

## CHAPTER IV

### RESEARCH FINDING AND DISCUSSION

This chapter present the statistical result based on the instruments that used conducting in the research hypothesis and finding.

#### **A. Research Finding**

In this research, the researcher can present some data based on the research instruments that were used to collect the data. The researcher used two kinds of research instruments, they are test and documentation.

##### **1. The Result of Data Test**

As stated in the previous chapter, test is the main instrument in this research. It means that the data which are obtained from the test instrument will be analyzed by using statistical method.

The researcher used two kinds of test, they were pretest and posttest. The test consist of ten questions that used in pretest and posttest. In scoring the test's answer, the researcher gave 1 score for each item.

In this test, the researcher use two class in doing a test. In this test the the researcher take several sample from the population. Population that the researcher take in the research there are two class; control class and experimental class in the same number of sample, namely 25 students every class. Beside that, the score will be gave to the students who answered correctly, and the students will get under the score above if the students who answered would not answered

appropriate with the answers. So, the students will get 10 score if they could answers 10 questions perfectly.

#### **a. The Result of Pretest of Experimental and Control Class**

The pretest was used to measure the students ability on part of speech before giving the treatment. Based on the sample of the reserarcher had choosen. After that, the researcher can determine whether can be experimental group that it got a tretament and control group that it did not get a treatment.

The researcher gave a pretest on experimental group at 15 January 2020 on Thursday at 06.45 a.m. Pretest gave to the A class. The are 20 students conducting the pretest. While the researcher gave to pretest on control group at 15 January 2020 on Thursday at 13.15 a.m. Pretest gave to the B class. There are 20 students conducting the pretest. From the result of pretest:

Table 1

The score of pretest at the experimental and control class

No.	Name	Experimental Class	No.	Name	Control Class
1	TAM	60	1	HL	90
2	AAR	50	2	RI	70
3	SAM	60	3	YA	60
4	SUP	70	4	PHN	70
5	NHS	70	5	NS	60
6	ASN	70	6	AP	60
7	AM	70	7	ZR	70
8	FA	70	8	AZ	50

9	PNS	60	9	HDH	70
10	APB	70	10	EYM	70
11	INW	30	11	MZF	70
12	RAF	70	12	NW	70
13	NAI	50	13	NSK	70
14	RA	70	14	NUA	80
15	FY	70	15	WK	50
16	PMM	70	16	SAP	60
17	ASR	70	17	EBW	80
18	SDA	70	18	ADM	70
19	MSRK	80	19	MAM	50
20	HHF	70	20	RNM	70
21	ALM	80	21	ANA	40
22	AF	80	22	SG	40
23	IYWR	60	23	NDPS	40
24	ASN	80	24	AFN	30
25	CAN	80	25	FAF	40
	EX=	1.680		EY=	1.520

Based on the table 1, the total score of experimental class 1.680, to calculate mean of pretest on experimental class the researcher uses the following formula:

$$\begin{aligned}
 X &= \frac{\sum X}{N} \\
 &= \frac{1.680}{25} \\
 &= 67,2
 \end{aligned}$$

Mean of experimental class : 67,2

While the total score of control class is 1.520, to calculate mean of pretest on control class the researcher uses the following formula:

$$\begin{aligned} Y &= \frac{\sum Y}{N} \\ &= \frac{1.520}{25} \\ &= 60,8 \end{aligned}$$

Mean of control class: 60,8

Table 2

The mean of the experimental and control class in the pretest

Achievement

Class	Number of students (N)	Score	Mean
Experimental	25	1.680	67,2
Control	25	1.520	60,8

Based on the result above, the researcher determines A class is at experimental class that gave a treatment, and B class is as control class because mean value of A and B class is higher than with A class. The difference both are 6,4 points.

