CHAPTER IV
RESEARCH FINDING AND DISCUSSION

A. Research Results
1. Analysis Data
a. Preliminary Analysis

The data analyzed in this study are the result of questionnaire and test. The researcher description is based in the score of the questionnaire to know the students' English learning motivation and test to know the vocabulary mastery of seventh grade students of MTs in Jepara in academic year 2020/2021. In computing the data, the researcher assisted by SPSS 15.0 for windows to analyzed all data and hypothesis.

1) English Learning Motivation During COVID-19 Pandemic Situation

In this study, students' English learning motivation is as independent variable (X). To collect the data, the researcher use questionnaire. The type of the questionnaire is closed-type questionnaire. The questionnaire has three components of indicators consists of self's motivation, teacher, and COVID-19 situation. The questionnaires were assessed by Likert scale rating. This scale has five options. They are Strongly Agree (Sangat Setuju), Agree (Setuju), Less Agree (Kurang Setuju), Disagree (Tidak Setuju), Strongly Disagree (Sangat Tidak Setuju). Independent variable data obtained through a questionnaire consisting of 20 items with the number of respondents 26 students. Below is the result of questionnaire test for Students' English learning motivation During COVID-19 Pandemic situation.

Table 4. 1 Score of Student's English Learning Motivation During COVID-19 Pandemic (X Variable)

No	Answer					Score					SUM
	SS	S	KS	TS	STS	5	4	3	2	1	
1	3	9	2	5	1	15	36	6	10	1	68
2	2	7	6	5	0	10	28	18	10	0	66
3	9	7	3	1	0	45	28	15	2	0	90
4	3	8	6	3	0	15	32	18	6	0	71
5	2	8	5	2	3	10	32	15	4	3	64
6	5	9	5	0	1	25	36	15	0	1	77
7	4	8	7	0	1	20	32	21	0	1	74
8	5	7	8	0	0	25	28	24	0	0	77
9	2	6	8	4	0	10	24	24	8	0	66
10	4	7	5	4	0	20	28	15	8	0	71
11	7	6	4	2	1	35	24	12	4	1	76
12	4	11	4	1	0	20	44	12	2	0	78
13	4	7	7	2	0	20	28	21	4	0	73
14	3	8	2	6	1	15	32	6	12	1	66
15	3	8	6	2	1	15	32	18	4	1	70
16	2	9	4	2	3	10	36	12	4	3	65
17	0	13	7	0	0	0	52	21	0	0	73
18	6	7	5	0	2	30	28	15	0	2	75
19	3	5	6	1	5	15	20	18	2	5	60
20	4	3	8	4	1	20	12	24	8	1	65
21	9	8	2	1	0	45	32	9	2	0	88

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22	7	9	3	1	0	35	36	9	2	0	82
23	4	6	6	3	1	20	24	18	6	1	69
24	3	6	5	3	3	15	24	15	6	3	63
25	4	9	5	1	1	20	36	15	2	1	74
26	6	2	4	3	5	30	8	12	6	5	61
SUM											1862

From the data of the value of the questionnaire then can be presented in the form of the following frequency distribution table.

Table 4. 2 Frequency Distribution

No	X	F	FX
1	60	1	60
2	61	1	61
3	63	1	63
4	64	1	64
5	65	2	130
6	66	3	198
7	68	1	68
8	69	1	69
9	70	1	70
10	71	2	142
11	73	2	146
12	74	2	148
13	75	1	75

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14	76	1	76
15	77	2	154
16	78	1	78
17	82	1	82
18	88	1	88
19	90	1	90
$\sum$		26	**1862**

The data description is then presented mean, median, mode, standard deviation, variance, minimum score, maximum score, and totals score from English learning motivation during COVID-19 Pandemic situation data of 7th graders at MTs in Jepara academic year 2020/2021, which is presented in the following table.

