experimental group had same variant. The researcher conducted treatment in experimental class twice in week for 40 minutes each meeting. The first treatment conducted on 16th January 2012 and the second treatment conducted on 23rd 2012 by using a medium of song to teach vocabulary.

There were some activities in experimental group using song to teach vocabulary:

1. The teacher asked students "can you make announcement and advertisement by using your own words?"
2. The teacher explained the material and formula of vocabulary using song as a medium.
3. The teacher asked students by singing advertisement and announcement song.
4. The teacher asked students to analyze the vocabulary that was used.
5. The students had to make an announcement or an advertisement individually.
6. The Teacher gave some examples to make announcement and advertisement.
7. The volunteer students practiced the activities in front of the class individually.
8. The teacher asked volunteer group to sing songs individually.

9. Every student had to analyze each vocabularies based on the song.
10. The volunteer students which made announcement or advertisement as soon as possible, the students chose three students became the winner and got the reward.

The control group was not taught using song ; just explaining the material orally based on the teacher's lesson plan without gave variation in learning process. The teacher also asked students just to do the assignment until they felt bored in the class. The teaching also conducted twice a week on 17th January 2012 and 20th January 2012 for 40 minutes for each meeting.

The evaluation of the research found some obstacles in teaching and learning process in control class. The first was the experimental research conducted when the English teacher can not present in the class, so the students felt bad mood to build the better atmosphere because they had not recognized the researcher yet. Moreover, the students did not concentrate into the material because they regard that researcher was not their teacher. Students in experimental class also felt bored in beginning of teaching and learning atmosphere, but they got a great potential to build creativity and could accept materials of the lessons easily in warm atmosphere of the classroom using song as the medium in teaching and learning process.

From the different situation, the researcher evaluated that the researcher should be humorist to recognize students personally. The teacher also had to know the names each student and they will do the teacher's instruction if the teacher points them. This evaluation was done in the second meeting of teaching in control class and giving treatment in experimental class and could be as reference on the other occasion of the future teaching.

After the researcher gave treatments in experimental group and conventional teaching in control group, the researcher gave post-test which consisted 25 test items which approximately finished on 30 minutes. Giving post test on 23th January 2012 both experimental group and control group.

From the post-test could be known that there were significant result between control group and experimental group by hypothesis test which

showed the value of t-test is higher than t-table. It could be seen on the value of t-test is 4,095 while the critical value on $t_{s0,05}$ is 1.66, so the hypothesis is accepted. It meant that using a medium of song in teaching Vocabulary is effective and gave good result in teaching and learning process because the students felt interesting learning in the classroom.

B. The Data Analysis

1. The Data Analysis

a) The Data Analysis of Try-out Test

This discussion covered validity, reliability, level of difficulty and discriminating power.

1) Validity of Instrument

As mentioned in chapter III, validity refers to the precise measurement of the test. In this study, item validity was used to know the index validity of the test. To know the validity of instrument, the researcher used the Pearson product moment formula to analyze each item.

It was obtained that from 30 test items; there were 25 test items which were valid and 5 test items which were invalid. They were on number 2, 7, 11, 19,and 27. They were invalid with the reason the computation result of their r_{xy} value (the correlation of score each item) was lower than their r_{table} value.

The following was the example of item validity computation for item number 1 and for the other items would use the same formula.

$$N = 40 \qquad \sum Y = 810$$

$$\sum XY = 635 \qquad \sum X^2 = 29$$

$$\sum X = 29 \qquad \sum Y^2 = 18012$$

$$r_{xy} = \frac{N\sum XY - \sum(X)\sum(Y)}{\sqrt{\left\{N\sum X^2 - \left(\sum X\right)^2\right\}\left\{N\sum Y^2 - \left(\sum Y\right)^2\right\}}}$$

$$r_{xy} = \frac{40(635) - 29(810)}{\sqrt{\left\{40(29) - (29)^2\right\}\left\{40(18012) - (810)^2\right\}}}$$

$$r_{xy} = \frac{25400 - 23490}{\sqrt{(1160 - 841)(720480 - 656100)}}$$

$$r_{xy} = \frac{1910}{\sqrt{319 \times 64380}}$$

$$r_{xy} = \frac{1910}{\sqrt{20537220}}$$

$$r_{xy} = \frac{1910}{4531,800967}$$

$$r_{xy} = 0,42146599$$

From the computation above, the result of computing validity of the item number 1 was 0.421. After that, the researcher consulted the result to the table of r Product Moment with the number of subject (N) =40 and significance level 5% it was 0.312. Since the result of the computation was higher than r in table, the index of validity of the item number 1 was considered to be valid.

