

III. ANALYSIS AND DISCUSSION

3.1 Findings

3.1.1 Try-out Instrument

The try out test was administered to select the good items with item analysis. In the item analysis, the validity and reliability had also been tested. Here are the steps in analyzing the test:

- 1) Arrange the score from the highest to the lowest score. The result is 17, 18, 18, 18, 20, 20, 20, 22, 23, 23, 24, 24, 24, 24, 24, 24, 24, 24, 25, 25, 25, 25, 25, 26, 26, 26, 26, 26, 27, 27, 27, 28, 29, 30, 30, 30, 31, 33.
- 2) Analyze the difficulty index of each item. The difficulty index of item number 1 is:

$$P = \frac{32}{37} = 0,864 = 0,86$$

Based on the interpretation of the difficulty index, if P 0. 70 – 1.00, means the item no. 1 is easy. Item number 2- 40 were calculated with the same formula. The results are:

- Item number 1, 2, 3, 4, 8, 9, 11, 12, 13, 15, 16, 21, 24, 25, 27, 30, 33, 36, 37 were categorized easy.
- Item number 6, 10, 17, 18, 19, 22, 23, 26, 28, 31, 32, 34, 35, 38, 40 were categorized good.
- Item number 5, 7, 14, 20, 29, 39, were categorized difficulty.

- 3) Determining the upper and lower group by calculating 27% from the testee. Each group consists of 10 testee.

Table 3.1 The Upper and Lower group

no	Upper group		No	Lower group	
	Students	Score		Students	Score
1.	Tiara	33	1.	Dinda	17
2.	Mia	31	2.	Mega	18
3.	Indra	30	3.	Nurul	18
4.	M Hafid	30	4.	Tessa	18
5.	Salma	30	5.	Sintia	20
6.	Irfan	29	6.	Prasti	20
7.	Redi	28	7.	Vradly	20
8.	Deni	27	8.	Aditya	22
9.	M Fajar	27	9.	Novita	23
10.	R Mikal	27	10.	Firsa	23

Analyzing the discrimination index of each item. For example the discrimination

Index no. 1 is $D = \frac{8}{10} - \frac{9}{10} = 0.8 - 0.9 = 0.1$

Based on the interpretation of the discrimination index if D 0.00 – 0.20, the item is poor. It means that item number 1 is poor. The item no 2 – 40 were calculated with the same formula. The discrimination index of each item is:

- Item number 1, 4, 7, 12, 13, 14, 17, 21, 24, 29, 35 were categorized poor.
- Item number 2, 3, 8, 19, 20, 25, 27, 30, 31, 32, 34, 38, 40 were categorized good.
- Item number 5, 39 were categorized thrown away, means that this two item couldn't use for the pretest and post-test.
- Item number 6, 9, 10, 15, 16, 22, 23, 26, 28, 33, 36, 37 were categorize satisfaction.
- Item number 11, 18 were categorized excellent.

3.1.1.1 The Validity Items

The point biserial correlation is used in determining the validity of each item, and continued with the significant correlation using students distribution formula on the significant level $\alpha=0.05$ and the degree of freedom (Df) we got = $37 - 2 = 35$. The T_{table} in this instrument is 2.042. For example, item number 1 has the value of $t_{obs} = 1.106$ and the value of t_{table} is 2.042 the result showed that t_{obs} is less than t_{table} ($1.106 < 2.042$), it

means that item number 1 is invalid. The rest numbers results were calculated with the same formula.

3.1.1.2 The Reliability of the Test Instrument

In determining the reliability of the test, split half method was used. First table the items were divided into two halves, the odd-numbered became one half and the even-numbered became the other half. Then, correlated the scores of the students on the two halves of the test.

Using the Pearson product moment formula, we got the value of half test is 2.880. Then to get the full test of reliability we used Spearman-Brown formula, and we got r-value as $t_{obs} = 1.4845$. The value of t_{obs} was compared with r product moment as t_{table} on significant level $\alpha=0.05$ and the degree of freedom (df) = $37 - 2 = 35$; $r_{(0.05;35)}$ as t_{table} is 0.3246. The result showed that t_{obs} is greater than t_{table} ($1.4845 > 0.3246$), it means that the test is reliable.

