

## **CHAPTER IV**

### **THE DATA PRESENTATION AND DISCUSSION**

In this chapter, the writer presents and analyzes all of the data that was collected from the research. They are include; the application of using song at MAN Lamongan, the effect of using song on students' speaking ability at MAN Lamongan which presents the statistic calculating such as; calculating the normality test, the homogeneity test, the differences between means with t-test.

#### **A. The Application of Using Song at MAN Lamongan**

The writer applied the English songs in MAN Lamongan, in second grade of IPA class, it limits to the XI IPA 3 as experiment group. The writer gave three treatments to the class by using English songs as a mean of teaching and learning. These songs are presented during the teaching and learning. The writer used popular songs with good lyrics and the easy topic in order to be easy received by students. Further explanation as follows:

1. Treatment I (May 12, 2009)

Topic: Love

Sub-topic: a desire to meet boy/girlfriend

Below the following the steps:

- The teacher gave print of the song lyric and then introduced the topic that would be discussed in the day
- The teacher played the song at three-five times
- The teacher explained the difficult words
- The teacher divided students into pairs
- The teacher asked pairs to correct the pronunciation

## 2. Treatment II (16 May, 2009)

Topic: Love

Sub-topic: Loyal to boy/girlfriend

Title of the song: You are still the one (by Shania Twain)

Below the following steps:

- Teacher gave print out of the song lyric and then introduced the topic that would be discussed in the day
- The teacher played the song at three-five times
- The teacher explained the difficult words
- The teacher asked students to make short conclusion from that song
- The teacher asked students to retell in front of the class

## 3. Treatments III (19 May, 2009)

Topic: Love

Sub-topic: disappoint to boy/girlfriend

Title of the song: The day you went away (by M2M)

Below the followings steps:

- Teacher gave print out of the song lyric and then introduce the topic that would be discussed in the day
- The teacher played the song at three-five times
- The teacher explained the difficult words
- The teacher divided students in groups
- The teacher asked groups to discuss about the topic.

For further explanation, the writer has done the research in MAN Lamongan in a month, there are three times for teaching and learning activities for each groups and one meeting for doing the test. In doing research, the writer gave several treatments to the experiment class, while the control class get the lesson as usual. The topic lessons, teacher, and the test were same, but the method of teaching was different, song used in the experimental group but not for control group. The writer made three lesson plans for each group.

After giving the treatments to the experiment group and giving lesson the control group as usual, the writer gave the test for both groups. The test designed as discussion and presentation. The students divided into five groups and each contains five or six students. The topic discussion is about love globally, and it was determined by the writer with the English teacher of the school. The time for

discussion is forty minutes. After discussion, each group must present their result of discussion. The time for presentation is ten minutes for each group.

To score the students, the writer made her own standard, but it was accordance to the FSI scale. For each criteria such as accent, grammar, vocabulary, and comprehension are fitted to the Indonesian school. Absolutely, the ability to speak English is different with foreign language standard, it means that the ability's level in Indonesia is under from foreign level. The writer used the criteria from the lowest and to the highest (1-3) as follows:

Level	Criteria (Accent)	Score
1	Pronunciation unintelligible, difficult to understand	3
2	Occasional mispronunciation	7
3	No conspicuous mispronunciation	10
<b>Total</b>		<b>20</b>

Level	Criteria (Grammar)	Score
1	Grammar almost entirely inaccurate	3
2	Occasional error causing irritation and misunderstanding	7
3	Few error with no pattern of failure during presentation	10
<b>Total</b>		<b>20</b>

Level	Criteria (Vocabulary)	Score
1	Vocabulary inadequate for even the simplest presentation	3

2	Choice of words sometimes inaccurate and limitation vocabulary	7
3	Vocabulary apparently as accurate and extensive	10
<b>Total</b>		<b>20</b>

<b>Level</b>	<b>Criteria (Fluency)</b>	<b>Score</b>
1	Speech is fragmentary, very slow and uneven except for short or routine sentence	3
2	Speech is frequently hesitant and sentences uncompleted	7
3	Speech is smooth during presentation	10
<b>Total</b>		<b>20</b>

<b>Level</b>	<b>Criteria (Comprehension)</b>	<b>Score</b>
1	Understand too little and very slow for the simplest type of presentation	3
2	Understand quite well normal educated speech directed to him/her, but requires occasional repetition or rephrasing	7
3	Understand everything in normal educated presentation except for very colloquial or low-frequency items, or exceptionally rapid or slurred speech	10
<b>Total</b>		<b>20</b>

The writer determined the score of each criteria with “20” and if it summed up, so the score would be “100”.