2) Reliability of Instrument

A good test must be valid and reliable. To get the coefficient of correlation, the researcher applied the *product-moment* formula and then continued to the *spearman-brown* formula. The formula of product moment as follow:

Before computing the reliability, the researcher had to compute *product moment* formula (r_{xy}) with the formula below:

N = 3 $\qquad\qquad \sum XY = 4510$

$\sum Y = 410 \qquad\qquad \sum X^2 = 4513$

$\sum Y^2 = 4632 \qquad\qquad \sum X = 409$

$$r_{xy} = \frac{N\sum XY - \sum(X)\sum(Y)}{\sqrt{\left\{N\sum X^2 - \left(\sum X\right)^2\right\}\left\{N\sum Y^2 - \left(\sum Y\right)^2\right\}}}$$

$$r_{xy} = \frac{16(4510) - (409)(410)}{\sqrt{\left\{16(4513) - (409)^2\right\}\left\{16(4632) - (410)^2\right\}}}$$

$$r_{xy} = \frac{150138 - 144965}{\sqrt{(146490 - 134689)(164122 - 156025)}}$$

$$r_{xy} = 0,8428$$

After finding *product moment* formula (r_{XY}) the computation was continued to the *spearman-brown* formula as follow:

$$r_{11} = \frac{2 \times r_{xy}}{\sqrt{1 + r_{xy}}}$$

$$r_{11} = \frac{2 x 0,843}{\sqrt{1 + 0,84}}$$

$$r_{11} = 0,915$$

From the computation above, it was found out that r_{11} (the total of reliability test) was 0.915 whereas the number of subjects was 40 and the critical value for r-table with significance level 5% was 0.312. Thus, the value resulted from the computation was higher than its critical value. It could be concluded that the instrument used in this research was reliable.

3) The level of Difficulty

The following was the computation of the level difficulty for item number 1 and for the other items would use the same formula.

R = 18+11

N = 40

$$FR = \frac{R}{N}$$

$$FR = \frac{29}{40}$$

$$FR = 0{,}73$$

It was proper to say that the index difficulty of the item number 1 above can be said as the medium category, because the calculation result of the item number 1 was in the interval $0.70 \leq FR \leq 1{,}00$

After computing 30 items of the try-out test, there were 12 items were considered to be easy, 18 items were considered to be medium, and there were no difficult test.

4) The Discriminating Power

The discrimination power of an item indicated the extent to which the item discriminated between the tested, separating the more able tested from the less able. The index of discriminating power told us whether those students who performed well on the whole test tended to do well or badly on each item in the test. To do this analysis, the number of try-out subjects was divided into two groups, upper and lower groups. They were upper and lower group.

Table 3

The Table of Discriminating Power of Item Number 1

Upper Group			Lower Group		
No	Code	Score	No	Code	Score
1	E-10	1	1	E-26	1
2	E-27	1	2	E-29	0
3	E-2	1	3	E-33	1
4	E-15	1	4	E-25	1
5	E-19	1	5	E-8	0
6	E-16	0	6	E-22	1
7	E-23	1	7	E-6	1
8	E-13	1	8	E-28	1
9	E-12	0	9	E-11	0
10	E-24	1	10	E-31	1
11	E-4	1	11	E-32	1
12	E-5	1	12	E-37	1
13	E-9	1	13	E-36	0
14	E-14	1	14	E-35	0
15	E-20	1	15	E-21	0
16	E-3	1	16	E-30	0
17	E-17	1	17	E-39	0
18	E-18	1	18	E-34	1
19	E-7	1	19	E-40	1
20	E-1	1	20	E-38	0
Jumlah		18	Jumlah		11

T : Try Out Student

The following was the computation of the discriminating power for item number 1, and for other items would use the same formula.