#### **b. The Result of Post-test on Experimental and Control Class**

The researcher gave a posttest on experimental class of 22 January 2020 on Thursday 06.45 a.m. Posttest gave to the A class there are 25 students conducting the posttest. While the researcher gave a posttest in control class at 22

January 2020 on Thursday at 13.15 a.m. Postest gave to the B class. There are 25 students conducting the postest. The postest higher than the pretest score. From both of the result of postest.

Table 3

The score of postest at experimental and control class

No.	Name	Experimental Class	No.	Name	Control Class
1	TAM	90	1	HL	70
2	AAR	90	2	RI	90
3	SAM	80	3	YA	90
4	SUP	90	4	PHN	70
5	NHS	100	5	NS	80
6	ASN	90	6	AP	70
7	AM	90	7	ZR	80
8	FA	90	8	AZ	40
9	PNS	70	9	HDH	50
10	APB	90	10	EYM	90
11	INW	70	11	MZF	50
12	RAF	100	12	NW	90
13	NAI	80	13	NSK	50
14	RA	90	14	NUA	70
15	FY	90	15	WK	80
16	PMM	70	16	SAP	50
17	ASR	80	17	EBW	60
18	SDA	80	18	ADM	60
19	MSRK	100	19	MAM	80
20	HHF	90	20	RNM	90
21	ALM	100	21	ANA	80

22	AF	90	22	SG	60
23	IYWR	90	23	NDPS	70
24	ASN	100	24	AFN	70
25	CAN	100	25	FAF	60
	EX =	2.210		EY =	1.740

Based on the table 3, the total score of experimental class is 2.210, so

calculate mean of posttest on experimental class the researcher uses the following formula :

$$\begin{aligned}
 X &= \frac{\sum X}{N} \\
 &= \frac{2.210}{25} \\
 &= 88,4
 \end{aligned}$$

Mean of experimental class : 88,4

While the total score of control class is 1.740, to calculate mean of posttest on control class the reseacher uses the following formula :

$$\begin{aligned}
 Y &= \frac{\sum X}{N} \\
 &= \frac{1.740}{25} \\
 &= 69,6
 \end{aligned}$$

Mean of control class : 69,6

Table 4

The result of experimental and control class in the posttest

Achievement

Class	Number of students (N)	Score	Mean
Experimental	25	2.210	88,4
Control	25	1.70	69,6

Based on the value comparison between experimental and control class is known that mean of experimental class is 88,4 and the mean of control class is 69,6. The differences both are 18,8 points. It can be conclude that the students who are taught by using kahoot game in teaching part of speech have higher achievement than the students who are not taught by using kahoot game.

## 2. The Result of Documentation Data

The data that are obtained from documentations are as follow :

- a. Lesson Plan
- b. Students name list of Elevent Grade of SMAN 1 Pamekasan especially A class that use kahoot game on students part of speech mastery and B class that uses non kahoot game on students part of speech mastery.
- c. Picture of teaching learning process before and after using kahoot game.
- d. The score of students part of speech mastery after using kahoot game
- e. The list pretest and posttest scores
- f. The test that students answer (The result of pretest and posttest)

## **B. Data Analysis**

### **1. Data Analysis of Test Finding**

First, in conducting the test the researcher should consider about the validity and reliability. The test should be valid and reliable.

#### **a. Validity of The Test Instrument**

Adnan latief said in his book valid means correct, the correctness of the assessment is called validity and the evidence to support the correctness of the assessment is called validity evidence.<sup>1</sup>There are two kinds of validity these are construct validity and context validity. In this research the researcher used context validity o get instrument, means that in conducting the test, the subject that will be tested include the material that was taught by the teacher.

The validity of the test always depends on situation and purpose of the test used. A test should have validity in the sense that if measure what it intends to be measured. The validity of the test always depends on situation and purpose of the the test that used. A test that is valid for situation may not be valid for other situation, and the purpose of using test is also a factor in showing validity.

