

## CHAPTER IV

### RESULT OF RESEARCH AND DISCUSSION

This chapter discuss about research finding and discussion, research finding present the data that gotten from spreading the instrument of research that is questionnaire and test. There are some points that the researcher presents, that are presentation of data, hypothesis testing and discussion of finding.

#### A. Presentation of Data

After collecting the data that the researcher needs the next is presentation of the data. The data that will be described is result of linguistic intelligence as variable X and students' speaking achievement as variable Y. To know the result of linguistic intelligence the researcher use questionnaire as a method to collect the data, while the result of students' speaking achievement use test as a method to collect the data. The data that will be presented is data that the researcher got during a research in MA Mambaul Ma'arif.

##### 1. Result of Linguistic Intelligence Questionnaire

As stated in previous chapter, the data of linguistic intelligence is obtained by using questionnaire. The questionnaire contains 10 allegations with five alternatives namely strongly agree, agree, undecided, disagree, and strongly disagree. The result is not numerical form, so that the researcher uses scale likert to scoring the answer of

the respondent. The scoring of alternative answer of the questionnaire applied in the following formulas:

- a. If respondent select “strongly agree” will get score 5.
- b. If respondent select “agree” will get score 4.
- c. If respondent select “undecided” will get score 3.
- d. If respondent select “disagree” will get score 2.
- e. If respondent select “strongly disagree” will get score 1.

So the answer from the respondents will be scored by scale likert and the data must be valid and reliable, to know the validity and reliability of the data the researcher uses construct validity and coefficient alpha.

In this research the population is the students of MA Mambaul Ma’arif Montor, but to make easily the researcher use cluster sampling technique. The researcher only takes one of the classes and that is XI A. The researcher takes XI A class because this class is superior class, so the sample is the students in XI A class that consist of 24 students. The researcher takes an error 5% distribution of  $r_{table}$ .

- a. The result of the data

In this research, the researcher gets the data by given the questionnaire to students at the eleventh grade of MA Mambaul Ma’arif Montor. The researcher only needs one meeting in spreading the questionnaire to students, and it was held on the 03<sup>rd</sup> October 2020 at 09.00 until 09.30. and the meeting have four activities they are:

- 1) Entering the class and checking the students' attendance list.
- 2) Spreading out of the questionnaire
- 3) Giving clear instruction of the questionnaire
- 4) Collecting the answer of the questionnaire

The score of the students' questionnaire it can be seen in the table as follow:

**Table 4.1**  
**Result of questionnaire data**

NO	Number of Item										SUM
	1	2	3	4	5	6	7	8	9	10	
1	4	5	5	4	4	4	5	5	4	5	45
2	4	2	5	3	2	4	5	3	4	5	37
3	4	2	5	2	1	4	3	4	4	5	34
4	5	2	5	3	2	5	3	5	2	4	36
5	4	5	3	5	1	5	4	4	3	5	39
6	4	2	4	4	3	5	2	4	4	5	37
7	4	2	4	4	3	5	2	4	5	5	38
8	5	2	4	4	1	4	2	4	2	5	33
9	5	2	4	4	3	4	2	5	2	5	36
10	5	2	2	4	3	5	2	3	5	5	36
11	5	3	4	4	3	1	2	3	2	2	29
12	4	2	4	3	1	4	2	5	4	5	34
13	4	2	3	3	1	4	2	3	4	5	31
14	5	2	3	3	2	2	2	4	4	5	32
15	5	2	4	3	2	2	2	4	4	5	33
16	5	2	3	4	4	3	3	4	3	5	36
17	5	2	2	3	2	3	2	4	4	5	32
18	5	2	3	3	2	3	2	3	4	5	32
19	5	4	5	4	2	2	2	4	2	4	34

20	5	2	4	4	1	2	1	5	2	5	31
21	3	5	3	1	1	2	1	4	1	1	22
22	4	2	4	4	3	4	2	4	4	5	36
23	4	2	4	3	2	4	2	4	2	4	31
24	5	1	3	1	1	5	1	4	5	5	31
25	4	5	4	5	5	4	4	3	4	5	43
<b>Total of score</b>											<b>815</b>