This was the analysis of discriminating power for item number 1:

n =20

U=18

L=11

$$D = \frac{Correct\ U - Correct\ L}{n}$$
$$D = \frac{18-11}{20}$$
$$D = \frac{7}{20}$$

D=0,35

According to the criteria, the item number 1 above was medium category, because the calculation result of the item number 1 was in the interval $0.20 \leq D \leq 0.40$.

After computing 30 items of try –out test and after being consulted to the discriminating power category, there were 12 items were considered to be easy, 18 items were enough good (medium).

Based on the analysis of validity, reliability, difficulty level, and discriminating power, finally 30 items of test, there were 12 items were accepted to be used in pre test and post test is considered easy. They were number 1,4,5,7,10,15,16,17,18,20,26,27. There were 18 items were accepted to be used in pre test and post test is considered medium. They were number 2, 3, 6, 8, 11, 12, 13, 14, 19, 21, 22, 23, 24, 25, 28, 29, 30.

b) **The Data Analysis of the Experimental class and the Control Class Pre test.**

Table 4
The list of the Experimental and Control Class Pre test Score
PRE TEST SCORE BETWEEN EXPERIMENTAL GROUP AND CONTROL GROUP

Experimental			Control		
No	Code	Score	No	Code	Score
1	E-01	64.00	1	C-01	68.00
2	E-02	64.00	2	C-02	84.00
3	E-03	60.00	3	C-03	68.00
4	E-04	64.00	4	C-04	76.00
5	E-05	64.00	5	C-05	60.00
6	E-06	76.00	6	C-06	72.00
7	E-07	68.00	7	C-07	76.00
8	E-08	72.00	8	C-08	64.00
9	E-09	64.00	9	C-09	60.00

10	E-10	68.00	10	C-10	64.00
11	E-11	72.00	11	C-11	68.00
12	E-12	72.00	12	C-12	72.00
13	E-13	68.00	13	C-13	72.00
14	E-14	68.00	14	C-14	72.00
15	E-15	64.00	15	C-15	52.00
16	E-16	76.00	16	C-16	64.00
17	E-17	80.00	17	C-17	64.00
18	E-18	72.00	18	C-18	68.00
19	E-19	76.00	19	C-19	64.00
20	E-20	60.00	20	C-20	64.00
21	E-21	76.00	21	C-21	60.00
22	E-22	76.00	22	C-22	72.00
23	E-23	76.00	23	C-23	76.00
24	E-24	60.00	24	C-24	76.00
25	E-25	76.00	25	C-25	64.00
26	E-26	72.00	26	C-26	68.00
27	E-27	80.00	27	C-27	64.00
28	E-28	52.00	28	C-28	72.00
29	E-29	60.00	29	C-29	68.00
30	E-30	68.00	30	C-30	84.00
31	E-31	68.00	31	C-31	72.00
32	E-32	60.00	32	C-32	64.00
33	E-33	64.00	33	C-33	60.00
34	E-34	68.00	34	C-34	60.00
35	E-35	68.00	35	C-35	76.00
36	E-36	64.00	36	C-36	68.00
37	E-37	64.00	37	C-37	76.00
38	E-38	56.00	38	C-38	60.00
39	E-39	56.00	39	C-39	68.00
40	E-40	64.00	34	C-40	76.00
$\square$	=	2700	$\square$	=	2736
n_1	=	40	n_2	=	40
$\overline{x}_1$	=	67.50	$\overline{x}_2$	=	68.40
$s_1{}^2$	=	46.9231	$s_2{}^2$	=	47.4256
s_1	=	6.850	s_2	=	6.887

1) The Normality of the Experimental Class Pre test

The normality test was used to know whether the data obtained was normally distributed or not. Based on the table above, the normality test:

Hypothesis:

Ha: The distribution list was normal.