#### **B. The Effect of Using Song on Students’ Speaking Ability at MAN Lamongan**

We can see from the student' final score, that the effect of using song on st is very good, it points that they are very enthusiast and more confident to speak English and we have known from the score of experiment class that use song is better than the control class that does not use song. The details statistic calculating also points the same result. For further explanation as follows:

### C. The Data Analysis

After doing the research, the writer analyzed the data were collected, then described and analyzed the results by using statistic test. The statistic tests that used are *the normality, the homogeneity and the differences between means*. The explaining as follows:

#### 1. The Calculating of Normality Test

##### a. Experiment Class

- Making list of Frequency Distribution

No	Score	f	fi
1	40	2	80
2	47	2	94
3	50	2	100
4	56	2	112
5	60	2	120
6	65	2	130

7	70	3	210
8	76	3	228
9	80	3	240
10	87	3	261
11	90	3	270

- Calculating the mean

$$\begin{aligned}\bar{x} &= \frac{\sum_{i=1}^n x_i}{n} \\ &= \frac{(40)+(40)+(47)+(47)+(50)+(50)+(50)+(56)+(56)+\dots+(90)}{27} \\ &= \frac{1845}{27} \\ &= 68,33 \rightarrow \mathbf{68}\end{aligned}$$

- Calculating standard deviation

$$\begin{aligned}s^2 &= \frac{\sum (x_i - \bar{x})^2}{n-1} \\ &= \frac{2(40-65)^2 + 2(47-65)^2 + 2(50-67)^2 + 2(56-65)^2 + \dots + 3(90-65)^2}{27-1} \\ &= \frac{2(-28)^2 + 2(-21)^2 + 2(-18)^2 + 2(-12)^2 + \dots + 3(22)^2}{27-1} \\ &= \frac{2(784) + 2(441) + 2(324) + 2(144) + \dots + 3(484)}{27-1} \\ &= \frac{1568 + 882 + 648 + 288 + \dots + 1452}{26} \\ &= \frac{6703}{26}\end{aligned}$$

$$= \sqrt{257,80}$$

$$= 16,05 \rightarrow \mathbf{16}$$

- Determining the observation and expectation frequency list

The procedure as the following:

- Determining range

$$= \text{biggest score} - \text{smallest score}$$

$$= 90 - 40$$

$$= \mathbf{50}$$

- Determining many interval class (k)

$$= 1 + 3,3 \log (n)$$

$$= 1 + 3,3 \log (27)$$

$$= 1 + 3,3 (1,43)$$

$$= 1 + 4,719$$

$$= \mathbf{5,719} \text{ (can take 5 or 6), take } \mathbf{6}$$

- Determining high interval class

$$= \frac{\text{Range}}{\text{Many interval classes}}$$

$$= \frac{50}{6}$$

$$= 8,33 \text{ (take } \mathbf{8})$$

- Determining under limits ( $X_i$ ) of each interval

$$40 - 0,5 = 39,5 \dots \text{and so on}$$

- Calculating standard number ( $Z_i$ ) of each interval

$$Z \text{ table} = Z_{-2,20} - Z_{-1,79} = 0,4625 - 0,4099 = 0,0526 \text{ and so on}$$



Interval Class	Limits Cass	Z Limit Class	Area Z Table	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
40-46	39,5	-1,78	0,0526	1,4202	2	0,2366
	46,5	-1,34				
47-53	53,5	-0,90	0,094	2,538	4	0,8421
	60,5	-0,46				
54-60	67,5	-0,03	0,1652	4,4604	2	1,3571
	74,5	0,40				
61-67	81,5	0,84	-0,2403	-6,4881	6	-24,0367
	88,5	1,28				
68-74	95,5	1,71	-0,0607	-1,6389	3	-13,1303