Based on the data above, the result of questionnaire data is 815. In this questionnaire, the highest score of all items are 50 score, but the result of students' answer of the questionnaire is lower than 50. The highest score is 45 and the lowest score is 22 of total of students are 25 students.

b. Validity of questionnaire

The validity use to measure how far the instrument especially questionnaire instrument is valid or not. Because the variable or the data that going to research is about intelligence especially linguistic intelligence. So to know the questionnaire is valid or not the researcher uses construct validity. Because construct validity focuses on test scores as a measure of psychological construct such as intelligence, motivation, anxiety, or critical thinking are hypothetical qualities or characteristic that have been constructed to account for observed behavior.<sup>1</sup>

The result of questionnaire is not numerical score, so the researcher use scale likert to give score to each item of

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<sup>1</sup>Ary et al., *Introduction to Reaserch in Education*.

questionnaire. Before testing the validity of questionnaire, the researcher will present the table coefficient value of correlation “r” product moment, that is:

**Table 4.2**

**Table of Coefficient Value of Correlation “R” Product Moment<sup>2</sup>**

	The distribution value $r_{table}$
Significance	5%
N	25
$r_{table}$	0.381

To testing the validity of questionnaire, the researcher uses SPSS 20 that is:

**Table 4.3**

**Testing of validity questionnaire**

**Correlations**

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	SUMX	
X1	Pearson Correlation	1	-.460*	-.171	.156	.038	-.251	-.250	.051	-.020	.270	-.044
	Sig. (2-tailed)		.021	.413	.455	.856	.226	.228	.811	.925	.191	.833
	N	25	25	25	25	25	25	25	25	25	25	25
X2	Pearson Correlation	-.460*	1	.133	.293	.256	-.158	.433*	-.023	-.305	-.	.249
	Sig. (2-tailed)	.021		.525	.155	.216	.449	.030	.914	.138	.049	.229
	N	25	25	25	25	25	25	25	25	25	25	25

<sup>2</sup>Sudijono, *Pengantar Statistik Pendidikan*. P., 402.

X3	Pearson											
	Correlation	-.171	.133	1	.114	.093	.024	.412*	.334	-.241	-.019	.343
	Sig. (2-tailed)	.413	.525		.588	.658	.910	.041	.103	.247	.928	.094
	N	25	25	25	25	25	25	25	25	25	25	25
X4	Pearson					.559*						
	Correlation	.156	.293	.114	1	*	.105	.386	-.037	-.022	.333	.657**
	Sig. (2-tailed)	.455	.155	.588			.004	.617	.057	.861	.918	.103
	N	25	25	25	25	25	25	25	25	25	25	25
X5	Pearson				.559*							
	Correlation	.038	.256	.093	*	1	.063	.414*	-.154	.201	.112	.625**
	Sig. (2-tailed)	.856	.216	.658	.004		.766	.040	.461	.336	.595	.001
	N	25	25	25	25	25	25	25	25	25	25	25
X6	Pearson											
	Correlation	-.251	-.158	.024	.105	.063	1	.292	.083	.444*	.490*	.532**
	Sig. (2-tailed)	.226	.449	.910	.617	.766		.157	.694	.026	.013	.006
	N	25	25	25	25	25	25	25	25	25	25	25
X7	Pearson											
	Correlation	-.250	.433*	.412*	.386*	.414*	.292	1	-.091	.181	.270	.752**
	Sig. (2-tailed)	.228	.030	.041	.057	.040	.157		.664	.386	.192	.000
	N	25	25	25	25	25	25	25	25	25	25	25
X8	Pearson											
	Correlation	.051	-.023	.334	-.037	-.154	.083	-.091	1	-.302	.099	.113
	Sig. (2-tailed)	.811	.914	.103	.861	.461	.694	.664		.142	.639	.592
	N	25	25	25	25	25	25	25	25	25	25	25
X9	Pearson											
	Correlation	-.020	-.305	-.241	-.022	.201	.444*	.181	-.302	1	.637*	.423*
	Sig. (2-tailed)	.925	.138	.247	.918	.336	.026	.386	.142		.001	.035
	N	25	25	25	25	25	25	25	25	25	25	25

X10	Pearson Correlation	.270	-.398*	-.019	.333	.112	.490*	.270	.099	.637*	1	.615**
	Sig. (2-tailed)	.191	.049	.928	.103	.595	.013	.192	.639	.001		.001
	N	25	25	25	25	25	25	25	25	25	25	25
SUM X	Pearson Correlation	-.044	.249	.343	.657*	.625*	.532*	.752*	.113	.423*	.615*	1
	Sig. (2-tailed)	.833	.229	.094	.000	.001	.006	.000	.592	.035	.001	
	N	25	25	25	25	25	25	25	25	25	25	25

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).