Table 4. 3 Descriptive Statistics

Statistics

N	Valid	26
	Missing	0
Mean		71.62
Median		71.00
Mode		66
Std. Deviation		7.600
Variance		57.766
Minimum		60
Maximum		90
Sum		1862

From the data of students' learning motivation questionnaire, it is found that highest

score is 90 and the lowest score is 60 in the scoring scale of 0-125. The mean, median, mode, and standard deviation are 71.62, 71.00, 66, and 7600.

Furthermore, to process the data, then use the following steps:

a) Mean (X)

$$x = \frac{\sum fX}{n}$$

$$= \frac{1862}{26} = 71,62$$

b) Determine the spread area of the value

R = H - L + 1

H = the number of item x max score, SS =5

= 20 x 5

= 100

L = the number of item x min score, STT =1

= 20 X 1

= 20

R = H- L + 1

= 100 – 20 + 1

= 81

c) Create a class interval with the following categories.

K = 1 + 3,3 log n

= 1 + 3,3 log 26

= 1 + 3,3 x 1,414973348

= 1 + 4,6694120483

= 5, 6694120483 or 6

Then obtained the interval value as follows

$i = \frac{R}{K} = \frac{81}{6} = 13,5$

From the result of the range above can be obtained the value of 13.5 rounded to 14 so that it can be obtained the following table:

Table 4. 4 Interval Value of Students' English Learning Motivation Category During COVID-19

No	Interval	Category
1	89 – 103	Very high

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2	76 – 89	High
3	62 – 75	Good
4	48 – 61	Fair
5	34 – 47	Low
6	20 – 33	Very low

Based on the interval above, the mean value of the students' English learning motivation is 71.62 is relatively good because it is included in the interval of 62 - 75. So, it can be concluded that English learning motivation of 7th graders at MTs in Jepara during COVID-19 pandemic situation is relatively good.

2) Vocabulary Mastery

Vocabulary mastery is as dependent variable (Y). The researcher conducted written test to know the students' vocabulary mastery score. The test was evaluated from two indicators of word knowledge, they are word classes/ word use and word meaning. Word classes consists of noun, verb, and adjective. Meanwhile word meaning made up of synonym and antonym. The test's scoring system is as follows: if students answer the item correctly, they receive a score of 1, whereas if they answer the item incorrectly, they receive a score of 0. Dependent variable data obtained through a test consisting of 25 items with the number of respondents 26 students. Below is the result of students' vocabulary mastery test.

Table 4. 5 Score of Student's Vocabulary Mastery (Y Variable)

No	Right Answer	Score (x4)
1	15	60

2	16	64
3	21	84
4	14	56
5	15	60
6	13	52
7	16	64
8	16	64
9	13	52
10	15	60
11	16	64
12	17	68
13	17	68
14	13	52
15	15	60
16	11	44
17	13	52
18	17	68
19	18	72
20	15	60
21	21	84
22	17	68
23	17	68
24	13	52

25	21	84
26	11	44
Sum	406	**1624**

From the data of the value of the questionnaire then can be presented in the form of the following frequency distribution table.

Table 4. 6 Frequency Distribution

No	X	F	FX
1	44	2	88
2	52	5	260
3	56	1	56
4	60	5	300
5	64	4	256
6	68	5	340
7	72	1	72
8	84	3	252
$\sum$		26	**1624**

The data description is then presented mean, median, mode, standard deviation, variance, minimum score, maximum score, and totals score from data vocabulary mastery of 7th graders at MTs in Jepara academic year 2020/2021, which is presented in the following table.

Table 4. 7 Descriptive Statistics

Statistics

N	Valid	26
	Missing	0
Mean		62.46
Median		62.00
Mode		52(a)
Std. Deviation		10.856
Variance		117.858
Minimum		44
Maximum		84
Sum		1624

From the data of students' learning motivation questionnaire, it is found that highest score is 84 and the lowest score is 44 in the scoring scale of 0-100. The mean, median, mode, and standard deviation are 62.46, 62.00, 52, and 10.856.

Furthermore, to process the data, then use the following steps:

a) Mean

$$x = \frac{\sum fX}{n}$$

$$= \frac{1624}{26} = 62,46$$

b) Determine the spread area of the value

R = H - L + 1

H = the number of item x max score

  = 25 x 4

  = 100

 L = the number of item x min score

  = 25 X 0

  = 0

R = H- L + 1

  = 100 – 0 + 1

  = 101

c) Create a class interval with the following categories.