Ho: The distribution list was not normal

Test of hypothesis:

The formula was used:

$$X^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

The computation of normality test:

Maximum score	= 80,00	N	= 40
Minimum score	= 52,00	Range	=28,00
K / Number of class = 6		Length of the class	= 4,7
$\sum x$	= 81,50	$\bar{x}$	= 67,5
S	= 6.9		

Table 5
The Frequency Distribution of the Experimental class pre test

Class Interval			x	Pz	P	z	Ei	Oi	$\frac{(O_i-E_i)^2}{E_i}$
52.00	-	56.00	51.50	-2.34	0.4902	0.0444	1.776	3	0.843
57.00	-	61.00	56.50	-1.61	0.4458	0.1364	5.455	5	0.038
62.00	–	66.00	61.50	-0.88	0.3095	0.2514	10.057	10	0.000
67.00	-	71.00	66.50	-0.15	0.0580	0.2784	11.136	8	0.883
72.00	-	76.00	71.50	0.58	0.2204	0.1852	7.407	12	2.847
77.00	-	81.00	76.50	1.31	0.4056	0.0740	2.958	2	0.310
			81.50	2.04	0.4795			40	
							χ^2 ☐ =		4.923

for a = 5%, dk = 6 - 3 = 3, c² table = 7.815
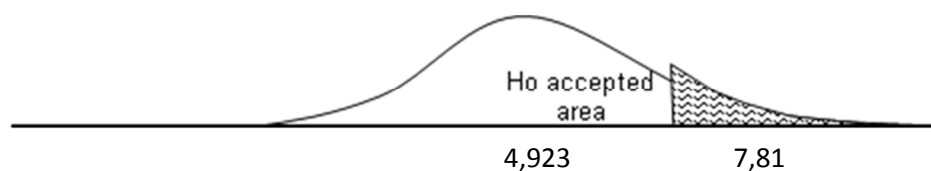
Because c² < 7,81 then the post test is said to be normally distributed

With α = 5% and dk = 6-3=3, from the chi-square distribution table, obtained X_{table} = 7.81. Because $X^2{}_{count}$ was lower than $X^2{}_{table}$ (4.923<7.81). So, the distribution list was normal.

2) The Normality of the Control Class Pre test

Hypothesis :

Ho: The distribution list was normal.

Ha: The distribution list was not normal.

Test of hypothesis:

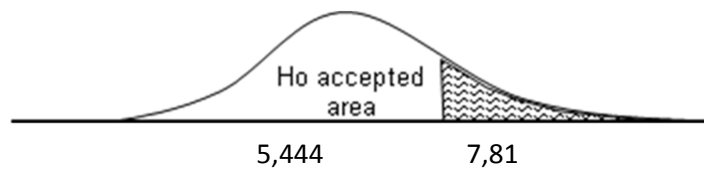The formula was used:

$$X^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

The computation of normality test:

Maximum score	= 84,00	N	= 40
Minimum score	= 52,00	Range	= 32,00
K/ Number of class	= 6	$\sum x$	= 68,4
Length of the class	= 6	$\bar{x}$	= 57

Table 6
The Normality of the Control Class Pre test

Class Interval			x	pz	P	Z	Ei	Oi	$\frac{(Oi-Ei)^2}{Ei}$
52.00	-	57.00	51.50	-2.45	0.4929	0.0497	1.987	1	0.490
58.00	-	63.00	57.50	-1.58	0.4433	0.1816	7.266	6	0.221
64.00	-	69.00	63.50	-0.71	0.2616	0.3251	13.003	17	1.229
70.00	-	75.00	69.50	0.16	0.0635	0.2853	11.411	7	1.705
76.00	-	81.00	75.50	1.03	0.3487	0.1227	4.908	7	0.892
82.00	-	87.00	81.50	1.90	0.4714	0.0258	1.032	2	0.908
			87.50	2.77	0.4972			40	
							c^2	=	5.444

for   a = 5%, dk = 6 - 3 = 3, c^2 table = 7.815

5,444	7,81

Because c² < 7,81 then the post test is said to be normallly distributed

With $\alpha = 5\%$ and dk = 6-3 = 3, from the chi-square distribution table, obtained X_{table} = 7.81. Because $X^2{}_{count}$ was lower than $X^2{}_{table}$ (5.444< 7.81). So, the distribution list was normal.