3.1.2 The Pretest and Post-test between Experimental and Control Group

3.1.2.1 The Experimental Group and Control Group Pretest

The pretest was conducted to both groups in order to know student's vocabulary background. According to Sujana (1989) the comparing test of mean between Experimental and Control Group which is calculated by using statistical analysis (t-test), requires the investigation on the normal distribution assumption. The normality distributions of the pretest result of the two groups have to be calculated. The researcher used Kolmogorov-Smirnov SPSS programs to find out whether the pretest scores of the two groups are normally distributed or not. The results were:

Table 3.2 the Normality distribution of pretest

Group	P-Level	Asymp.Sig. (2-tailed)	Data Distribution
Experimental group	0.05	0.417	Normal
Control Group		0.662	

From the table above, the value of probability of each group is more than the alpha level 0.05. It means that the two groups have the normal distribution. Then we investigated the homogeneity variance of the scores. The researcher used the F-test to examine the homogeneity of variance. The hypothesis that is going to be used is H_0 (the data of both groups have the same variance), the result were:

Table 3.3 the Homogeneity Variance of pretest

Group	Df	P-level	$F_{observe}$	$F_{critical}$
Experimental group	36	0.05	0.914	1.78
Control Group	37			

The table showed that the variance is homogenous, because $F_{observe}$ is less than $F_{critical}$, see the appendix for the calculation.

After we find out the homogeneity variance of the two groups pretest score, now we compare the mean difference between the experimental and control group. The researcher used the Independent T-Test in SPSS program. Here are the results:

Table 3.4 Experimental and control group pretest result

Group Statistics

	Students Group	N	Mean	Std. Deviation	Std. Error Mean
Pretest Result	Experimental Group	37	17,38	3,601	,592
	Control Group	38	16,39	3,405	,552

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pretest Result	Equal variances assumed	.338	.563	1,216	73	.228	.98	.809	-.629	2,596
	Equal variances not assumed			1,215	72,505	.228	.98	.810	-.630	2,597

From the table above, it showed the value of probability is greater than alpha level ($0.228 > 0.05$), it means that the null hypothesis is accepted. In addition, we can say that the two group are equal because there is no difference between \bar{X}_e and \bar{X}_c .

3.1.2.2 The Experimental Group and Control Group Posttest

The posttest conducted in order to find out the student's achievement to the treatment given. To analyze the data from the Experimental and control Group, the steps are the same with pretest data. Before analyzing the hypothesis, first table we have to determining the normal distribution. By using the Kolmogorov-Smirnov Program in SPSS. The result was showed in the following table:

Table 3.5 the Normality distribution of posttest

Group	P-Level	Asymp.Sig. (2-tailed)	Data Distribution
Experimental group	0.05	0.566	Normal
Control Group		0.668	

Based on the table above, the value of probability of each group is more than the alpha level (0.05). It means that the experimental and the control groups have normal distribution.

To determine the homogeneity of variance, F-test was used. The results are:

Table 3.6 the Homogeneity Variance of posttest

Group	Df	P-level	F _{observe}	F _{critical}
Experimental group	36	0.05	1.64	1.78
Control Group	37			

The table showed that $F_{observe}$ is less than $F_{critical}$ ($1.64 < 1.78$), means that the variance of the score is homogeneous (see appendix for further information).

Then to find out the difference between the experimental and control group, the independent t-test was used. The results are:

Table 3.7 Experimental and Control Group Posttest result

Group Statistics

Students Group		N	Mean	Std. Deviation	Std. Error Mean
Posttest Result	Experimental Group	37	20,43	3,042	,500
	Control Group	38	17,37	3,914	,635

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Posttest Result	4,042	,048	3,778	73	,000	3,06	,811	1,448	4,680
Equal variances assumed									
Equal variances not assumed			3,791	69,610	,000	3,06	,808	1,452	4,676

The result above showed that the value of the probability is less than the alpha level ($0.000 < 0.05$). Means that the null hypothesis is rejected and the alternative hypothesis accepted, and there is a difference between \bar{X}_e and \bar{X}_c .

3.1.3 Comparing the Experimental and Control Group Means

3.1.3.1 The Experimental Group Means

In this study, we also have to compare the two means between the two groups after we determining the difference of two means between the Experimental and Control Group. Here is the result:

Table 3.8 the Experimental Group Mean Scores

Group	N	Means	
		Pretest	Posttest
Experimental Group	37	17.38	20.43

This research conducted to find out whether songs could increase student's vocabulary mastery. From the table above, we can see that there is a significant difference between the two means score on the experimental group, means that the experiments are worked. Still it has to prove, and to determine it matched T-test in the SPSS program was used. The computation result of the matched T-test in the experimental group is:

Table 3.9 Experimental group Matched T-test Result

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Test before treatment	17,38	37	3,601	,592
Test after treatment	20,43	37	3,042	,500

Paired Samples Correlations

	N	Correlation	Sig.
Pair 1 Test before treatment & Test after treatment	37	,489	,002

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 before treatment - Test after treatment	-3,05	3,391	,557	-4,18	-1,92	-5,479	36	,000

If the probability scores are less than the alpha levels at 0.05, we can reject the null hypothesis and accepted the alternative hypothesis. Furthermore the table above showed that the scores of probability is less than the alpha level ($0.000 < 0.05$). It means that there is a difference between two mean scores of pretest and posttest of the same groups, and rejected the null hypothesis which is stated that there is no difference score mean between pretest and posttest of the experimental group.