#### **b. Reliability of The Test Instrument**

A good test must be valid and reliable. To know the reliability of the test, the researcher use Kuder-Richardson formula 21 (K-R,21). The formula is :

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<sup>1</sup>Muhammad Adnan Latief, *Research Method on Language Learning An Introduction* (Malang: UMPress, 2013), 223.



$$R_{11} = \left( \frac{k}{k-1} \right) \left( 1 - \frac{M(k-M)}{kVt} \right)$$

Calculation result of the formula  $r_{11}$  is compared with the table criticism price of  $r$  product moment by 95% (interval) degree of significance, or it can be called 5% degree of significance. If  $r_{11}$  is higher than  $r_{table}$ , the item of question is reliable.

### 1. Reliability of Pretest

Table 5

The list Pretest scores in Control Class

Control Class			
No.	Name	Score of Pretest	X <sup>2</sup>
1	HL	9	81
2	RI	7	49
3	YA	6	36
4	PHN	8	64
5	NS	7	49
6	AP	6	36
7	ZR	6	36
8	AZ	7	49
9	HDH	5	25
10	EYM	7	49
11	MZF	7	49
12	NW	7	49
13	NSK	5	25
14	NUA	8	64
15	WK	8	64
16	SAP	5	25
17	EBW	6	36
18	ADM	7	49
19	MAM	5	25
20	RNM	7	49
21	ANA	4	16
22	SG	4	16
23	NDPS	4	16
24	AFN	3	9

25	FAF	4	16
		152	982

Table 6

The list Pretest Scores in Experimental Class

<b>Experimental Class</b>			
<b>No.</b>	<b>Name</b>	<b>Score of Pretest</b>	<b>Y<sup>2</sup></b>
1	TAM	6	36
2	AAR	5	25
3	SAM	6	36
4	SUP	7	49
5	NHS	7	49
6	ASN	7	49
7	AM	7	49
8	FA	7	49
9	PNS	6	36
10	APB	7	49
11	INW	3	9
12	RAF	7	49
13	NAI	5	25
14	RA	7	49
15	FY	7	49
16	PMM	7	49
17	ASR	7	49
18	SDA	7	49
19	MSRK	8	64
20	HHF	7	49
21	ALM	8	64
22	AF	8	64
23	IYWR	6	36
24	ASN	8	64
25	CAN	8	64
		168	1.160

The researcher computes the reliability of pretest between control and experimental class as follow :

N = 25

N =25

$$Vt = \frac{\sum X^2 - \frac{(\sum X)^2}{N}}{N}$$

$$= \frac{982 - \frac{(152)^2}{25}}{25}$$

$$= \frac{982 - \frac{(23,104)}{25}}{25}$$

$$= \frac{982 - (924,16)}{25}$$

$$= \frac{57,84}{25}$$

$$= 2,3136$$

$$M = \frac{\sum X}{N}$$

$$= \frac{152}{25}$$

$$= 6,08$$

$$r_{11} = \left( \frac{k}{k-1} \right) \left( 1 - \frac{m(k-m)}{k \cdot Vt} \right)$$

$$= \left( \frac{10}{10-1} \right) \left( 1 - \frac{6,08(10-6,08)}{10 \cdot 2,3136} \right)$$

$$= 1,111111111111 \left( 1 - \frac{6,08(3,92)}{23,136} \right)$$

$$= 1,111111111111 \left( 1 - \frac{23,8336}{23,136} \right)$$

$$= 1,111111111111 (1 - 1,03015214)$$

$$= 1,111111111111 (0,96984470)$$

$$Vt = \frac{\sum X^2 - \frac{(\sum X)^2}{N}}{N}$$

$$= \frac{1.160 - \frac{(168)^2}{25}}{25}$$

$$= \frac{1.160 - \frac{(28,224)}{25}}{25}$$

$$= \frac{1.160 - (1,128,96)}{25}$$

$$= \frac{1,158,87104}{25}$$

$$= 46,3548416$$

$$M = \frac{\sum X}{N}$$

$$= \frac{168}{25}$$

$$= 6,72$$

$$r_{11} = \left( \frac{k}{k-1} \right) \left( 1 - \frac{m(k-m)}{k \cdot Vt} \right)$$