With $\alpha = 5\%$ and dk = (40-1 = 39): (40-1 = 39), obtained F_{table} = 1.0107. Because F_{count} was lower than F_{table} (1.0107 > 1.89). So, Ho was rejected and the two groups have not same variant / there is no **homogeneous.**

With $\alpha = 5\%$ and dk = 40 + 40 − 2 = 78, obtained t_{table} =1.66. Because t_{count} was lower than t_{table} (-0.586<1.66). So, Ho was accepted and there was no difference of the pre test average value from both groups.

c) **The Data Analysis of the Experimental Class and the Control Class Post-test Score.**

Table 7
The list of the Experimental and Control Class Post test score

Experimental			Control		
No	Code	Score	No	Code	Score
1	E-01	96.00	1	C-01	88.00
2	E-02	96.00	2	C-02	92.00
3	E-03	92.00	3	C-03	88.00
4	E-04	100.00	4	C-04	92.00
5	E-05	84.00	5	C-05	84.00
6	E-06	92.00	6	C-06	92.00
7	E-07	76.00	7	C-07	84.00
8	E-08	80.00	8	C-08	84.00
9	E-09	88.00	9	C-09	76.00

10	E-10	96.00	10	C-10	84.00
11	E-11	72.00	11	C-11	80.00
12	E-12	96.00	12	C-12	88.00
13	E-13	92.00	13	C-13	84.00
14	E-14	96.00	14	C-14	88.00
15	E-15	92.00	15	C-15	84.00
16	E-16	92.00	16	C-16	80.00
17	E-17	92.00	17	C-17	88.00
18	E-18	72.00	18	C-18	84.00
19	E-19	84.00	19	C-19	84.00
20	E-20	92.00	20	C-20	76.00
21	E-21	88.00	21	C-21	80.00
22	E-22	92.00	22	C-22	76.00
23	E-23	92.00	23	C-23	72.00
24	E-24	84.00	24	C-24	72.00
25	E-25	88.00	25	C-25	84.00
26	E-26	88.00	26	C-26	76.00
27	E-27	84.00	27	C-27	72.00
28	E-28	88.00	28	C-28	72.00
29	E-29	88.00	29	C-29	80.00
30	E-30	84.00	30	C-30	76.00
31	E-31	84.00	31	C-31	84.00
32	E-32	88.00	32	C-32	80.00
33	E-33	80.00	33	C-33	76.00
34	E-34	80.00	34	C-34	76.00
35	E-35	84.00	35	C-35	72.00
36	E-36	80.00	36	C-36	68.00
37	E-37	84.00	37	C-37	80.00
38	E-38	84.00	38	C-38	76.00
39	E-39	68.00	39	C-39	72.00
40	E-40	84.00	40	C-40	80.00
$\square$	=	3472.00	$\square$	=	3224.00
n_1	=	40	n_2	=	40
$\overline{x}_1$	=	86.80	$\overline{x}_2$	=	80.60
$s_1{}^2$	=	51.8564	$s_2{}^2$	=	39.8359
s_1	=	7.201	s_2	=	6.312

1) The Normality of the Experimental Class Post test

Based on the table above, the normality test:

Hypothesis :

Ho   : The distribution list was normal.

Ha   : The distribution list was not normal.

Test of hypothesis:

The formula was used:

$$\chi^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

The computation of normality test:

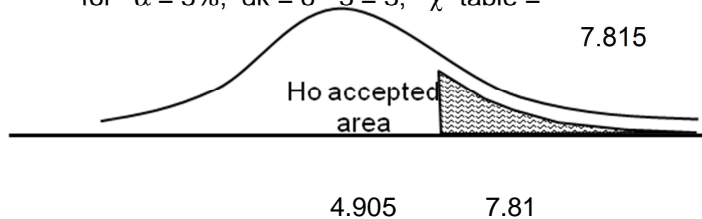|			
Maximum score	= 100,00	Range	= 32,00
Minimum score	= 68,00	N	= 40
K/ Number of class	= 6	Length of the class	= 5,3
$\sum x$	=100,50	$\bar{x}$	= 86,8
S	= 7,2		