K = 1 + 3,3 log n

= 1 + 3,3 log 26

= 1 + 3,3 x 1,414973348

= 1 + 4,6694120483

= 5, 6694120483 or 6

Then obtained the interval value as follows

$$i = \frac{R}{K} = \frac{101}{6} = 16,83$$

From the result of the range above can be obtained the value of 16,83 rounded to 17 so that it can be obtained the following table:

Table 4. 8 Interval Value of Vocabulary Mastery

No	Interval	Category
1	93 – 110	Very high
2	75 – 92	High
3	58 – 74	Fair
4	41 – 57	Low
5	25 – 41	Very low

Based on the interval above, the mean value of the students' vocabulary mastery is 62.46 is relatively fair because it is included in the interval of 58 - 74. So, it can be concluded that students' vocabulary mastery of 7th graders at MTs in Jepara during COVID-19 pandemic situation is relatively fair.

b. Validity and Reliability Instrument

There are two requirements that must be filled by the research instrument, namely the validity and reliability of the instrument. Validity and reliability tests in this study were used in questionnaires and tests used to measure students'

English learning motivation (X) and vocabulary mastery (Y).

1) Validity of the instrument
a) Validity of Students' English Learning Motivation

The criteria of validity instrument of English learning motivation motivation becomes valid if robtained > rtable and it becomes invalid if robtained < rtable. In this research the number of respondent for validity test is 26 students of 7th graders MTs in Jepara. The validity instrument of English learning motivation during COVID-19 can be seen in the table below.

Table 4. 9 The Validity of English learning motivation during COVID-19

Item	$r_{obtained}$	r_{table} 5% (26)	Result
1	0,943	0,388	VALID
2	0,943	0,388	VALID
3	0,942	0,388	VALID
4	0,740	0,388	VALID
5	0,906	0,388	VALID
6	0,740	0,388	VALID
7	0,813	0,388	VALID
8	0,813	0,388	VALID
9	0,792	0,388	VALID
10	0,595	0,388	VALID
11	0,813	0,388	VALID
12	0,813	0,388	VALID

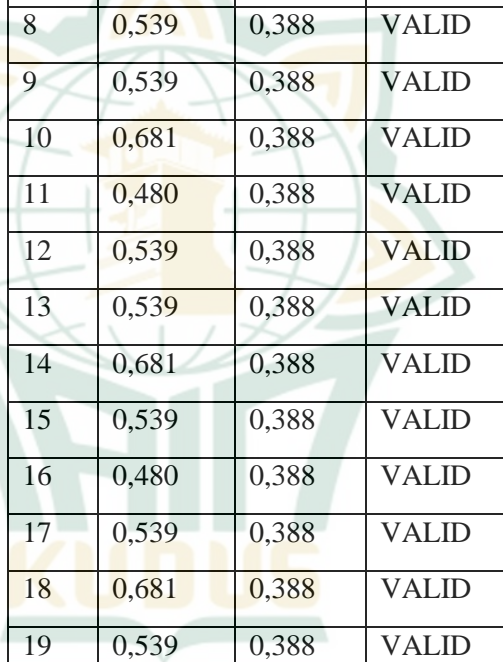| 13	0,985	0,388	VALID
14	0,740	0,388	VALID
15	0,985	0,388	VALID
16	0,614	0,388	VALID
17	0,614	0,388	VALID
18	0,985	0,388	VALID
19	0,985	0,388	VALID
20	0,813	0,388	VALID

The questionnaire item is considered valid if the correlation coefficients are at least the same as the rtable at = 0.05 for N = 26. The result of the table above indicates that the questionnaire is in the valid criteria because coefficient correlation > 0,388 .

b) Validity of Vocabulary Mastery

The criteria of validity instrument of vocabulary mastery becomes valid if robtained > rtable and it becomes invalid if robtained < rtable. In this research the number of respondent for validity test is 26 students of 7th graders MTs in Jepara. The validity instrument of vocabulary mastery can be seen in the table below.

