

CHAPTER IV
FINDINGS AND DISCUSSION

A. Findings

1. Description of Data

The study has been done at IAIN Antasari Banjarmasin. It is located on Jl. A. Yani KM. 4.5 Banjarmasin 70234. In this data presentation, the writer presents and describes the result of the on-field research that has been done in the third semester students of English Department of IAIN Antasari Banjarmasin. The data are about the English learners' aptitude and their vocabulary mastery.

a. English learners' aptitude (X)

The data of English learners' aptitude were collected by using Modern Language Aptitude Test. It was conducted to 42 students of third semester students of English Department IAIN Antasari Banjarmasin. The result of each students are presented in the following table :

Table 4.1 The Modern Language Aptitude Test Scores.

No	Initials' Name	Language Aptitude (X)
1	ADS	80
2	AKW	84

The Continued Table

No	Initials' Name	Language Aptitude (X)
3	AW	76
4	AM	72
5	AI	76
6	AS	76
7	BR	84
8	BTD	84
9	EA	88
10	FI	68
11	IP	88
12	KH	80
13	LH	76
14	LA	72
15	MAA	84
16	MMH	80
17	MRR	72
18	MH	76
19	MA	84
20	MK	84
21	MS	64

The Continued Table

No	Initials' Name	Language Aptitude (X)
22	MQ	60
23	NNR	88
24	NL	84
24	NWH	60
26	NI	76
27	RH	80
28	RHH	88
29	RJ	80
30	RA	88
31	RP	84
32	SM	72
33	SRH	72
34	SR	80
35	SY	84
36	SG	88
37	SH	80
38	SMP	84
39	TNL	68
40	WH	76

The Continued Table

No	Initials' Name	Language Aptitude (X)
41	YR	80
42	ZA	84

The writer is making frequency distribution of the students.

The frequency distribution is seen in the following table:

Table 4.2 Frequency Distribution of English Learners' Aptitude

Score (X)	F	fX	Percentage
60	2	120	4.8%
64	1	64	2.4%
68	2	136	4.8%
72	5	360	11.9%
76	7	532	16.7%
80	8	640	19.0%
84	11	924	26.2%
88	6	528	14.3%
Total	N = 42	$\sum X = 3304$	100%

To know the English learners' aptitude generally, the writer applies "mean, median and modus" statistical formula below:

a) Mean of Modern Language aptitude Test

$$\begin{aligned} M_x &= \frac{\sum X}{N} \\ &= \frac{3304}{42} \\ &= 78.67 \end{aligned}$$

b) Median of Modern language Aptitude Test

Score of language aptitude test are 60, 64, 68, **72, 76**, 80, 84, and 88.

$$\begin{aligned} Me &= \frac{72+76}{2} \\ &= 74 \end{aligned}$$

c) Modus of Modern Language aptitude Test

Based on the frequency that often appear on the table above. The value Modus of Modern Language Aptitude Test is 84.

The table above showed that the highest score of language aptitude was 88 and the lowest score of language aptitude was 66. The mean of Modern Language Aptitude Test is 78.67, median of Modern language Aptitude Test is 74, modus of Modern Language aptitude Test is 84.

b. Students' Vocabulary Mastery (Y)

The data of students' vocabulary mastery were collected by using test. It was also conducted to 42 students of third semester students English Department IAIN Antasari Banjarmasin. The result of each students are presented in the following table :

Table 4.3 The scores of Vocabulary Mastery

No	Initials' Name	Vocabulary Mastery (Y)
1	ADS	72
2	AKW	78
3	AW	72
4	AM	72
5	AI	72
6	AS	68
7	BR	82
8	BTD	84
9	EA	80
10	FI	64
11	IP	74
12	KH	72
13	LH	64

The Continued Table

No	Initials' Name	Vocabulary Mastery (Y)
14	LA	64
15	MAA	76
16	MMH	68
17	MRR	64
18	MH	64
19	MA	78
20	MK	76
21	MS	60
22	MQ	52
23	NNR	82
24	NL	74
25	NWH	76
26	NI	68
27	RH	72
28	RHH	78
29	RJ	88
30	RA	78
31	RP	72

The Continued Table

No	Initials' Name	Vocabulary Mastery (Y)
32	SM	70
33	SRH	74
34	SR	68
35	SY	68
36	SG	74
37	SH	76
38	SMP	74
39	TNL	62
40	WH	72
41	YR	76
42	ZA	68

The writer was making frequency distribution of the students.