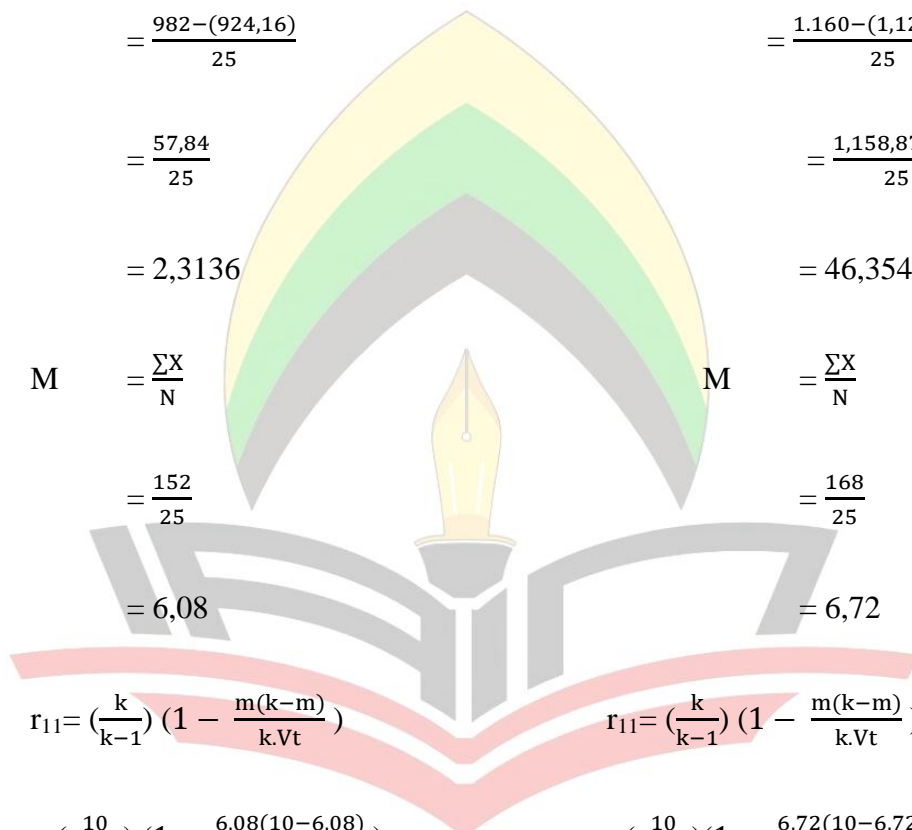
$$= \left( \frac{10}{10-1} \right) \left( 1 - \frac{6,72(10-6,72)}{10 \cdot 46,3548416} \right)$$

$$= 1,111111111111 \left( 1 - \frac{6,72(3,28)}{463,548416} \right)$$

$$= 1,111111111111 \left( 1 - \frac{22,0416}{463,548416} \right)$$

$$= 1,111111111111 (10,04754972609)$$

$$= 1,111111111111 (0,95245027391)$$



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=1,07760522222

=1,0582780821

## 2. Reliability of Post-test

Table 7

The list Post-test Scores in Control Class

Control Class			
No.	Name	Score of Post-test	X <sup>2</sup>
1	HL	7	49
2	RI	9	81
3	YA	9	81
4	PHN	6	36
5	NS	7	49
6	AP	8	64
7	ZR	7	49
8	AZ	8	64
9	HDH	4	16
10	EYM	5	25
11	MZF	9	81
12	NW	5	25
13	NSK	7	49
14	NUA	7	49
15	WK	6	36
16	SAP	8	64
17	EBW	5	25
18	ADM	6	36
19	MAM	8	64
20	RNM	9	81
21	ANA	8	64
22	SG	6	36
23	NDPS	7	49
24	AFN	7	49
25	FAF	6	36
		174	1.258