Table 4. 10 The Validity of Vocabulary Mastery

Item	$r_{obtained}$	r_{table} 5% (26)	Result
1	0,539	0,388	VALID
2	0,681	0,388	VALID

3	0,480	0,388	VALID
4	0,539	0,388	VALID
5	0,539	0,388	VALID
6	0,480	0,388	VALID
7	0,480	0,388	VALID
8	0,539	0,388	VALID
9	0,539	0,388	VALID
10	0,681	0,388	VALID
11	0,480	0,388	VALID
12	0,539	0,388	VALID
13	0,539	0,388	VALID
14	0,681	0,388	VALID
15	0,539	0,388	VALID
16	0,480	0,388	VALID
17	0,539	0,388	VALID
18	0,681	0,388	VALID
19	0,539	0,388	VALID
20	0,480	0,388	VALID
21	0,539	0,388	VALID
22	0,539	0,388	VALID
23	0,539	0,388	VALID
24	0,681	0,388	VALID
25	0,480	0,388	VALID

The item of the test is considered as valid if the correlation coefficients is at least same as the rtable at α = 0.05 for N = 26. Based on the table above, the result shows that the questionnaire is in the valid criteria because coefficient correlation > 0,388.

2) Reliability of the Instrument
a) Reliability of the Students' English Learning Motivation

The criteria of reliability measured using the comparison between the values of the test process using the statistic test Cronbach Alpha. If the value obtained in the test process using the statistic test Cronbach Alpha > 0.60, it means that the instrument is reliable, while if the Cronbach Alpha found a smaller coefficient number (<0.60), it can be concluded that the instrument is not reliable. After analyzed the data by spss program, the following results are obtained:

Table 4. 11 The Result of Reliability Students' English Learning Motivation During COVID-19

Reliability Statistics

Cronbach's	N of Items
.752	26

Based on the results of the analysis using the formula of Alpha Cronbach with the assistance of SPSS for windows is 0,752. So it can be said that the result > 0.60 and reading comprehension instrument has high reliability.

b) Reliability of the Vocabulary Mastery

The criteria of reliability measured using the comparison between the values of the test process using the statistic test Cronbach

Alpha. If the value obtained in the test process using the statistic test Cronbach Alpha > 0.60, it means that the instrument is reliable, while if the Cronbach Alpha found a smaller coefficient number (<0.60), it can be concluded that the instrument is not reliable. After analyzed the data by spss program, the following results are obtained:

Table 4. 12 The Result of Reliability Vocabulary Mastery

Reliability Statistics

Cronbach's Alpha	N of Items
.953	26

Based on the results of the analysis using the formula of Alpha Cronbach with the assistance of SPSS for windows is 0,953. So it can be said that the result > 0.60 and vocabulary test has high reliability.

c. Testing of Prerequisite Analysis

The characteristics of the research data determine the techniques for analyzing the data. It is necessary to examine the data before analyzing it. The examination includes the normality and linearity tests.

1) Normality Test

The researcher used Kolmogorov Smirnov (KS-Z) formula to test the normality of data through SPSS 15.0 for windows. The significance of p (significance) on the Kolmogorov Smirnov value indicates normality. If the p (significance) value is greater than 0,05 (p>0,05), the data distribution is normal.

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After analyzed the data by spss program, the following results are obtained:

Table 4. 13 Tests of Normality

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		26
Normal Parameters(a,b)	Mean	.0000000
	Std. Deviation	11.61173257
Most Extreme Differences	Absolute	.156
	Positive	.156
	Negative	-.073
Kolmogorov-Smirnov Z		.797
Asymp. Sig. (2-tailed)		.548

a Test distribution is Normal
b Calculated from data.

Based on the computation on normality analysis, the result is 0,548 it means that p(significance) > 0,05 so it can be said the distribution of the data is normal.

2) Linearity Test

Linearity testing is aimed to know whether two variables which done by statistical analysis correlation show the linear relationship or not. The criteria for linearity test are:

1) If the graph points to the upper right, the data is in the linear category.
2) If the graph does not point to the top right, the data is not linear.