To know which item of questionnaire is valid or not, we must see the  $r_{table}$ . In this research the total of students in XI – A class is 25 students, and all students are the participant of this research. So the totals of participant are 25 students, and the researcher uses significance 5%, and the  $r_{table}$  is 0,396. Based on the data above, there are some of item questionnaire which not valid that are item 1, 2, 3, and 8. This is the explanation why the item 1,2,3, and 8 are not valid :

- 1) Item 1 is not valid because value of pearson correlation is -  
 $0,44 < r_{table} 0,381$ .
- 2) Item 2 is not valid because value of pearson correlation is  
 $0,249 < r_{table} 0,381$ .
- 3) Item 3 is not valid because value of pearson correlation is  
 $0,343 < r_{table} 0,381$ .
- 4) Item 8 is not valid because value of pearson correlation is  
 $0,113 < r_{table} 0,381$

After testing the validity of questionnaire, there are 4 item of questionnaire which not valid because the value of pearson correlation is lowest than  $r_{table}$ , and there are 6 item of questionnaire is valid because the value pearson correlation is highest than  $r_{table}$ .

Actually this questionnaire unnecessary to testing about validity, because the item of questionnaire that be spread to the students are taking out from book, and the author is Thomas Armstrong, Multiple Intelligence in The Classroom. Because the conditions of students in abroad with Indonesia are different, so the researcher tests the validity of questionnaire to know where is the item which is valid or not when it is testing in Indonesia.

c. Reliability of questionnaire

To know reliability of questionnaire, the researcher uses internal consistency reliability and calculates the linguistic intelligence score using coefficient alpha, also called Cronbach alpha. To measure the questionnaire is reliable or not, we must know the level of significance and  $r_{table}$ , that is:

**Table 4.4**

**Table of Coefficient Value of Correlation “R” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
Significance	5%
N	25
$r_{table}$	0.381



To measure the reliability of questionnaire, the researcher uses SPSS 20 to make the researcher easier and decimate misinterpretation, are as follows:

**Table 4.5**

	N	%
Valid	25	100.0
Cases Excluded <sup>a</sup>	0	.0
Total	25	100.0

a. Listwise deletion based on all variables in the procedure.

**Table 4.5**

Cronbach's Alpha	N of Items
.690	11

**Table 4.7**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X1	64.16	83.723	-.108	.706
X2	66.08	78.910	.121	.696
X3	64.88	78.193	.253	.683
X4	65.24	71.940	.588	.650
X5	66.44	71.423	.542	.650
X6	65.04	72.790	.428	.661
X7	66.24	69.273	.693	.635
X8	64.68	81.977	.039	.699
X9	65.28	75.377	.311	.675
X10	64.04	72.707	.539	.654
SUMX	34.32	20.727	1.000	.567

Based on the data above, the result of Alpha is higher than  $r_{table}(0,381)$ , so all items of questionnaire is reliable.

## 2. Result of Speaking Achievement

In result of speaking achievement, the data of speaking achievement is obtained by using test of speaking. The test contains of 5 questions, and the answer of question is not numerical form, so that the researcher uses rating scale of speaking to scoring the answer of respondents. The rating scale of speaking as follows:

**Table 4.8**

**Table of rating scale of speaking (Adopted from Rahayu's Research)**

No	Category	Score	Explanation
1.	Pronunciation	1	It is difficult to understand because of pronunciation problem and often asked to repeat.
		2	There is a problem in pronunciation
		3	Easy to understand without complain
		4	Has a foreign accent
2.	Vocabulary	1	Missuse of words and very limited vocabulary which makes it quite difficult to understand the sentences
		2	Frequent uses of wrong words because of inadequate vocabulary.
		3	Sometimes uses inappropriate terms because of inadequate vocabulary.
		4	Using vocabulary and expressions accurately like that an educated people.
3.	Grammar	1	It often makes mistakes, influences the meaning, and often rearranges the sentences.
		2	It often makes mistakes in structure and influences meaning
		3	Sometimes make mistakes in structure.