Table 8

Frequency Distribution of the Experimental Class

x_i	f_i	$f_i\, x_i$	$(x_i - \bar{x})$	$(x_i - \bar{x})^2$	$f_i(x_i - \bar{x})^2$
60	1	60	-17.5	306.25	306.25
65	1	65	-12.5	156.25	156.25
70	6	420	-7.5	56.25	337.5
75	12	900	-2.5	6.25	75
80	13	1040	2.5	6.25	81.25
85	5	425	7.5	56.25	281.25
95	2	190	17.5	306.25	612.5
$\sum$	40	3100			1850

$$S = \sqrt{\frac{\sum f_i(x_i - \bar{x})^2}{n-1}} = \sqrt{\frac{1850}{40-1}} = 6.887$$

Table 9
The Normality of the Experimental Class Post test

Class Interval	x	pz	P	Z	Ei	Oi	$\dfrac{(Oi\text{-}Ei)^2}{Ei}$
65.00 - 70.00	64.50	-3.10	0.4990	0.0108	0.433	1	0.743
71.00 - 76.00	70.50	-2.26	0.4882	0.0645	2.580	3	0.068
77.00 – 82.00	76.50	-1.43	0.4237	0.1989	7.956	4	1.967
83.00 - 88.00	82.50	-0.60	0.2248	0.3181	12.724	17	1.437
89.00 - 94.00	88.50	0.24	0.0933	0.2642	10.569	9	0.233
95.00 - 100.00	94.50	1.07	0.3575	0.1139	4.557	6	0.457
	100,50	1.90	0.4714			40	
						χ^2 □ =	4.905

for α = 5%, dk = 6 - 3 = 3, χ² table =

7.815

Ho accepted area

4.905   7.81

Because χ² < 7,81 then the post test is said to be normallly distributed.

With α = 5% and dk = 6-3=3, from the chi-square distribution table, obtained X_{table} = 7.81. Because $X^2{}_{count}$ was lower than $X^2{}_{table}$ (4,905< 7.81). So, the distribution list was normal.

2) The Normality of the Control Class Post test

Hypothesis:

Ho   : The distribution list was normal

Ha   : The distribution list was not normal

Test of hypothesis:

The formula was used:

$$\chi^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

The computation of normality test:

Maximum score	=92,00	Range	=24,00
Minimum score	= 68,00	N	= 40
K / many class interval = 6		Length of the class	= 4,0

$$\sum x \qquad = 2690 \qquad \bar{x} \qquad = 80{,}6$$

$$S \qquad = 6{,}3$$

Table 10

The Normality of the Control Class Post test

Class Interval			x	Pz	p	z	Ei	Oi	$\dfrac{(Oi-Ei)^2}{Ei}$
68.00	-	71.00	67.50	-2.08	0.4810	0.0557	2.228	1	0.677
72.00	-	75.00	71.50	-1.44	0.4253	0.1349	5.394	6	0.068
76.00	–	79.00	75.50	-0.81	0.2905	0.2213	8.852	8	0.082
80.00	-	83.00	79.50	-0.17	0.0692	0.2462	9.849	7	0.824
84.00	-	87.00	83.50	0.46	0.1771	0.1858	7.432	10	0.887
88.00	-	92.00	87.50	1.09	0.3629	0.1075	4.298	8	3.188
			92.50	1.89	0.4703			40	
							χ^2 ⍰ =		5.726

for $\alpha = 5\%$, dk = 6 - 3 = 3, χ^2
table = 7.815
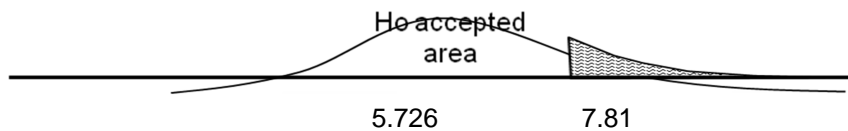
Because $\chi^2 < 7{,}81$ then the post test is said to be normallly distributed.

