CHAPTER IV
RESULT AND DISCUSSION

A. Description of Data

In this chapter the writer would like to present the description of data obtained. As the writer explained in the previous chapter that the population in this research were 240 students of first grade in SMPN 4 Kota Serang and the sample were 30 students of VII A as experimental class and 30 students of VII E as control class.

In this research, the writer did an analyze of quantitative data. The data was obtained by giving test to the experimental class and control class. The test is divided into two types are pre-test and post-test. Pre-test was given before treatment and post-test was given after treatment. On the test, students should listen to the audio and obeyed the instructions or questions by the writer.

The writer identified some result to find out the influence of kangguru indonesia packages on students' listening skill. They are the score of students before treatment, the score students after treatment and the differences between pre-test and post-test score of students. The writer describes the data in experimental and control class as follows:

1. Experimental Class

The researcher describes the result of pre-test in the experimental class by the table as follow:

Table 4.1

The students' score of pre-test at the experimental class

NO	RESPONDENT	CRITERIA			SCORE
		S	A	V	
1	AKH	3	6	8	57
2	DMP	2	6	9	57
3	ARZ	1	5	10	53
4	ARG	3	5	10	60
5	AN	1	5	10	53
6	AMS	2	4	6	40
7	AR	2	8	9	63
8	BM	4	6	10	67
9	CU	3	6	13	73
10	DS	3	7	12	73
11	FH	2	9	10	70
12	FS	1	7	12	67
13	IM	4	6	10	67
14	IF	3	7	10	67
15	I	2	5	9	53
16	LP	3	4	7	50
17	MPW	2	9	11	73
18	MFT	4	7	12	70
19	MAS	1	7	12	67
20	MFR	2	6	10	60
21	MRP	1	5	9	50

22	**MRF**	**2**	**5**	**8**	**50**
23	**NSP**	**1**	**4**	**7**	**40**
24	**MS**	**2**	**6**	**8**	**53**
25	**NA**	**1**	**4**	**9**	**47**
26	**QZH**	**1**	**9**	**8**	**60**
27	**RW**	**2**	**6**	**10**	**60**
28	**SP**	**2**	**6**	**6**	**46**
29	**TK**	**2**	**4**	**6**	**40**
30	**ZK**	**2**	**5**	**11**	**60**
N= 30	**TOTAL**				**∑X = 1745**
	AFERAGE				**M = 58,16**

Note:

S = Symbol

D = Dictation

V -= Visual Representation

Mean of Pre-test:

X = $\frac{\sum X}{N} = \frac{1745}{30} = 58.16$ (the mean of pre-test experimental class is 58,16)

While the result of post-test in experimental class got better score. The result of post-test in experimental class described by table below:

Table 4.2

The students' score of post-test at the experimental class

NO	RESPONDENTS	CRITERIA			SCORE
		S	A	V	
1	AKH	3	8	11	73
2	AMP	4	6	10	67
3	ARZ	2	8	12	73
4	ARG	3	8	9	67
5	AN	3	7	9	63
6	AMS	4	7	12	77
7	AR	4	8	12	80
8	BM	3	8	11	73
9	CU	3	9	11	77
10	DS	4	8	10	73
11	FH	3	7	13	77
12	FS	2	7	14	73
13	IM	4	8	8	67
14	IF	4	8	11	77
15	I	3	9	8	67
16	LP	4	8	11	77
17	MPW	3	7	12	73
18	MFT	4	6	13	77
19	MAS	2	8	10	67
20	MFR	3	8	12	77
21	MRP	4	6	10	63
22	MRF	3	9	11	77

23	**NSP**	**2**	**9**	**11**	**73**
24	**MS**	**2**	**8**	**13**	**77**
25	**NA**	**4**	**7**	**11**	**73**
26	**QZH**	**3**	**8**	**12**	**77**
27	**RW**	**4**	**7**	**12**	**77**
28	**SP**	**2**	**8**	**12**	**73**
29	**TK**	**4**	**8**	**11**	**77**
30	**ZK**	**4**	**8**	**11**	**73**
	Total				**∑X = 2195**
N = 30	**Average**				**M = 73,16667**