The frequency distribution is seen in the following table:

Table 4. 4 Frequency Distribution of Vocabulary Mastery

Score (Y)	F	fY	Percentage
52	1	52	2.4%
60	1	60	2.4%
62	1	62	2.4%
64	5	320	11.9%
68	6	408	14.3%
70	1	70	2.4%
72	8	576	19.0%
74	4	296	9.5%
76	6	456	14.3%
78	4	312	9.5%
80	1	80	2.4%
82	2	164	4.8%
84	1	84	2.4%
88	1	88	2.4%
Total	N = 42	$\sum X = 3028$	100%

To know the vocabulary mastery of the students generally, the writer applies “mean, median and modus” statistical formula below:

d) Mean of Vocabulary Mastery Test

$$\begin{aligned} M_Y &= \frac{\sum X}{N} \\ &= \frac{3028}{42} \\ &= 72.09 \end{aligned}$$

e) Median of Vocabulary Mastery Test

Score of vocabulary mastery test are 52, 60, 62, 64, 68, 70, **72**, **74**, 76, 78, 80, 82, 84, and 88.

$$\begin{aligned} Me &= \frac{72+74}{2} \\ &= 73 \end{aligned}$$

f) Modus of Vocabulary Mastery Test

Based on the frequency that often appear on the table above. The value Modus of vocabulary mastery test is 72.

The table above showed that the higher score was 88, and the lowest score was 52. The mean of vocabulary mastery test is 72.09, median of vocabulary test is 73, modus of vocabulary mastery test is 72.

To know the vocabulary mastery of the students, the writer was interpreting the scores by using the categories which is submitted by Harris (1969) as cited in Mawaddah (2015, p. 39).

Table 4.6 Analysis of Students' Vocabulary Mastery Test Scores

Score	Frequency	Category	Percentage
91 – 100	0	Excellent	0%
81 – 90	4	Very Good	9.5%
71 – 80	23	Good	54.8%
61 – 70	13	Fair	30.1%
51 – 60	2	Poor	4.8%
Less than 50	0	Very Poor	0%
Total	42		100%

The table above shows that vocabulary mastery test based on the categories are no students are in very poor category, 2 students are in poor category (4.8 %), 13 students are in fair category (30.1%), 23 students are in good category (54.8 %), and 4 students are in very good category (9.5%).

2. Analysis of Data

The next step in this research is finding the XY, X2, and Y2 of the data.

They are seen in the following table:

Table 4.7 Working Table of Data Analysis

No	Initials' Name	X	Y	XY	X ²	Y ²
1	ADS	80	72	5760	6400	5184
2	AKW	84	78	6552	7056	6084
3	AW	76	72	5472	5776	5184
4	AM	72	72	5184	5184	5184
5	AI	76	72	5472	5776	5184
6	AS	76	68	5168	5776	4624
7	BR	84	82	6888	7056	6724
8	BTD	84	84	7056	7056	7056
9	EA	88	80	7040	7744	6400
10	FI	68	64	4352	4624	4096
11	IP	88	74	6512	7744	5476
12	KH	80	72	5760	6400	5184
13	LH	76	64	4864	5776	4096
14	LA	72	64	4608	5184	4096
15	MAA	84	76	6384	7056	5776
16	MMH	80	68	5440	6400	4624
17	MRR	72	64	4608	5184	4096
18	MH	76	64	4864	5776	4096
19	MA	84	78	6552	7056	6084

<i>The Continued Table</i>						
No	Initials' Name	X	Y	XY	X²	Y²
20	MK	84	76	6384	7056	5776
21	MS	64	60	3840	4096	3600
22	MQ	60	52	3120	3600	2704
23	NNR	88	82	7216	7744	6724
24	NL	84	74	6216	7056	5476
25	NWH	60	76	4560	3600	5776
26	NI	76	68	5168	5776	4624
27	RH	80	72	5760	6400	5184
28	RHH	88	78	6864	7744	6084
29	RJ	80	88	7040	6400	7744
30	RA	88	78	6864	7744	6084
31	RP	84	72	6048	7056	5184
32	SM	72	70	5040	5184	4900
33	SRH	72	74	5328	5184	5476
34	SR	80	68	5440	6400	4624
35	SY	84	68	5712	7056	4624
36	SG	88	76	6688	7744	5776
37	SH	80	76	6080	6400	5776
38	SMP	84	74	6216	7056	5476

<i>The Continued Table</i>						
No	Initials' Name	X	Y	XY	X ²	Y ²
39	TNL	68	62	4216	4624	3844
40	WH	76	72	5472	5776	5184
41	YR	80	76	6080	6400	5776
42	ZA	84	68	5712	7056	4624
Total		ΣX = 3304	ΣY = 3028	ΣXY = 239600	ΣX² = 262176	ΣY² = 220288

Before using pearson product moment, the researcher does prerequisite test (normality test and linearity test) by using SPSS 23. These are the results of normality test and linearity test.