With $\alpha = 5\%$ and dk = 6-3 = 3, from the Chi-Square distribution table, obtained $X_{table} = 7.81$. Because $X^2{}_{count}$ was lower than $X^2{}_{table}$ (5,726< 7.81). So, the distribution list was normal.
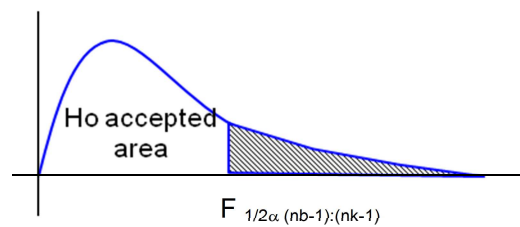
Hypothesis

$$Ho : \sigma_1^2 = \sigma_2^2$$

$$Ha: \sigma_1^2 = \sigma_2^2$$

The Calculation

Formula :

$$F \ = \ \frac{Vb}{VK}$$

Ho is accepted if $F \leq F_{1/2\alpha\ (nb-1):(nk-1)}$

$F_{1/2\alpha\ (nb-1):(nk-1)}$

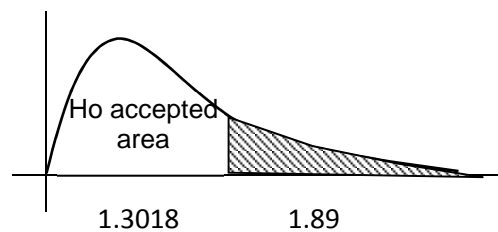|	Experimental	Control
Sum	3472	3224
n	40	40
— x	86.80	80.60
Variance (s^2)	51.8564	39.8359
Standart deviation (s)	7.20	6.31

$$F \ = \ \frac{51.86}{39.84} \ = \ 1.3018$$

For $a = 5\%$ with:
df1	=	n1 - 1	=	40 - 1	=	39
df2	=	n2 - 1	=	40 - 1	=	39

$F_{(0.025)(39:39)}$ = 1.89

1.3018   1.89

Since F value < F table, the experimental and control group have the sama variance
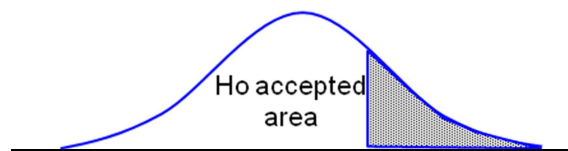
With $\alpha = 5\%$ and dk = (40-1=39) :(40-1=39), obtained F_{table} =1,89. Because F_{count} was lower than F_{table} (1.89 < 1,3018). So, Ho was accepted and the two groups have same variant/ **homogeneous.**

2. **The Hypothesis Test**

In this research, because $\sigma_1^2 = \sigma_2^2$ (has same variant), the t-test formula was as follows:

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}} \qquad S^2 = \frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2}$$
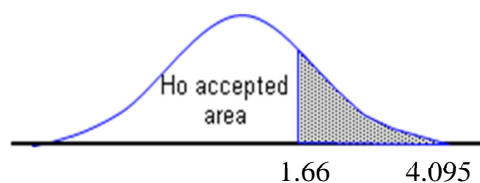
Ho is accepted if $t > t_{(1-\alpha)(n1+n2-2)}$

Ho accepted area

	Experimental	Control
Sum	3472	3224
N	40	40
$\overline{x}$	86.80	80.60
Variance (s^2)	51.8564	39.8359
Standart deviation (s)	7.20	6.31

$$s = \sqrt{\frac{(40-1)51.86 + (40-1)39.84}{40 + 40 - 2}} = 6.77098$$

$$t = \frac{86.80 - 80.60}{6.77098\sqrt{\dfrac{1}{40} + \dfrac{1}{40}}} = 4.095$$

For a = 5% and dk = 40 + 40 - 2 = 78, $t_{(0.95)(78)} = 1.66$

Ho accepted area

1.66   4.095

Since t value > t table mean there is a significant difference between experimental and control class on the test the experimental is higher than the control one

From the computation above, by 5% alpha level of significance and dk = 40+40-2=38. Obtained t_{table} was 1.66 while t_{count} was 4.095 So, can be concluded Ho was rejected because t_{count} was higher than the critical value on the t_{table} (4.095 >1.66).

From the result, the hypotheses in this research can be concluded that there was a significance difference in vocabulary achievement score between experimental class taught using Song and control class without taught using song.

C. **Discussion of the Research Findings**

Before giving the treatment, the researcher checked the balance of the students' initial ability of both classes. The data used to test the balance was the score of pre-test. Analysis of initial data was conducted through normality test that aimed at showing whether the data is normally distributed or not. This can be seen from the normality test with chi-square, where $X^2_{count} < X^2_{table}$, α = 5 %, dk = 3.