Note:

S = Symbol

A = Accuracy

V = Visual

Mean of Post-test:

X = $\frac{\sum X}{N} = \frac{2195}{30} = 73{,}16667$ (the mean of post-test experimental class is 73,16667)

Table 4.3

The difference score between pre-test and post-test at experimental class

NO	RESPONDENTS	PRE TEST	POST TEST
1	**AKH**	**57**	**73**
2	**AMP**	**57**	**67**
3	**ARZ**	**53**	**73**
4	**ARG**	**60**	**67**
5	**AN**	**53**	**63**
6	**AMS**	**40**	**77**
7	**AR**	**63**	**80**
8	**BM**	**67**	**73**
9	**CU**	**73**	**77**
10	**DS**	**73**	**73**
11	**FH**	**70**	**77**
12	**FS**	**67**	**73**
13	**IM**	**67**	**67**
14	**IF**	**67**	**77**
15	**I**	**53**	**67**
16	**LP**	**50**	**77**
17	**MPW**	**73**	**73**

18	**MFT**	**70**	**77**
19	**MAS**	**67**	**67**
20	**MFR**	**60**	**77**
21	**MRP**	**50**	**63**
22	**MRF**	**50**	**77**
23	**NSP**	**40**	**73**
24	**MS**	**53**	**77**
25	**NA**	**47**	**73**
26	**QZH**	**60**	**77**
27	**RW**	**60**	**77**
28	**SP**	**46**	**73**
29	**TK**	**40**	**77**
30	**Zk**	**60**	**73**
N = 30	**Total**	**∑X =1745**	**∑X = 2357**
	Average	**M = 58,1**	**M = 73,16667**

From the table 4.1 above showed that the result of students' pre-test score at the experimental class. The data showed the maximum score was 73 and the minimum score was 40. There was one student who got maximum score and there were two students who got minimum score. The average score of pre-test in experimental class was 58,1.

From the table 4.2 above showed that the result of students' post-test score at the experimental class. The data showed the maximum score was 80 and the minimum score was 63. There

was one student who got maximum score and one student who got minimum score. The average score of post-test in experimental class was 78,5.

From the table 4.3 showed the difference result of pre-test and post-test at the experimental class. It got the significant improvement after giving treatment using quantum teaching method, it was seen from the average of the post-test better than pre-test 58,1 < 73.16667

2. Control Class

The writer describes the result of pre-test in the control class by the table as follow:

Table 4.4

The students' score of pre-test in the control class

NO	RESPONDENTS	CRITERIA			SCORE
		S	A	V	
1	ARS	2	6	11	63
2	ARF	2	4	6	40
3	ARI	2	6	8	53
4	AZA	3	5	9	57
5	AA	4	5	11	67
6	AUH	3	4	10	57
7	ADW	2	5	8	50
8	AS	1	7	7	50
9	ATO	2	6	11	63

10	**AWP**	**2**	**5**	**10**	**57**
11	**FIF**	**2**	**6**	**8**	**53**
12	**FAA**	**3**	**4**	**12**	**63**
13	**HH**	**3**	**5**	**8**	**53**
14	**IAR**	**2**	**6**	**9**	**57**
15	**LNS**	**1**	**5**	**8**	**47**
16	**LSS**	**2**	**4**	**8**	**47**
17	**MDRS**	**1**	**5**	**11**	**57**
18	**MPR**	**3**	**6**	**10**	**63**
19	**MR**	**2**	**4**	**6**	**40**
20	**MAM**	**2**	**5**	**7**	**47**
21	**MR**	**3**	**4**	**12**	**60**
22	**MRA**	**3**	**7**	**10**	**67**
23	**MRH**	**2**	**5**	**5**	**40**
24	**NY**	**2**	**5**	**8**	**50**
25	**RA**	**1**	**4**	**9**	**47**
26	**RF**	**3**	**4**	**6**	**43**
27	**RK**	**4**	**5**	**8**	**57**
28	**SI**	**2**	**7**	**8**	**57**
29	**SNP**	**3**	**6**	**7**	**53**
30	**S**	**2**	**4**	**8**	**47**
N = 30	**TOTAL**				**∑X =** 1608
	AVERAGE				**M = 53,6**