Table 4.8 Result of Normality Test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		42
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	5.22697624
Most Extreme Differences	Absolute	.111
	Positive	.111
	Negative	-.057
Test Statistic		.111
Asymp. Sig. (2-tailed)		.200

a. Test distribution is Normal.

b. Calculated from data.

Based on the result, it shows that the normality test with Kolmogorov-Smirnov Test is gotten value of Test Statistic (0.111) and Asymp. Sig (0.200) are higher than 0.05. So, it can be concluded that the data are normal.

Table 4.9 Result of Linearity Test

Variable	Significance	Criteria
X*Y	0.838	Linear

The result of linearity test between learners' language aptitude (X) and vocabulary mastery (Y) above shows that the significance value = 0.838 which is higher than 0.05. Therefore, it can be concluded that variable X and variable Y is linear. For more information about the result, it can be seen in the appendix.

Because of the data are normal and linear, the researcher can use Pearson product moment formula in order to know the correlation between English learners' aptitude and thier vocabulary mastery of the third semester students English department in IAIN Antasari Banjaminsin.

Then next step is analyzing the data by using Pearson rough number correlation formula. The formula is:

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

$$r_{xy} = \frac{42 \times 239600 - 3304 \times 3028}{\sqrt{[42 \times 262176 - 3304^2][42 \times 220288 - 3028^2]}}$$

$$r_{xy} = \frac{10063200 - 10004512}{\sqrt{[11011392 - 10916416][9252096 - 9168784]}}$$

$$r_{xy} = \frac{58688}{\sqrt{94976 \times 83312}}$$

$$r_{xy} = \frac{58688}{\sqrt{7912640512}}$$

$$r_{xy} = \frac{58688}{88953,02}$$

$$r_{xy} = 0.659$$

After finding the result of the calculation by using correlation formula, the researcher re-calculates the data by using the *Statistical Package for the Social Science (SPSS) windows program* in order to confirm the calculation result, and the result is 0.66, which is the roundness of **0.659**. The result from the SPSS is seen in the following table:

Table 4.10 SPSS Correlation Result

Correlations			
		Aptitude	Vocabulary
Aptitude	Pearson Correlation	1	.660**
	Sig. (2-tailed)		.000
	N	42	42
Vocabulary	Pearson Correlation	.660**	1
	Sig. (2-tailed)	.000	
	N	42	42

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

Based on the result of the calculation above, it is known that r_{xy} is 0.660. To test the hypothesis of the research there are two steps that the

researcher have performed. Firstly, the researcher consulted to the table of standard classification of correlation degree below:

Table 4.11. Standard Categories of “r” Product Moment Value

The value of “r” Pearson product moment (r_{xy})	Interpretation
0.00 – 0.20	There is a very low correlation between variable X and Y
0.20 – 0.40	There is a low correlation between variable X and Y
0.40 – 0.70	There is a medium correlation between variable X and Y
0.70 – 0.90	There is a high correlation between variable X and Y
0.90 – 1.00	There is very high correlation between variable X and Y

From the table above, it is seen that the r_{xy} 0.660 means that the correlation between variable X and variable Y in this research is fair or medium. It means there is a correlation between variable X and variable Y in this research.

Secondly, based on the calculation above, the value of Pearson correlation (r_{xy}) is 0.660. Furthermore, the value of r_{xy} (0.660) is compared with the value of r_{table} at the significant value 0.05 with $df = 40$.

$$df = N - nr$$

$$= 42 - 2 = 40$$

So, by looking the table of product moment at significant value 0.05 with $df= 40$, the value of r_{table} is 0.304. It is clear that $r_{xy} < r_t$.

$$r_{xy} = 0.660$$

$$r_t = 0.304$$

$$r_{xy} > r_t$$

It means that the hypothesis null (H_0) is denied and hypothesis alternative (H_a) is accepted. Therefore, the conclusion is that there is a correlation between English learners' aptitude and their vocabulary mastery.