- Determining hypothesis

$H_0$  = Samples is from distributes normal

$H_i$  = Samples is from population does not distribute normal

- Determining alpha ( $\alpha$ ) = 0,01

- Calculating the value of  $X^2$  by chi square

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

$$= 0,2366 + 0,8421 + 0,0173 + 1,3571 + -12,1962 + -24,0367 + -12,0632 + -13,1303$$

$$= \mathbf{-58,9733}$$

Therefore:  $X (1 - \alpha) (k-3)$

$$= (1-0,01) (8-3)$$

$$= (0,99) (5) = \mathbf{15,0863}$$

- Concluding

The writer can take conclude that  $(-58,9733 < 15,0863)$ , it means  $H_0$  received samples is from population distributes normal.

b. Control Class

- Making list of Frequency Distribution

No	Score	F	fixi
1	40	6	240
2	47	6	282
3	50	3	150
4	56	3	168
5	60	4	240
6	65	3	195
7	70	1	70
8	76	1	76
9	80	1	80

- Calculating the mean

$$\begin{aligned}\bar{x} &= \frac{\sum_{i=1}^n x_i}{n} \\ &= \frac{(40)+(40)+(40)+(40)+(40)+(40)+(47)+(47)+(47)+\dots+(80)}{28} \\ &= \frac{1501}{28} \\ &= 53,60 \rightarrow \mathbf{54}\end{aligned}$$

- Calculating standard deviation

$$\begin{aligned}s^2 &= \frac{\sum (x_i - \bar{x})^2}{n-1} \\ &= \frac{6(40-55) + 6(47-55) + 3(50-55) + 3(56-55) + \dots + 1(80-55)}{28-1} \\ &= \frac{6(-9)^2 + 6(-2)^2 + 3(1)^2 + 3(1)^2 + \dots + 1(31)^2}{28-1} \\ &= \frac{6(81) + 6(4) + 3(1) + 3(1) + 1(961)}{28-1} \\ &= \frac{(486) + (24) + (3) + (147) + \dots + (961)}{28-1} \\ &= \frac{4043}{27} \\ &= \sqrt{149,74} \\ &= 12,23 \rightarrow \mathbf{12}\end{aligned}$$

- Determining the observation and expectation frequency list

The procedure as the following:

- Determining range

$$= \text{biggest score} - \text{smallest score}$$

$$= 80 - 40$$

$$= \mathbf{40}$$

- Determining many interval class (k)

$$= 1 + 3,3 \log (n)$$

$$= 1 + 3,3 \log (28)$$

$$= 1 + 3,3 (1,44)$$

$$= 1 + 4,752$$

$$= \mathbf{5,752} \text{ (can take 5 or 6), take } \mathbf{6}$$

- Determining high interval class

$$= \frac{\text{Range}}{\text{Many interval classes}}$$

$$= \frac{40}{6}$$

$$= \mathbf{6,66} \text{ (can take 6 or 7), take } \mathbf{6}$$

- Determining under limits ( $X_i$ ) of each interval

$$40 - 0,5 = 39,5 \dots \text{and so on}$$

- Calculating standard number ( $Z_i$ ) of each interval

$$Z \text{ table} = Z_{-1,32} - Z_{-0,76}$$

$$= 0,3849 - 0,2324 = 0,1525 \dots \text{and so on}$$

Interval Class	Limits Cass	Z Limit Class	Area Z Table	Ei	Oi	$\frac{(O_i - E_i)^2}{E_i}$
40-46	39,5	-1,20	0,1525	4,27	6	0,7009
	46,5	-0,62				
47-53	53,5	-0,04	0,2164	6,0592	9	1,4273
	60,5	0,54				
54-60	67,5	1,12	-0,1632	-4,5696	3	-12,5391
	74,5	1,70				
61-67	81,5	2,29	-0,0868	-2,4304	1	-4,8418
68-74			-0,0336	-0,9408	2	-9,1924
75-81						