Note:

S = Symbol

A. : Accuracy

V. : Visual representation

Mean of Pre-test:

$X = \frac{\sum X}{N} = \frac{1608}{30} = 53{,}6$ (the mean of pre-test control class is 53,6)

While the result of post-test in control class got better score. The result of post-test in control class described by table below:

Table 4.5

The students' score of post-test in the control class

NO	RESPONDENTS	CRITERIA			SCORE
		S	A	V	
1	ARS	2	8	12	73
2	ARF	3	7	9	63
3	ARI	4	8	11	77
4	AZA	4	5	1	63
5	AA	3	7	13	77
6	AUH	2	8	9	63
7	ADW	3	8	12	77
8	AS	4	9	11	80
9	ATO	2	7	10	63
10	AWP	3	7	6	53
11	FIF	4	7	12	77
12	FAA	2	7	8	57

13	**HH**	**3**	**8**	**11**	**73**
14	**IAR**	**3**	**5**	**9**	**57**
15	**LNS**	**3**	**7**	**12**	**73**
16	**LSS**	**3**	**6**	**7**	**53**
17	**MDRS**	**4**	**6**	**12**	**73**
18	**MPR**	**3**	**6**	**8**	**57**
19	**MR**	**3**	**6**	**10**	**63**
20	**MAM**	**3**	**7**	**6**	**53**
21	**MR**	**3**	**8**	**6**	**57**
22	**MRA**	**3**	**7**	**12**	**73**
23	**MRH**	**3**	**7**	**7**	**57**
24	**NY**	**4**	**8**	**9**	**73**
25	**RA**	**2**	**7**	**7**	**53**
26	**RF**	**2**	**7**	**10**	**63**
27	**RK**	**3**	**5**	**9**	**57**
28	**SI**	**2**	**8**	**12**	**73**
29	**SNP**	**3**	**6**	**10**	**63**
30	**S**	**3**	**7**	**13**	**77**
N=30	**TOTAL**				**∑X = 1961**
	AVERAGE				**M = 65,7**

Note:

S. : Symbol

A. : Accuracy

V. : Visual reprentation

Mean of Post-test:

X = $\frac{\sum X}{N} = \frac{1961}{30} = 65,7$ (the mean of post-test control class is 65,7)

Table 4.6

The difference score between pre-test and post-test at the control class

NO	RESPONDENTS	PRE TEST	POS TES
1	ARS	63	73
2	ARF	40	63
3	ARI	53	77
4	AZA	57	63
5	AA	67	77
6	AUH	57	63
7	ADW	50	77
8	AS	50	80
9	ATO	63	63
10	AWP	57	53
11	FIF	53	77
12	FAA	63	57
13	HH	53	73
14	IAR	57	57
15	LNS	47	73
16	LSS	47	53
17	MDRS	57	73
18	MPR	63	57
19	MR	40	63
20	MAM	47	53

21	**MR**	**60**	**57**
22	**MRA**	**67**	**73**
23	**MRH**	**40**	**57**
24	**NY**	**50**	**73**
25	**RA**	**47**	**53**
26	**RF**	**43**	**63**
27	**RK**	**57**	**57**
28	**SI**	**57**	**73**
29	**SNP**	**53**	**63**
	S	**47**	**63**
N =	**TOTAL**	**∑X =** 1608	**∑X = 1961**
30	**AVERAGE**	**M = 53,6**	**M = 65,7**

From the table 4.4 above showed that the result of students' pre-test score at the control class. The data showed the maximum score was 67 and the minimum score was 40. There was one student who got maximum score and there were two students who got minimum score. The average score of pre-test in control class was 53,6.