Table 8

The list Post-tes scorest in Experimental Class

<b>Experimental Class</b>			
<b>No.</b>	<b>Name</b>	<b>Score of Postest</b>	<b>Y<sup>2</sup></b>
1	TAM	9	81
2	AAR	9	81
3	SAM	8	64
4	SUP	9	81
5	NHS	10	100
6	ASN	9	81
7	AM	9	81
8	FA	9	81
9	PNS	7	49
10	APB	9	81
11	INW	7	49
12	RAF	10	100
13	NAI	8	64
14	RA	9	81
15	FY	9	81
16	PMM	7	49
17	ASR	8	64
18	SDA	8	64
19	MSRK	10	100
20	HHF	9	81
21	ALM	10	100
22	AF	9	81
23	IYWR	9	81
24	ASN	10	100
25	CAN	10	100
		221	1.975

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The researcher computes the reliability of postest between control and experimental class as follow :

N = 25

N =25

$$Vt = \frac{\sum X^2 - \frac{(\sum X)^2}{N}}{N}$$

$$= \frac{1.258 - \frac{(174)^2}{25}}{25}$$

$$= \frac{1.258 - \frac{(30,276)}{25}}{25}$$

$$= \frac{1.258 - (1,211,04)}{25}$$

$$= \frac{1,256,78896}{25}$$

$$= 50,2715584$$

$$M = \frac{\sum X}{N}$$

$$= \frac{174}{25}$$

$$= 6,96$$

$$r_{11} = \left( \frac{k}{k-1} \right) \left( 1 - \frac{m(k-m)}{k.Vt} \right)$$

$$= \left( \frac{10}{10-1} \right) \left( 1 - \frac{6,96(10-6,96)}{10.50,2715584} \right)$$