		4	Accurately in vocabulary.
4.	Fluency	1	Usually hesitant, often forced into silence caused by limited language used
		2	Speech is occasionally, distributed by the problem of language.
		3	Speech rates seem to be slightly affected by language problem of language.
		4	Speak fluently, smooth like educated people.
5.	Comprehension	1	The speech is rather irrelevant to the task and does not use suitable organizational aids.
		2	Rather difficult to understand because it is not well organized.
		3	Most parts of the speech are relevant to the task and the ideas are tied together.
		4	It can be understood easily without difficulty because the speech is well organized.

So the answer from the respondents will be scored by rating scale of speaking and the data must be valid and reliable, to know the validity and reliability of the data the researcher uses content validity and coefficient alpha.

In this research the population is the students of MA Mambaul Ma'arif Montor, but to make easily the researcher use cluster sampling technique. The researcher only takes one of the classes and that is XI A. The researcher takes XI A class because this class is superior class, so the sample is the students in XI A class that consist of 25 students. The researcher takes an error 5% distribution of  $r_{table}$  because this research is about education.

a. Result of test speaking achievement

In this research, the researcher gets the data by test the students at the eleventh grade of MA Mambaul Ma'arif Montor. The researcher needs 3 meetings, and it was held on the 06<sup>th</sup> October 2020 until 20 October 2020. and the meeting have four activities they are :

1. Entering the class and checking the students' attendance list.
2. Giving clear instruction of the test
3. Giving time to prepare the test
4. Testing all students one by one
5. Giving score of the test by rating scale of speaking

The score of test speaking achievement can be seen in the table as follow:

**Table 4.9**  
**Result of Test Speaking Achievement**

NO	Number of item of Test Speaking Achievement					SUM
	1	2	3	4	5	
1	18	19	18	18	19	92
2	7	9	10	6	6	38
3	9	11	5	10	15	50
4	17	19	18	17	18	89
5	5	5	5	5	5	25
6	13	14	16	18	17	78
7	15	19	17	16	18	85
8	9	10	8	11	8	46
9	18	16	19	19	18	90
10	11	14	16	15	17	73

11	18	15	19	18	19	89
12	16	19	17	18	17	87
13	17	15	19	17	18	86
14	16	18	17	19	19	89
15	14	19	18	15	16	82
16	12	16	18	16	18	80
17	15	18	17	18	19	85
18	7	5	5	8	5	30
19	10	16	9	11	14	60
20	16	18	19	17	18	88
21	8	11	16	13	7	55
22	18	19	17	16	19	89
23	17	18	17	19	15	86
24	8	13	10	14	8	53
25	14	10	12	9	16	61
<b>Total of score</b>						<b>1706</b>

Based on the data above, the score of test speaking achievement is 1706. In this test, the highest score of all items are 100 score, but the result of students' answer of the questionnaire is lower than 100. The highest score is 92 and the lowest score is 25 of total of students are 25 students.

b. Validity of test speaking achievement

The validity use to measure how far the instrument especially questionnaire instrument is valid or not. Because the variable or the data that going to research is about achievement especially speaking achievement, so to know the test is valid or not the researcher uses content validity because content validity is especially important in evaluating achievement tests.