On the normality test of pre-test of the experimental class, it can be seen X^2_{count} (4.923) $< X^2_{table}$ (7.81) and the control class X^2_{count} (5.444) $< X^2_{table}$ (7.81). Since homogeneity test shows F_{count} (1.0107) $< F_{table}$ (1.89), it can be concluded that the two classes is homogeneous. Based on the analysis of t-test at the pre-test, it is obtained t_{count} = -0.686 with t_{table} = 1.66 which proves that there is no difference of the average of pre-test between both classes.

The normality test of post-test of experimental class results X^2_{count} (4.904) $< X^2_{table}$ (7.81) and control class results X^2_{count} (4.904) $< X^2_{table}$ (7.81). The post-test demonstrate that the hypothesis of those classes is normal on the distribution. It is proved with F_{count} (1.3018) $< F_{table}$ (1.89) from the homogeneity test that had the same variant.

From the last phase of the t-test, it is obtained t_{count} = 4.095 with t_{table} = 1.66 with the standard of significant 5%. Because of t_{count} > t_{table} = (4.095 > 1.66) so the hypothesis is accepted. It means that using song in teaching vocabulary is effective.

Song has some positive influences for the students in improving vocabulary achievement. There were some reasons why the students can improve their vocabulary by using song. They were as follows:

1. By using song, students will have encouragement and curiosity to find out the meaning of unfamiliar words. Students should create advertisement and announcement by using their own words.

2. By using song, students can learn advertisement and announcement by mastering many vocabularies relaxed. In the learning process, teacher should be resource in determining the classroom setting in order to make students focus on the lesson.

3. The use of song in Junior High School can give opportunities for students to study advertisement and announcement. It offers some opportunities for learning vocabulary more and more, so students are not only can make advertisement and announcement, but also they can understand many vocabularies.

4. Based on the result of tests that had been done, it could be explained that using song in the process of learning English at VII A students of SMPN 16 Semarang could help students' understanding on vocabulary. In this case, students should create advertisement and announcement into song. It enabled students to be able to master the material related to vocabulary because they were involved directly.

Meanwhile, teaching learning process in the control class was implemented through lecturing using text or classical way. In this process, the teacher explained the material using text. At the beginning of the process, the students were given a pre-test to know the students' ability. Then, the students just sat and paid attention to the teacher's explanation. However, students felt

saturated with the material presented by the teacher because there were no interesting ways were used in teaching learning process.

The result of the research shows that the experimental class (the students who were taught using song) has average score 77.5. Meanwhile, the control class (the students who were taught without using song) has average score 67.25. It can be said that the vocabulary understanding in announcement and advertisement score of experimental class was higher than the control class. It means that there was a significant difference of the vocabulary score between students taught using Song and those taught without Song.

On the other hand, the test of hypothesis using t-test formula shows the value of the t-test is higher than the critical value, $t_{count} > t_{table}$ (t_{count} higher than t_{table}). The value of t-test is 7.10, while the critical value on $t_{s0,05}$ is 1.98, the hypothesis is accepted.

In this research, the researcher used the song to improve the vocabulary achievement at the seventh grade of SMPN 16 Semarang in the academic year of 2011/ 2012. So, the research findings were only representative in that school. The researcher hopes that more researches will be done by the others to prove this method in improving students' vocabulary and to find out other methods in learning and teaching English.

D. Limitations of the Research

The researcher realizes that this research had not been done optimally. There were constraints and obstacles faced during the research process. Some limitatitions of this research were:

1. Relative short time of research makes this research could not be done maximum.
2. The research was limited at SMPN 16 Semarang in the academic year of 2011/ 2012. So that when the same research will be gone in other schools, it was still possible to get different result.
3. The implementation of the research process was less smooth; this was more due to lack of experience and knowledge of the researcher.

Considering all those limitations, there was a need to do more research about teaching vocabulary using song. However, this research might give a broader overview to everyone toward the importance of using song in teaching vocabulary was appropriate. Moreover, the result of this research could be a basic reference for any future research related to kinds of vocabularies based on short functional text (announcement and advertisement).