From the table 4.5 above showed that the result of students' post-test score at the control class. The data showed the maximum score was 80 and the minimum score was 53. There were two students who got maximum score and there was two students who got minimum score. The average score of pre-test in control class was 65,7.

From the table 4.6 above showed the difference result of pre-test and post-test at the control class got the significant improvement after giving treatment without using flashcard media, it was seen from the average of the post-test better than pre-test 53,6 < 65,7.

B. Data Analysis

1. Experimental Class

The writer analysis the data by comparing students' score in pre-test and post-test in the experimental class. The students' improvement score caused the writer used flashcard media in teaching pronunciation. If seen from the students' improvement` score, it means that used flashcard media was success in improving students' pronunciation. The writer describes the students' improvement score of pre-test and post-test at the experimental class by the table below:

Table 4.7

The difference score between pre-test and post-test result of experimental class

NO	RESPONDENTS	PRE TEST	POST TEST	DIFFERENCE ($X_2 - X_1$)
1	AKH	57	73	16
2	AMP	57	67	10

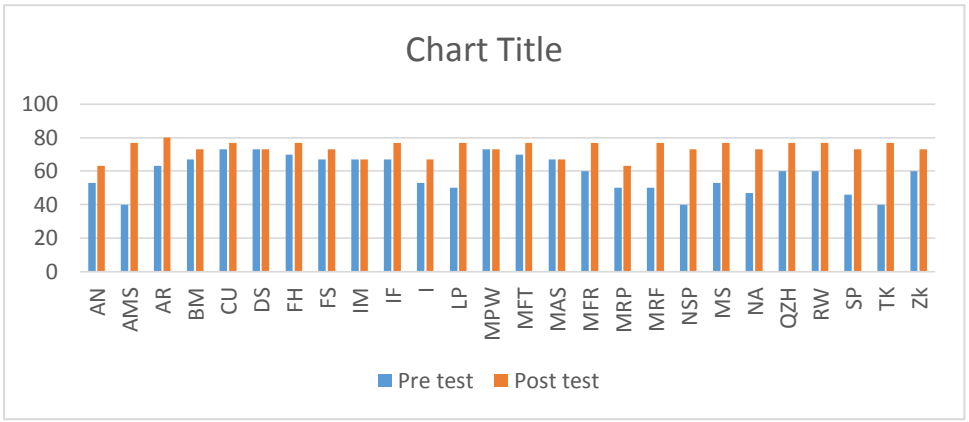
3	**ARZ**	**53**	**73**	**20**
4	**ARG**	**60**	**67**	**7**
5	**AN**	**53**	**63**	**10**
6	**AMS**	**40**	**77**	**37**
7	**AR**	**63**	**80**	**17**
8	**BM**	**67**	**73**	**6**
9	**CU**	**73**	**77**	**4**
10	**DS**	**73**	**73**	**0**
11	**FH**	**70**	**77**	**7**
12	**FS**	**67**	**73**	**6**
13	**IM**	**67**	**67**	**0**
14	**IF**	**67**	**77**	**10**
15	**I**	**53**	**67**	**14**
16	**LP**	**50**	**77**	**27**
17	**MPW**	**73**	**73**	**0**
18	**MFT**	**70**	**77**	**7**
19	**MAS**	**67**	**67**	**0**
20	**MFR**	**60**	**77**	**17**
21	**MRP**	**50**	**63**	**13**
22	**MRF**	**50**	**77**	**27**
23	**NSP**	**40**	**73**	**33**
24	**MS**	**53**	**77**	**24**
25	**NA**	**47**	**73**	**26**
26	**QZH**	**60**	**77**	**17**
27	**RW**	**60**	**77**	**17**
28	**SP**	**46**	**73**	**27**