$$= 1,111111111111 \left( 1 - \frac{6,96(3,04)}{502,715584} \right)$$

$$= 1,111111111111 \left( 1 - \frac{21,1584}{502,715584} \right)$$

$$= 1,111111111111 (1 - 0,04208821185)$$

$$= 1,111111111111 (0,95791178815)$$

$$Vt = \frac{\sum X^2 - \frac{(\sum X)^2}{N}}{N}$$

$$= \frac{1.975 - \frac{(221)^2}{25}}{25}$$

$$= \frac{1.975 - \frac{(48,841)}{25}}{25}$$

$$= \frac{1.975 - (1,953,64)}{25}$$

$$= \frac{1,973,04636}{25}$$

$$= 78,9218544$$

$$M = \frac{\sum X}{N}$$

$$= \frac{221}{25}$$

$$= 8,84$$

$$r_{11} = \left( \frac{k}{k-1} \right) \left( 1 - \frac{m(k-m)}{k.Vt} \right)$$

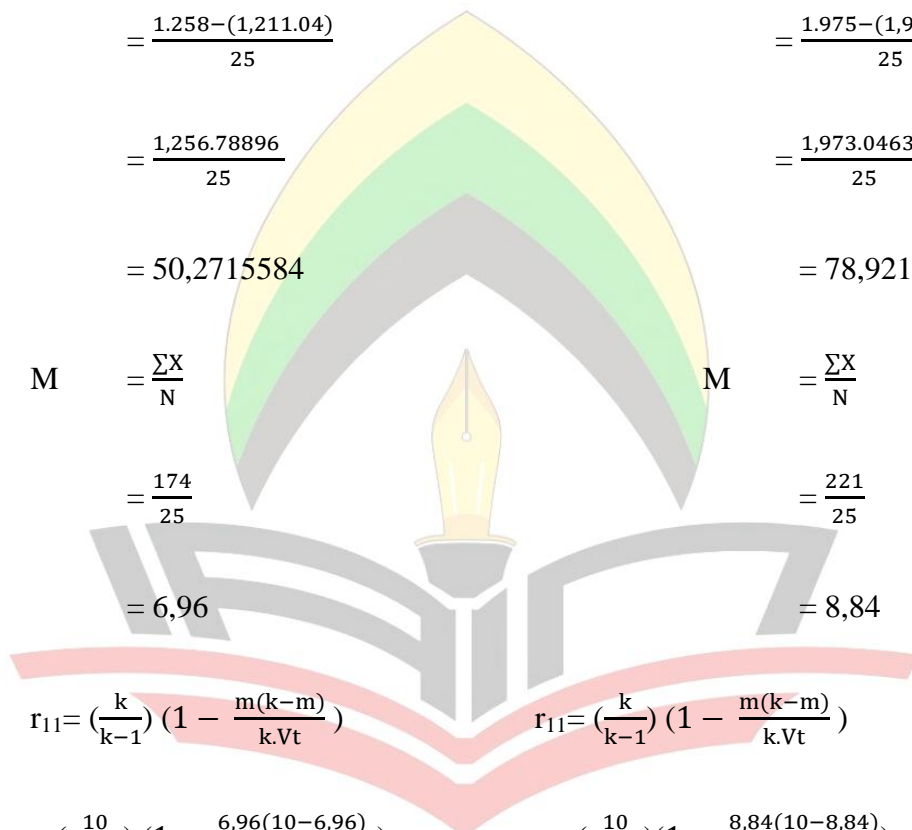
$$= \left( \frac{10}{10-1} \right) \left( 1 - \frac{8,84(10-8,84)}{10.78,9218544} \right)$$

$$= 1,111111111111 \left( 1 - \frac{8,84(1,16)}{789,218544} \right)$$

$$= 1,111111111111 \left( 1 - \frac{10,2544}{789,218544} \right)$$

$$= 1,111111111111 (1 - 0,0129931057)$$

$$= 1,111111111111 (0,9870068943)$$



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$$= 1,06434643128$$

$$= 1,096674327$$

Table 7

Table of Critic Value from r Product-Moment

N	Significant level	r-table	r-value
25	Interval (95%)	0,396	Pretest <b>Experimental</b> (1,0582780821) <b>Control</b> (1,07760522222)
	Trust (99%)	0,505	Posttest <b>Experimental</b> (1,096674327) <b>Control</b> (1,06434643128)

From the computation above, it is find out that  $r_{11}$  (the total of reliability test) suitably with the illustration in the table above. Whereas the number of items test is 10. To know weather or not the test instrument reliable, we have to consult the value of  $r_{11}$  to  $r_{table}$ . If the value of  $r_{11}$  higher than the value of  $r_{table}$ , so the test instrument (pretest-postest) is reliable. The value result from the computation is higher the critical value ( $r_{11}$ ) table, it is conclude that reliability of instrument is used is reliable.

Table 8

The value of pretest and posttest in experimental and control class

No	Experimental Class				No	Control Class			
	Pre-test	Post-test	Gain (N)	X <sup>2</sup>		Pre-test	Post-test	Gain (N)	Y <sup>2</sup>
1	60	90	30	900	1	90	70	-20	400
2	50	90	40	1.600	2	70	90	20	400
3	60	80	20	400	3	60	90	30	900
4	70	90	20	400	4	80	60	-20	400
5	70	100	30	900	5	70	70	0	0
6	70	90	20	400	6	60	80	20	400
7	70	90	20	400	7	60	70	10	100
8	70	90	20	400	8	70	80	10	100
9	60	70	10	100	9	50	40	-10	100
10	70	90	20	400	10	70	50	-20	400
11	30	70	40	1600	11	70	90	20	400
12	70	100	30	900	12	70	50	-20	400
13	50	80	30	900	13	50	70	20	400
14	70	90	20	400	14	80	70	-10	100
15	70	90	20	400	15	80	60	-20	400
16	70	70	0	0	16	50	80	30	900
17	70	80	10	100	17	60	50	-10	100
18	70	80	10	100	18	70	60	-10	100