3.1.3.2 The Control Group Means

The result of the control group means scores are:

Table 3.10 the Control Group Mean Scores

Group	N	Means	
		Pretest	Posttest
Control Group	38	16.39	17.37

The paired data was investigated to know whether there is a difference between the two means score of the control group. Matched t-test also used to determine it. Here are the results:

Table 3.11 Control Group Matched T-test Result

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Test before treatment	16,39	38	3,405	,552
	Test after treatment	17,37	38	3,914	,635

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Test before treatment & Test after treatment	38	,082	,624

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 before treatment - Test after treatment	-.97	4,973	,807	-2,61	,66	-1,207	37	,235

The table above showed that the probability value is more than the alpha level ($0.235 > 0.05$), so the null hypothesis is accepted. It means that in the control group there is no difference between the two means score.

3.2 Discussion

The research is conducted to find out the effectiveness of songs in increasing students' vocabulary. In the beginning of this research both groups' (Experimental and Control Group) vocabulary knowledge were relatively the same, but then after some treatments the result showed that both groups vocabulary achievement were different.

The hypothesis of the study is that there are significant differences between the experimental group and the control group. From the previous computation by using independent t-test in SPSS program, the mean difference between the experimental and control group was 3.06. The result showed that there is a difference between the two groups. It means that the alternative hypothesis is accepted and the null hypothesis is rejected. This evidence indicates that the hypothesis of the study is accepted and answers the first research problem.

The findings showed that experimental group achieved better than the control group. This is because the vocabulary teaching the researcher brought to the class was totally different from what their English teacher who usually tends to teach in conventional ways, in which students have to write in their book and then memorize every new words. Rahman (2001) says that traditional learning approach has an

assumption that the students have the same need, they learn in the same way and at the same time, in an orderly class, and they are always supervised by teacher.

In other words, this approach is dull because the students cannot explore their language skills. As a matter of fact, an English class should cater the students' needs and interests in order to motivate the students to develop their language skill such as speaking, listening, reading, and writing.

Creating an enjoyable learning atmosphere is necessary nowadays since the students' achievement in learning process are also affected a lot by the teachers' technique in teaching. Moreover, the researcher believes that the more creative the method the teachers bring to the classroom the more it will affect the purpose of teaching and learning process itself. As Duke (2004) states that the teacher couldn't neglect the function of media since it affects the learning process achievement, and what could be better than studying vocabulary by listening to our favorite songs because almost everyone loves music.

Through the activities in listening song, students subconsciously could enrich their vocabulary. According to Santoso (1996) “ *dengan sedikit meluangkan waktu memahami makna syair sebuah lagu siswa sekaligus dapat memperkaya perbendaharaan kata, mengenal idiom serta gaya pengungkapan baru dalam tata bahasa.*” Furthermore, many songs present excellent opportunities for improving vocabulary, some people simply like to play songs and then elicit the words line by line and verse by verse, singing each verse as it is learned.

At the end of the research, the researcher distributed questionnaire to the experimental group in order to look for the students' responses toward the use of song in

vocabulary teaching. Based on the questionnaire result, most of the students' love listening English songs and 52% of the respondents say they prefer listening pop songs to listening other kinds of music. Moreover, 86% of the respondents believe that by listening to song can enrich their vocabulary since learning English through song is fun. They responded positively to the treatment, 95% of the respondents say that their vocabulary increased after the treatment. This fact answers the second research problem, the students have a positive response toward song for vocabulary teaching.

Based on the two previous facts above about the research findings, we may conclude that teaching vocabulary through songs can help increasing the students' vocabulary. According to the result of the two groups, we can see that the experimental group (the group which is given special treatment) had high scores, meanwhile control group which did not get any treatment had lower scores. It means that the experimental group could increase their vocabulary achievement better than the control group. In conclusion the treatment works.

In conducting the research, the researcher faced some obstacles during teaching and learning processes. The first difficulty is in conducting the experiment, at the first day of the experimental the class situation was not conducive because the students were so enthusiastic with such method in learning vocabulary. This condition is also affected by researcher's lack of experience in controlling the class, but after some affective approaches given, the students were finally cooperative.

Another obstacle is in looking for the appropriate song as a media, because the researcher has to consider some aspects such as modernity, easy listening melody, and also the theme of the song. However, all obstacles could be overcome.

In short, by giving songs as the alternative way in teaching vocabulary, could help students to learn vocabulary in a real context since it easy to follow and understand without causing misinterpretation. Monreal (1999) says that song will make the students and teacher relax and have fun. It can be inferred that giving the variation on vocabulary teaching and learning could increase the students' ability in tapping the new word. Once an activity captures their interests, they may be willing to learn