29	**TK**	**40**	**77**	**37**
30	**Zk**	**60**	**73**	**13**
N = 30	**Total**	**∑X =1745**	**∑X = 2357**	**∑X = 449**
	Av erage	**M = 58,1**	**M = 73,16667**	**M = 28,96774**

Table 4.7 above showed that the difference score between pre-test and post-test at the experimental class. The difference score was the result from the post-test scores reduced pre-test score. There were significant difference score between pre-test and post-test at the experimental class, the highest score was one student and the lowest was three students . The graphic describes the table as follow:

Graphic 4.1

The different score between pre-test and post-test of experimental class



From graphic 4.1 above showed the results of the students' pre-test and post-test scores on the criteria in speaking at the experimental class. Data showed that the maximum score in pre-test was 73 and the minimum score was 40. While in post-test the maximum score was 80 and the minimum score was 67.

2. Control Class

The writer analysis the data by comparing students' score in/ pre-test and post-test at the control class. This result describes by the table below:

Table 4.8

The difference score between Pre-test and Post-test result of control class

NO	RESPONDENTS	PRE TEST	POST TEST	DIFFerence $(X_2 - X_1)$
1	ARS	63	73	10
2	ARF	40	63	23
3	ARI	53	77	24
4	AZA	57	63	6
5	AA	67	77	10
6	AUH	57	63	6
7	ADW	50	77	27

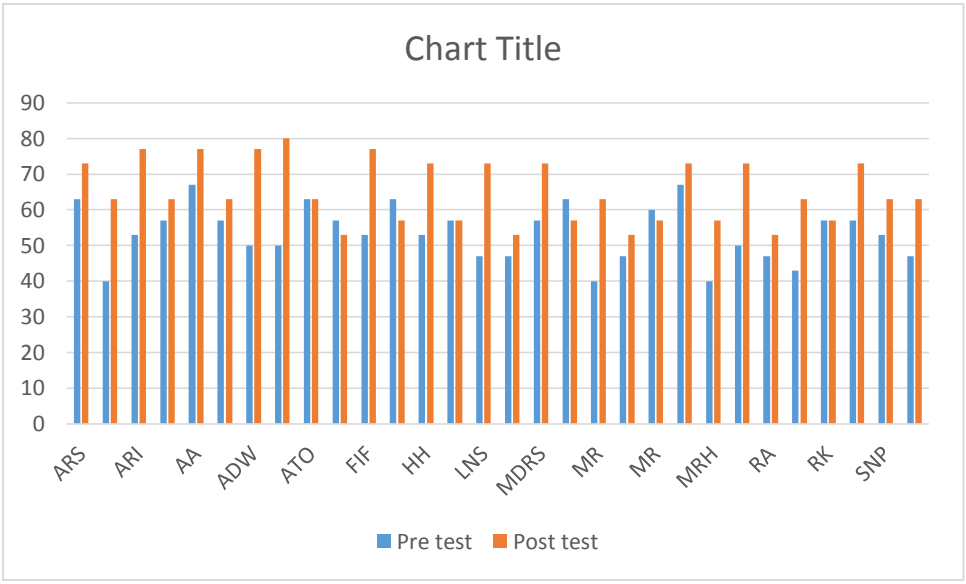
8	**AS**	**50**	**80**	30
9	**ATO**	**63**	**63**	0
10	**AWP**	**57**	**53**	-4
11	**FIF**	**53**	**77**	24
12	**FAA**	**63**	**57**	-6
13	**HH**	**53**	**73**	20
14	**IAR**	**57**	**57**	0
15	**LNS**	**47**	**73**	26
16	**LSS**	**47**	**53**	6
17	**MDRS**	**57**	**73**	16
18	**MPR**	**63**	**57**	-6
19	**MR**	**40**	**63**	23
20	**MAM**	**47**	**53**	6
21	**MR**	**60**	**57**	-3
22	**MRA**	**67**	**73**	6
23	**MRH**	**40**	**57**	17
24	**NY**	**50**	**73**	23
25	**RA**	**47**	**53**	6
26	**RF**	**43**	63	20
27	**RK**	**57**	**57**	0
28	**SI**	**57**	**73**	16
29	**SNP**	**53**	**63**	10
	S	**47**	**63**	16
N = 30	**TOTAL**	**∑X =** 1608	**∑X = 1961**	**∑X =** 352