19	80	100	20	400	19	50	80	30	900
20	70	90	20	400	20	70	90	20	400
21	80	100	20	400	21	40	80	40	1.600
22	80	90	10	100	22	40	60	20	400
23	60	90	30	900	23	40	70	30	900
24	80	100	20	400	24	30	70	40	1.600
25	80	100	20	400	25	60	80	20	400
$\Sigma X$	1.680	2.210	530	13.300	$\Sigma Y$	1.520	1.740	220	12.200

Before applied to the t-test formula, the researcher had to determine the value of  $M_x$ ,  $M_y$ ,  $\Sigma X^2$ ,  $\Sigma Y^2$ . The calculation of mean and deviation square in experimental and control class as follows:

$$M_x = \frac{\Sigma X}{N}$$

$$= \frac{530}{25}$$

$$= 21,2$$

$$\Sigma X^2 = \Sigma X^2 - \frac{(\Sigma X)^2}{N}$$

$$= 13.300 - \frac{(530)^2}{25}$$

$$= 13.300 - \frac{280,900}{25}$$

$$= 13.300 - 11,236$$

$$= 13, 266, 764$$

$$M_y = \frac{\sum Y}{N}$$

$$= \frac{220}{25}$$

$$= 8,8$$

$$\sum Y^2 = \sum Y^2 - \frac{(\sum Y)^2}{N}$$

$$= 12.200 - \frac{(220)^2}{25}$$

$$= 12.200 - \frac{48,400}{25}$$

$$= 12.200 - 1,936$$

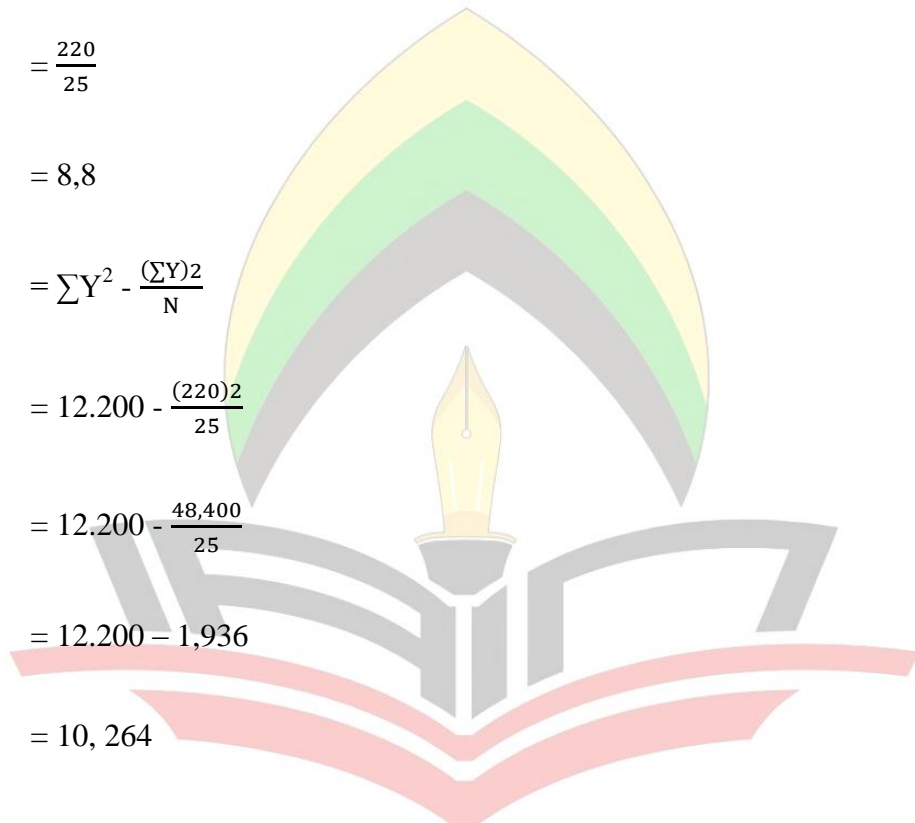
$$= 10, 264$$

Then the researcher calculate to the t-test formula as follow:

$$t = \frac{M_x - M_y}{\sqrt{\left(\frac{\sum X^2 + \sum Y^2}{N_x + N_y - 2}\right) \left(\frac{1}{N_x} + \frac{1}{N_y}\right)}}$$

$$= \frac{21,2 - 8,8}{\sqrt{\left(\frac{13,288,764 + 10,264}{25 + 25 - 2}\right) \left(\frac{1}{25} + \frac{1}{25}\right)}}$$

$$= \frac{12,4}{\sqrt{\left(\frac{23,552764}{48}\right) \left(\frac{1}{0,04} + \frac{1}{0,04}\right)}}$$



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$$= \frac{12,4}{\sqrt{(0,49068258333)(0,08)}}$$

$$= \frac{12,4}{\sqrt{(0,3925406666)}}$$

$$= \frac{12,4}{0,62653065895}$$

$$= 19,7915294693$$

$$\text{Df} = (N_x + N_y) - 2$$

$$= (25 + 25) - 2$$

$$= 48$$

### C.Hypothesis Testing

Hypothesis testing is very important step in conducting a research because this step proves which hypothesis is accepted or rejected. In this step the researcher will know the result of this research.

To know the weather the alternative hypothesis ( $H_a$ ) is accepted or rejected, the researcher has to consult the value of the obtained ( $t_0$ ) to t table ( $t_t$ ) if the value of ( $t_0$ ) is higher or at least have the same with ( $t_t$ ) so the alternative hypothesis is accepted. The value of t table can be seen in the follow table :

Table 9

Table coefficient value of "t test" Comparison

Df	Significant Level	t-table	t-value
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50	(5%)	0,273	19,7915294693
	(1%)	0,354	19,7915294693

Because df of 48 is nothing in t-table. So, the researcher takes df 50, t-value is higher than t-table either in 5% or 1% ( $5\% = 2,01 < 19,7915294693$ ) or ( $1\% = 2,68 < 19,7915294693$ ). From the result above, it can be concluded that  $H_a$  (Alternative Hypothesis) is accepted, and the  $H_o$  (Null Hypothesis) is rejected. It means that student that used kahoot game have better achievement on part of speech mastery than those who taught using non - kahoot game.

#### **D. Discussion of Finding**

In this research the researcher that has two research problems in this study. First, are students taught english learning in grammar by using kahoot game have better in part of speech mastery at the eleven grade of SMAN 1 Pamekasan, the second is there any significance effect of the using kahoot game on students part of speech mastery of the eleven grade of SMAN 1 Pamekasan.

Based on the finding in the research, the students taught by using kahoot game have better achievement than those who do not taught by using kahoot on part of speech mastery at the eleven grade and there is an effect of kahoot game to increase students' part of speech mastery at SMAN 1 Pamekasan. The statistical analysis on previous chapter presented that t-value is higher than t-table either in 5% or 1% ( $5\% = 2,01 < 19,7915294693$ ) or ( $1\% = 2,68 < 19,7915294693$ ). From the result above, it can be concluded that the students taught

by using kahoot game have better achievement than those who do not taught by kahoot game at SMAN 1 Pamekasan.

Kahoot game give effectsto the students in part of speech mastery , they can enjoy and easily to catch the quiz in kahoot game that relate with part of speech mastery. The students will be more active, interest, and interactive to follow the english learning activities in the classroom. Then, the students not feel bored. Moreover, the students wants to reply the game again and again.