The result of test is not numerical score, so the researcher uses rating scale of speaking to give score to each item of test. Before testing the validity of test, the researcher will present the table coefficient value of correlation “r” product moment, that is:

**Table 4.10**

**The Table Coefficient Value of Correlation “R” Product Moment**

The distribution value $r_{table}$	
Significance	5%
N	25
$r_{table}$	0.381

To testing the validity of test, the researcher uses SPSS 20 that is:

**Table 4.11**

**Testing of validity speaking achievement test**

**Correlations**

		Y1	Y2	Y3	Y4	Y5	SUMY
Y1	Pearson Correlation	1	.819**	.836**	.840**	.878**	.941**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	25	25	25	25	25	25
Y2	Pearson Correlation	.819**	1	.809**	.851**	.829**	.925**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	25	25	25	25	25	25
Y3	Pearson Correlation	.836**	.809**	1	.870**	.769**	.924**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	25	25	25	25	25	25
Y4	Pearson Correlation	.840**	.851**	.870**	1	.796**	.935**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	25	25	25	25	25	25

Y5	Pearson Correlation	.878**	.829**	.769**	.796**	1	.921**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	25	25	25	25	25	25
SUM Y	Pearson Correlation	.941**	.925**	.924**	.935**	.921**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	25	25	25	25	25	25

\*\* . Correlation is significant at the 0.01 level (2-tailed).

To know which item of test is valid or not, we must compare the  $r_{total}$  with the  $r_{table}$ . In this research the total of students in XI – A class is 25 students, and all students are the participant of this research. So the totals of participant are 25 students, and the researcher uses significance 5%, and the  $r_{table}$  is 0,381.

Based on the data above, all the item of test speaking achievement is reliable because the value of  $r_{total}$  is higher than  $r_{table}$ . The explanations are as follows:

- 1) Item 1 is valid because  $r_{total}$  is 0,941 >  $r_{table}$  0,381
- 2) Item 2 is valid because  $r_{total}$  is 0,925 >  $r_{table}$  0,381
- 3) Item 2 is valid because  $r_{total}$  is 0,924 >  $r_{table}$  0,381
- 4) Item 2 is valid because  $r_{total}$  is 0,935 >  $r_{table}$  0,381
- 5) Item 2 is valid because  $r_{total}$  is 0,921 >  $r_{table}$  0,381

#### c. Reliability of speaking achievement

To know reliability of test, the researcher uses internal consistency reliability and calculates the test of speaking achievement score using coefficient alpha, also called

Cronbach alpha. To measure the test is reliable or not, we must know the level of significance and  $r_{table}$ , that is:

**Table 4.12**

**The Table Coefficient Value of Correlation “R” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
Significance	5%
N	25
$r_{table}$	0,381

To measure the reliability of test of speaking achievement, the researcher uses SPSS 20 to make the researcher easier and decimate misinterpretation, are as follows:

**Table 4.13**

**Case Processing Summary**

		N	%
Cases	Valid	25	100.0
	Excluded <sup>a</sup>	0	.0
	Total	25	100.0

a. Listwise deletion based on all variables in the procedure.

**Table 4.14**

**Reliability Statistics**

Cronbach's Alpha	N of Items
.831	6



**Table 4.15**

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Y1	129.84	1441.973	.927	.797
Y2	128.32	1433.977	.908	.796
Y3	128.48	1401.177	.904	.790
Y4	128.44	1439.173	.920	.797
Y5	128.20	1394.500	.900	.789
SUMY	71.52	439.427	1.000	.959

Based on the data above, the result of Alpha is higher than  $r_{table}(0,381)$ , so all items of test speaking achievement is reliable.

### **3. Analyzing the Data of Linguistic Intelligence and Speaking Achievement**

After testing the validity and reliability of both variables, linguistic intelligence and speaking achievement, for the next section is analyzing the data that gotten from the respondents that is linguistic intelligence as variable X and students speaking achievement as variable Y. The result of both variables as follows:

- a. Entry the result of variable X and Y

**Table 4.16**

**The Result of Linguistic Intelligence and Students' speaking Achievement**

NO	Variables	
	Linguistic Intelligence (X)	Speaking Achievement (Y)
1	45	92
2	37	38
3	34	50
4	36	89
5	39	25
6	37	78

7	38	85
8	33	46
9	36	90
10	36	73
11	29	89
12	34	87
13	31	86
14	32	89
15	33	82
16	36	80
17	32	85
18	32	30
19	34	60
20	31	88
21	22	55
22	36	89
23	31	86
24	31	53
25	43	61
Total	815	1706