B. Discussion

Based on the findings, the researcher found some information about how the English language aptitude and vocabulary mastery on the third semester students of English Department in IAIN Antasari Banjarmasin. In addition, the researcher also found the correlation between them.

1. English Learners' Aptitude of The Third Semester Students of English Department of IAIN Antasari Banjarmasin

Based on the findings of English learners' aptitude that used MLAT as the instrument to measure their aptitude, the writer found that there are no students who got score less than 50. Furthermore, there are 2 students who got score between 51 and 60; 3 students who got score between 61 and 70; 20 students who got score between 71 and 80; 17 who got score between 81 and 90; and no students who got score 91 and 100. The writer also found out the higher score of

Modern Language Aptitude Test is 88, and the lowest score is 60. Mean is 78.67, median of Modern language Aptitude Test is 74, modus of Modern Language aptitude Test is 84. Moreover, based on the mean of the language aptitude test scores which is 78.67, it can be concluded that language aptitude of the third semester students English Department in IAIN Antasari Banjarmasin is in good category.

Based on the Modern Language Aptitude Test (MLAT), mostly students have difficulties in answering the questions about spelling clues and word in sentence. However, they could answer well the questions about number learning, phonetic script and paired associates. Therefore, the students should more develop their English language aptitude. Machnicka (2010, p. 29) said “aptitude is considered to be the best ways to discover how far the learners will be succeed in learning new languages and as points out that aptitude is the most reliable way to predict language learning success”.

2. Vocabulary Mastery of The Third Semester Students of English Department of IAIN Antasari Banjarmasin

From the statistical measurement, the writer found that there are no students who got score less than 50 (very poor category). Furthermore, there are 2 students (4.8%) who got score between 51 and 60 (poor category); 13 students (30.10%) who got score between 61 and 70 (fair category); 23 students (54.8%) who got score between 71 and 80 (good category); and 4 students (9.5%) who got score between 81 and 90 (very good category). The writer also found that

mean of vocabulary mastery test is 72.09, median of vocabulary test is 73, modus of vocabulary mastery test is 72, the higher score is 88, and the lowest score is 52. Based on the mean of the students' vocabulary mastery scores which is 72.09, it can be concluded that vocabulary mastery of the third semester students English Department in IAIN Antasari Banjarmasin is in good category.

From the test, mostly students have difficulties in answering the questions about collocation. Some of them were also still confused about part of speech and word and grammar. However, they could answer well the questions about word meaning, and the question about affixes (word formation). In addition, they understand about idiom. Therefore, the students should more improve their vocabulary mastery. Based on Celcie Murcia (2001, p.285) says "vocabulary is central to language acquisition, where the language is first, second, or foreign

3. The Correlation between English Learners' Aptitude and Vocabulary Mastery of The Third Semester Students of English Department of IAIN Antasari Banjarmasin

The writer also found the information about whether there is a correlation or not between English learners' aptitude and their vocabulary mastery on the third semester English Department in IAIN Antasari Banjarmasin. Based on the findings, the value of Pearson correlation (r_{xy}) between English language aptitude and vocabulary mastery is 0.660 and the value of r_{table} at significant value 0.05 with $df= 40$ is 0.304. So, it can be concluded that $r_{xy} (0.660) > r_{table} (0.304)$ which means there is a significant correlation. It means H_a is accepted and H_o is

rejected. In addition, the value of r_{xy} (+0.660) is positive. It means there is a positive correlation between English language aptitude and vocabulary mastery. On the other hand, if the students have good English language aptitude, their English vocabulary mastery is also good. Moreover, based on the correlation index number, the value of r_{xy} (0.660) is on medium correlation (between 0.40 and 0.70). It means there is a medium correlation between variable X and variable Y.

In conclusion, based on the findings of this research, the researcher found that there is a significant positive medium correlation between English learners' aptitude and their vocabulary mastery of the third semester English Department in IAIN Antasari Banjarmasin. Therefore, the result of this research supports the statement of Dörnyei (2006, p. 45) that explained the concept of language aptitude is related to the broader concept of human abilities, or intelligence and covering a variety of cognitively – based learner differences. In addition Carroll and Sapon also explained the concept of language aptitude as an umbrella term for “basic abilities that are essential to facilitate foreign language learning” (Carroll and Sapon, 1959 as cited in Machnicka, 2010, p. 29). It means including vocabulary as a part of language component or basic ability in learning a new language. It supports based on statement of UKESSAYS website that explained vocabulary is the basic for the development of all the other skills: reading comprehension, listening comprehension, speaking, writing, spelling and pronunciation.