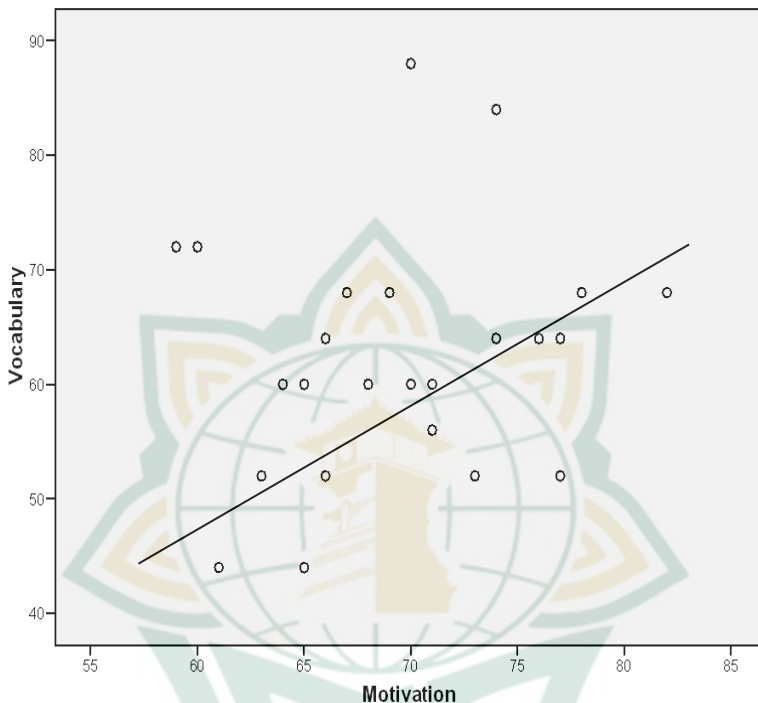After data analysis using SPSS program, the data results are obtained as follows.

Figure 4. 1 data linearity test plot

From the data above, it can be concluded that the data distribution appears to form a straight lines direction from left to bottom to top right. Thus it can be concluded that the relationship of independent variable and dependent variable has a linear form.

d. Hypothesis Testing

After testing the pre-requirement test, the researcher tested the hypothesis. In this hypothesis test aims to prove whether the hypothesis that has been submitted is acceptable or not. The hypothesis in this study is that "There is a correlation between English learning motivation and vocabulary mastery of 7th graders at MTs in Jepara during COVID-19 pandemic situation". The correlation coefficient (rxy) is used as the

basis for decision making. If the correlation coefficient is positive, the independent variable and dependent variable may have a positive relationship The value of rxy, then is compared with product moment formula table (rt) at significance of 5%, and N = the number of the students. If rxy is greater than rt (rxy>rt), it means that Ho is rejected and Ha is accepted. The researcher analyzed the collected data using Pearson Product Moment Formula to test the hypothesis by manual.

From the data collected, it is acquired:

Table 4. 14

No	X	Y	X^2	Y^2	XY
1	68	60	4624	3600	4080
2	66	64	4356	4096	4224
3	90	84	8100	7056	7560
4	71	56	5041	3136	3976
5	64	60	4096	3600	3840
6	77	52	5929	2704	4004
7	74	64	5476	4096	4736
8	77	64	5929	4096	4928
9	66	52	4356	2704	3432
10	71	60	5041	3600	4260
11	76	64	5776	4096	5016
12	78	68	6084	4624	5304
13	73	68	5329	4624	4964
14	66	52	4356	2704	3432

15	70	60	4900	3600	4200
16	65	44	4225	1936	2860
17	73	52	5329	2704	3796
18	75	68	5625	4624	5100
19	60	72	3600	5184	4320
20	65	60	4225	3600	3900
21	88	84	7744	7056	7392
22	82	68	6724	4624	5576
23	69	68	4761	4624	4692
24	63	52	3969	2704	3276
25	74	84	5476	7056	6216
26	61	44	3721	1936	2684
Sum	1862	1624	134792	104384	117768