a. Determining hypothesis

$H_0$  = Samples is from distributes normal

$H_1$  = Samples is from population does not distribute normal

b. Determining alpha ( $\alpha$ ) = 0,01

c. Calculating the value of  $X^2$  by chi square

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

$$= 0,7009 + 1,4273 + -28,5428 + -12,5391 + -4,8418 + -9,1924$$

$$= -52,9879$$

$$\begin{aligned}
\text{Therefore: } X (1 - \alpha) (k-3) \\
&= (1-0,01) (6-3) \\
&= (0,99) (3) = \mathbf{11,3449}
\end{aligned}$$

d. Conclusion

The writer can conclude that  $(-52,9879 < 11,3449)$ , it means that  $H_0$  received samples is from population distributes normal.

2. *The Calculation of Homogeneity Test*

The writer, used hypothesis test of two populations before using homogeneity test, the steps as follows:

a. Formulating hypothesis

$H_0$  = Samples is from that has variants homogeneity

$H_i$  = Samples is from that has not variants homogeneity

b. Determining alpha ( $\alpha$ )

$$\alpha = 0,05$$

c. Calculating test statistic

$$\text{We have known that } \bar{x}_1 = \frac{1845}{27} = \mathbf{68} \quad \bar{x}_2 = \frac{1501}{28} = \mathbf{54}$$

$$\bar{s}_1 = \mathbf{16} \quad \bar{s}_2 = \mathbf{12}$$

$$F = \frac{s_{big}^2}{s_{small}^2}$$

$$= \frac{16^2}{12^2}$$

$$= \frac{256}{144}$$

$$= 1,77$$

$$F_{\text{tab}} = 0.05; 26, 27 = 1,68$$

d. Concluding

. The writer can conclude that  $(1,77 < 1,68)$ . It means that  $H_0$  is received, both samples is from population that has variants homogeneity.

3. *The Calculation of Differences between Means*

The steps as follows:

a. Determining Hypothesis

$H_0$  = The final score of students who are using English songs is worse than students who are not using English songs.

$H_1$  = The final score of students who are using English songs is better than students who are not using English songs.

b. Determining alpha ( $\alpha$ )

$$\alpha = 0,05$$

c. Calculating test statistic, the formula is:

$$t_{hit} = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

$$= \frac{68 - 54}{\sqrt{\frac{16^2}{27} + \frac{12^2}{28}}}$$

$$= \frac{14}{\sqrt{\frac{256}{27} + \frac{144}{28}}}$$

$$= \frac{14}{\sqrt{9+5}}$$

$$= \frac{14}{\sqrt{14}}$$

$$= \frac{14}{4} = \mathbf{3,5}$$

$$\text{With } v = \frac{\left(\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}\right)^2}{\frac{\left(\frac{S_1^2}{n_1}\right)^2}{n_1-1} + \frac{\left(\frac{S_2^2}{n_2}\right)^2}{n_2-1}}$$

$$= \frac{\left(\frac{16^2}{27} + \frac{12^2}{28}\right)^2}{\frac{\left(\frac{16^2}{27}\right)^2}{27-1} + \frac{\left(\frac{12^2}{28}\right)^2}{28-1}}$$

$$= \frac{\left(\frac{256}{27} + \frac{144}{28}\right)^2}{\frac{\left(\frac{256}{27}\right)^2}{26} + \frac{\left(\frac{144}{28}\right)^2}{27}}$$

$$= \frac{(9+5)^2}{\frac{(9)^2}{26} + \frac{(5)^2}{27}}$$



$$= \frac{(14)^2}{\frac{(81)}{26} + \frac{(25)}{27}}$$

$$= \frac{196}{\frac{(81)}{26} + \frac{(25)}{27}}$$

$$= \frac{196}{3+1} = 49$$

Therefore  $t_{\text{hit}} = 3,5$   $t_{\text{table}}(\alpha, \nu) \rightarrow (0,05, 49) = \mathbf{1,684}$

d. Concluding

The writer can conclude that  $(1,684 < 3,5)$ , it means that  $H_0$  is refused. So, the final score of the students that use English songs is better than the students that do not use English song.