After the researcher get the data between variable X as Linguistic Intelligence and variable Y as Students' Speaking Achievement then, the next step the researcher correlate both variable by using formula of product moment. To make the researcher easy to correlate both of them so, the researcher will analyse used table as follow:

**Table 4.17**

**Table of Preparation to Find Out the Coefficient of Product**

NO	Variables		X <sup>2</sup>	Y <sup>2</sup>	XY
	Linguistic Intelligence (X)	Speaking Achievement (Y)			
1	45	92	2025	8464	4140
2	37	38	1369	1296	1406

3	34	50	1156	2500	1700
4	36	89	1296	7921	3204
5	39	25	1521	625	975
6	37	78	1369	6084	2886
7	38	85	1444	7225	3230
8	33	46	1089	2116	1518
9	36	90	1296	8100	3240
10	36	73	1296	8329	2628
11	29	89	841	7921	2581
12	34	87	1156	7569	2856
13	31	86	961	7396	2666
14	32	89	1024	7921	2848
15	33	82	1089	6724	2706
16	36	80	1296	6400	2880
17	32	85	1024	7225	2720
18	32	30	1024	900	960
19	34	60	1156	3600	2040
20	31	88	961	7744	2728
21	22	55	484	3025	1210
22	36	89	1296	7291	3204
23	31	86	961	7396	2666
24	31	53	961	2809	1643
25	43	61	1849	3721	2623
Total	815	1706	29944	140302	61258

b. Analyzing the data by statistical analysis

Based on the table 4.17, the researcher gets some points about two variables are Linguistic Intelligence and Students' Speaking Achievement as follow:

$$X = 815$$

$$Y = 1706$$

$$X^2 = 29944$$

$$Y^2 = 140302$$

$$XY = 61258$$

After that, the researcher will count the correlate both of them by using correlation - Pearson product moment:

$$r_{xy} = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{(n(\sum x^2) - (\sum x)^2)(n(\sum y^2) - (\sum y)^2)}}$$

$$r_{xy} = \frac{25(\sum 61258) - (\sum 815)(\sum 1706)}{\sqrt{(25(\sum 29944) - (\sum 815)^2)(25(\sum 140302) - (\sum 1706)^2)}}$$

$$r_{xy} = \frac{(1531450) - (1390390)}{\sqrt{(748600 - 664225)(3508000 - 2910436)}}$$

$$r_{xy} = \frac{141060}{\sqrt{(84375)(597564)}}$$

$$r_{xy} = \frac{141060}{\sqrt{50419462500}}$$

$$r_{xy} = \frac{141060}{224542.78}$$

$$r_{xy} = 0.628$$

## B. Hypotheses Testing

According to Creswell, hypotheses are statements in quantitative research in which the investigator makes a prediction or a conjecture about the outcomes of a relationship among attributes or characteristics.<sup>3</sup> There are two kinds of hypotheses, null hypotheses and alternative hypotheses.

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<sup>3</sup>Creswell, *Educational Research Planning, Conducting And Evaluating Quantitative And Qualitative Research*. Page., 111.

Hypotheses are important things in quantitative research because hypotheses make the result of the research and determine the hypotheses is null hypotheses or alternative hypotheses easily there is correlation between variable x and variable y or not.

Based on the analysing data by statistical analysis that the researcher uses is Correlation Pearson Product Moment, there is known that the result of  $r_{xy} = 0.628$ . After the researcher knows about the value then, the last step is comparing  $r_{xy}$  with  $r_{table}$ . If  $r_{xy}$  is highest than  $r_{table}$  so, there is relationship between two variable but if  $r_{xy}$  is lowest than  $r_{table}$  so, there is no relationship between two variable.

Before determine the hypotheses is null hypotheses or alternative hypotheses, the researcher must determine the value of df (*degrees of freedom*) to determine the value of  $r_{table}$  and the formula are as follows:

$$df = N - nr$$

df : *Degrees of Freedom*

N : *Number of Cases* (N = 25)

nr : *Sum of Variables* (Sum of variables is 2 that is variable X

(Linguistic Intelligence) and variable Y (Students Speaking Achievement)

$$df = N - nr$$

$$df = 25 - 2$$

$$df = 23$$

There is known that the value of df is 23, here the value of  $r_{table}$  can search by using the value of df. The value of  $r_{table}$  of 23 and the significance 5% is 0.396.