Where:

$\sum X = 1862$

$\sum Y = 1624$

$\sum XY = 117768$

$\sum_X 2 = 134792$

$\sum_Y 2 = 104384$

N = 26

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{\{n \sum X^2 - (\sum X)^2\}\{N \sum Y^2 - (\sum Y)^2\}}}$$

$$r_{xy} = \frac{26\,(117768) - (1862)(1624)}{\sqrt{\{26(134792) - (1862)^2\}\{26(104384) - (1624)^2\}}}$$

$$r_{xy} = \frac{3061968 - 3023888}{\sqrt{\{3504592 - 3467044\}\{2713984 - 2637376\}}}$$

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$$r_{xy} = \frac{38080}{\sqrt{\{37548\}\{76608\}}}$$

$$r_{xy} = \frac{38080}{\sqrt{2876477184}}$$

$$r_{xy} = \frac{38080}{53,632.7999}$$

$$= \frac{38080}{53,633}$$

$$= 0.7100106278 \text{ (rounded)}$$

$$= 0.710$$

From the correlation computation of X and Y, the coefficient of correlation is $rxy = 0,710$. Then this value compared to $rtable$ is 0,388 at the significant level of 5% N=26. It means that rxy is higher than $rtable$. It means that the H_0 is rejected and the H_a is accepted. The conclusion is there is a significant positive correlation between English learning motivation and vocabulary mastery during COVID-19 pandemic situation. It means that the increase of students' English learning motivation will be followed by the improvement of students' vocabulary mastery.

B. Discussion

Based on the data description, it is found the mean scores and standard deviation score in each variable. The mean score of the data description students' English learning motivation during COVID-19 pandemic situation is 71,62 and the standard deviation is 7,600. It means that English learning motivation of the 7th graders of Mts in Jepara during COVID-19 pandemic situation is relatively good. While The mean score of the data description students' vocabulary mastery is 62,46 and the standard deviation is 10,856. It can be said that vocabulary mastery of the 7th graders at one of the Mts in Jepara during COVID-19 pandemic situation is relatively fair.

The following discussion can be provided after analyzing the correlation between the variables. The discussion was more focused on determining the potential

causes of the study's findings. Since the computations of normality, linearity, and significant testing show that the data are in a normal distribution and that the regression is linear and significant. The researcher then returns to the hypothesis.

Some previous study showed that motivation have an important part in English teaching and learning process but their study were conducted on general situation, while this research is conducted in different situation causing COVID-19 Pandemic. From hypothesis testing, it is found that there is a correlation between vocabulary mastery and reading comprehension. It means that the hypothesis is accepted. Rxy = 0,710 > Rt = 0,388 it can be concluded that English learning motivation and vocabulary mastery has correlation. The level of correlation is strong correlation. There is positive correlation between English learning motivation during COVID-19 Pandemic situation and vocabulary mastery. A positive correlation means the higher score in English learning motivation is followed by the higher score in vocabulary.

According to Gardner motivation has also been widely researched on and agreed to be an important affective variable influencing SL/FL learning[1]. It can be known that students' English learning motivation has contribution on the result of students' vocabulary mastery. When the student has a high motivation in learning English it will make the student more enthusiastic and can mastered English well, while the low of students' English learning motivation will result in the low of students' vocabulary mastery.

From the explanation above, it can be concluded that online learning and limited time of face-to-face learning situation during COVID-19 Pandemic does not affect the motivation of students in learning English. This is evidenced by the results obtained that students have a good motivation in the pandemic period followed by good vocabulary mastery. Although the time is relatively short which is only 30 minutes of meetings in the classroom, most students still have good

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[1] R. C Gardner, "Social Psychology and Second Language Learning: The Role of Attitudes and Motivation," ed. Edward Arnold (London, UK, 1985), 23–31.

enough motivation in learning English. However, to further increase the motivation in learning English so that students have good vocabulary mastery, teachers can use interesting learning methods for more efficient English learning in a limited time during the pandemic situation.