	AVERAGE	**M = 53,6**	**M = 65,7**	**M =** 11,73333

Table 4.8 above showed that the difference score between pre-test and post-test at the control class. The difference score was the result from the post-test scores reduced pre-test score. There was significant difference score between pre-test and post-test at the control class, the highest score was one student and the lowest were three students. The graphic describes the table as follows:

Graphic 4.2

The different score between pre-test and post-test of control class



From graphic 4.2 above showed the results of the students' pre-test and post-test scores on the criteria in speaking at the control class. Data showed that the maximum score in pre-test was 67 and the minimum score was 40. While in post-test the maximum score was 80 and the minimum score was 53. After getting the data from score of two classes, then the writer analyzes it by using t-test. The formula as follow:

$$t_0 = \frac{M_1 - M_2}{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right)\left(\frac{N_1 + N_2}{N_1 \,.\, N_2}\right)}$$

Notes:

t_0 = t observation

M_1 = Mean score of the experiment class

M_2 = Mean score of the control class

$\sum x_1^2$ = Sum of square deviation score in experiment class

$\sum x_2^2$ = Sum of square deviation score in control class

N_1 = Number of students of experiment class

N_2 = Number of students of control class

2 = Constant number

df = Degree of Freedom (df = $N_1 + N_2 - 2$)

Table 4.9

The result calculation of post-test at the experimental class (X_1^2) and the control class (X_2^2)

No	X_1	X_2	X_1	X_2	x_1^2	x_2^2

1	73	73	-5,5	8	30,25	64
2	67	63	-11,5	-2	132,25	4
3	73	77	-5,5	12	30,25	144
4	67	63	-11,5	-2	132,25	4
5	63	77	-15,5	12	240,25	144
6	77	63	-1,5	-2	2,25	4
7	80	77	1,5	12	2,25	144
8	73	80	-5,5	15	30,25	225
9	77	63	-1,5	-2	2,25	4
10	73	53	-5,5	-12	30,25	144
11	77	77	-1,5	12	2,25	144
12	73	57	-5,5	-8	30,25	64
13	67	73	-11,5	8	132,25	64
14	77	57	-1,5	-8	2,25	64
15	67	73	-11,5	8	132,25	64
16	77	53	-1,5	-12	2,25	144
17	73	73	-5,5	8	30,25	64
18	77	57	-1,5	-8	2,25	64
19	67	63	-11,5	-2	132,25	4
20	77	53	-1,5	-12	2,25	144
21	63	57	-15,5	-8	240,25	64
22	77	73	-1,5	8	2,25	64
23	73	57	-5,5	-8	30,25	64
24	77	73	-1,5	8	2,25	64
25	73	53	-5,5	-12	30,25	144

26	**77**	**63**	**-1,5**	**-2**	**2,25**	**4**
27	**77**	**57**	**-1,5**	**-8**	**2,25**	**64**
28	**73**	**73**	**-5,5**	**8**	**30,25**	**64**
29	**77**	**63**	**-1,5**	**-2**	**2,25**	**4**
30	**73**	**77**	**-5,5**	**12**	**30,25**	**144**
$\sum$	**73,16667**	**65,7**			**1473,5**	**2381**

Note :

X_1 = Score Post-test (Experimental Class)