**Table 4.18**

**Table of Coefficient Value of Correlation “r” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
Significance	5%
df	23
$r_{table}$	0.396
$r_{xy}$	0.628

From the result of the table above, there is known that the value of  $r_{xy}$  is 0.628 and the value of  $r_{table}$  of coefficient value correlation product moment in significant error is 5% is 0.396. The result shows that  $r_{xy}$  is highest than  $r_{table}$  so, Null hypotheses is rejected and alternative hypotheses is accepted. It means that there is the effect between variable X between variable Y. So, the conclusion is there is effect of linguistic intelligence and students speaking achievement.

The researcher not only compares  $r_{xy}$  and  $r_{table}$  to know how far the relationship between two variables but it will be interpretation in table below:

**Table 4.19**

**Table of Interpretation of ‘r’ value product – moment**

No	‘r’ value product – moment	Interpretation
1	0,00 – 0,200	The correlation between variable X and Y is extremely low
2	0,200 – 0,400	The correlation between variable X and Y is low

3	0,400 – 0,700	The correlation between variable X and Y is enough
4	0,700 – 0,900	The correlation between variable X and Y high
5	0,900 – 1,00	The correlation between variable X and Y is strongly high

So, based on the table above, the result of this research is 0.628 and from the table above the result of this research include to the third interpretation that is 0,400 – 0,700. So it can conclude that there is correlation between variable X and variable Y and the correlation of variable X and Y is enough correlation.

So, the researcher concludes that there is effect of linguistic intelligence and students' speaking achievement.

### **C. Discussion of Finding**

In this research, there are two research problems that the researcher wants to research, as follows:

#### **1. The Effect of Linguistic Intelligence To Students Speaking Achievement In Learning English At MA Mambaul Ma'arif Montor**

Based on the data above, the result of this research that analysing by statistical analysis Pearson Product Moment showed that there is effect of linguistic intelligence and students' speaking achievement. It is proved by comparing the result of  $r_{xy}$  with  $r_{table}$ . The result of  $r_{xy}$  is 0.628 and the value of  $r_{table}$  0.396. So the result of  $r_{xy}$  is highest than  $r_{table}$  ( $0.628 > 0.396$ ). So, based on the hypotheses testing the null hypotheses is rejected and the alternative hypotheses is accepted.

The answer of this research problem is there is effect of linguistic intelligence to students' speaking achievement in learning English at MA Mambaul Ma'arif Montor. It suitable with Thomas Armstrong statement in characteristic of linguistic intelligence "one of characteristic of linguistic intelligence is ability to learn language through listening, reading, writing, speaking, easily remembers written and spoken information, and so on."<sup>4</sup> So that, the students who have good achievement in English especially speaking skill, maybe it is influenced by their linguistic intelligence.

## **2. The Significance of Linguistic Intelligence to Students Speaking Achievement in Learning English At MA Mambaul Ma'arif Montor**

In this research, there is an effect of linguistic intelligence to students' speaking achievement in learning English at MA Mambaul Ma'arif. It is evidenced by the result of  $r_{xy}$  is 0.628 and the value of  $r_{table}$  0.396. So the result of  $r_{xy}$  is highest than  $r_{table}$  ( $0.628 > 0.396$ ). When see the table interpretation of 'r' value product – moment, the value of  $r_{xy} = 0.628$  include to the third interpretation that is 0.400 – 0.700 and the interpretation is the correlation between variables X and Y is enough. Therefore, the researcher concludes that the students who have linguistic intelligence have enough significant level to their speaking achievement in learning English.

The students who have linguistic intelligence can influence their speaking achievement because according to Howard Gardner "linguistic intelligence is the capacity to use the word effectively, whether orally or in

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<sup>4</sup>Armstrong, *Multiple Intelligence in The Classroom*.



writing.<sup>5</sup> So, when the students have higher linguistic intelligence, the students can be easier to achieve knowledge about language especially in learning English.

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<sup>5</sup>R. Taylor and MacKenney, *Improving Human Learning In The Classroom: Theories and Teaching Practice*. Page., 113 – 114.