X_2 = Score Post-test (Control Class)

x_1 = X_1 - M_1(Mean X_1)

x_2 = X_2 - M_2 (Mean X_2)

x_1^2 = The Squared Value of x_1

x_2^2 = The Squared Value of x_2

From the table above, the researcher got the data $\sum X_1$ = 2195, $\sum X_2$ = 1971, $\sum x_1^2$ = 2789.63, $\sum x_2^2$ = 623.42 where as N_1 = 30 and N_2 = 30. After that the writer calculated them based on the t-test formula, the steps as follow:

1. Determine mean of variable X_1 and X_2

Variable X_1 $M_1 = \frac{\sum x_1}{N_1} = \frac{2195}{30}$ = 73,16

Variable X_2 $M_2 = \frac{\sum x_2}{N_2} = \frac{1971}{30}$ = 65,7

2. Determine t-test

$\sum x_1^2$ = 1473,5

$\sum x_2^2$ = 2381

df = $N_1 + N_2 - 2$ = 30 + 30 – 2 = 58

$$t_o = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2}\right)\left(\frac{N_1 + N_2}{N_1 \,.\, N_2}\right)}}$$

$$= \frac{73{,}16 - 65{,}7}{\sqrt{\left(\frac{1473{,}5 + 2381}{30+30-2}\right)\left(\frac{30+30}{30.\ 30}\right)}} =$$

$$\frac{7{,}46}{\sqrt{\left(\frac{3854{,}5}{58}\right)\left(\frac{60}{900}\right)}}$$

$$= \frac{7{,}46}{\sqrt{66{,}4569 \times 0{,}066667}} = \frac{7{,}46}{\sqrt{4{,}43046}}$$

$$= \frac{7{,}46,}{2{,}104866} = 3{,}54$$

So after the writer calculates this data based on the formula t-test, the obtained t_o or $t_{observation}$ was 3,54

C. Hypothesis Testing

The data obtained from experimental class and control class were calculated with the assumption as follow:

If $t_0 > t_t$: the alternative hypothesis was accepted. It means there was significant effect of using quantum teaching in teaching speaking than without using quantum teaching. If $t_0 < t_t$: null hypothesis was rejected. It means there was no significant effect of using quantum teaching in teaching speaking than without using quantum teaching than without it.

From the result of calculation above, it is obtained that the value of t_o ($t_{observation}$) was 3,54, the degree of freedom (df) = 58. In the degree significance 5% = 1,67 in degree of significance 1% = 2,40. After that the writer compared the data with t_t (t table) both in degree of significance 5% and 1%. Therefore $t_o : t_t$ = 3,54 > 1,67 in degree of significance 5% and $t_o : t_t$ = 3,54 > 2,40 in degree of significance 1%.

The statistic hypothesis states that if t_o is higher than t_t, it shows that H_a(alternative hypothesis) of the result is accepted and H_o(null hypothesis) is rejected. It means that there was an influence of using Kangguru Indonesia Package in teaching listening than without using Kangguru Indonesia Package.

D. Interpretation Data

From the result of the data above researcher found that the mean of pre-test score obtained from students of SMPN 4 kota Serang in the class VII A (experimental class) 58,1 is higher than class VII E (control class) 53,6. The highest score of pre-test in VII A (experimental class) was 73 and in the class VII E (control class) was 67. The lowest score of pre-test in class VIIE (experimental class) was 40 and in the class X IIS (control class) was 40. It means that the distribution of score in experimental score was smaller than control class.

The mean of post-test score in experimental class was 73,16667 was greater than in control class was 65,7. The highest score in experimental class was 80 and in control class was 80. The lowest score in experimental class was 63 and in control class was

53. It means that the distribution of score post-test in experimental class was greater than class control.

Based on the data obtained from the research of experimental class and control class among the average score, t observation and comparison with t table. The writer summarize that the students are taught by using Kangguru Indonesia has some differences in listening ability than the students taught without Kangguru Indonesia.

The students who taught by using Kangguru were easily to listen to the words, and many activities by using Kangguru Indonesia that can make them more active in learning English especially in English listening.