CHAPTER IV

RESEARCH FINDING

This chapter discusses a detailed finding of this research as the main point of this thesis. It includes data description, correlational analysis, testing hypothesis, and discussion. In short, it answers the main problem of the research.

4.1 Data Description

4.1.1 Data Description of Students' Reading Comprehension of Indonesian Fiction

The data of students' reading comprehension of Indonesian fiction was obtained from scores of reading comprehension test. As written in Chapter III section 3.4, reading comprehension test was arranged by the researcher. The test was divided in two parts: text was written in *Bahasa Indonesia* and instructions or questions were written in English. The text was entitled *"Kisah Seorang Kakak dan Adik"* taken from browsing http://bengkel-matematika.com/kisah-seorang-kakak-dan-adik/. There were 20 questions of the test. The highest score was 100 and the lowest was 0.

The results of the test were assessed to get quantitative data. The data can be shown in the following table (for more detail data, it is attached in Appendix 13):

Table 4.1 The Scores of Social Class Students
in Reading Comprehension of Indonesian Fiction

NO	SS CODE	F/M	TOTAL	EXPLANATION
1	R# 1	M	**84**	Passed
2	R# 2	F	**81**	Passed
3	R# 3	M	**72**	Passed
4	R# 4	M	**61**	Not passed
5	R# 5	M	**77**	Passed
6	R# 6	F	**95**	Passed
7	R# 7	F	**98**	Passed
8	R# 8	M	**73**	Passed
9	R# 9	M	**72**	Passed
10	R# 10	M	**76**	Passed
11	R# 11	F	**46**	Not passed
12	R# 12	F	**51**	Not passed
13	R# 13	F	**74**	Passed
14	R# 14	F	**89**	Passed
15	R# 15	F	**71**	Passed
16	R# 16	F	**45**	Not passed
17	R# 17	M	**76**	Passed
18	R# 18	F	**90**	Passed
19	R# 19	M	**77**	Passed
20	R# 20	M	**87**	Passed
21	R# 21	F	**75**	Passed

Table 4.2 The Scores of Science Class Students
in Reading Comprehension of Indonesian Fiction

NO	SS CODE	F/M	TOTAL	EXPLANATION
22	R# 22	M	**89**	Passed
23	R# 23	M	**94**	Passed
24	R# 24	M	**95**	Passed
25	R# 25	F	**85**	Passed
26	R# 26	F	**87**	Passed
27	R# 27	M	**92**	Passed
28	R# 28	F	**88**	Passed
29	R# 29	M	**78**	Passed
30	R# 30	M	**96**	Passed
31	R# 31	F	**93**	Passed
32	R# 32	M	**81**	Passed
33	R# 33	F	**89**	Passed
34	R# 34	M	**87**	Passed
35	R# 35	M	**80**	Passed
36	R# 36	F	**99**	Passed
37	R# 37	F	**91**	Passed
38	R# 38	F	**89**	Passed
39	R# 39	F	**85**	Passed
40	R# 40	F	**84**	Passed
41	R# 41	F	**92**	Passed
42	R# 42	M	**93**	Passed

The first step in data analysis is to describe or summarize the data using descriptive statistic. The major types of descriptive statistics are measures of central tendencies, measures of variability, measures of relative position, and measures of relationship (Gay, 1987).

From the table above, it can be revealed the central tendency of the scores. Hatch and Farhady (1982) state, "The term central tendency is used to talk about the central point in the distribution of score in the data. There are three measure of central tendency: the mode, median, and the mean". The mode means the most frequently obtained in the data. So, it can be inferred that the mode of this scores was 89. Next, the median means the score that is at the center of the distribution. In this data, the median of the scores was 85. After that, the mean is defined as the average of the scores. That is to add up all scores divided by the number of scores. The formula for gaining the mean is

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

So, the mean of the scores was 81.83. It is appropriate with the SPSS version 14.0 counting.

Then, in order to get more accurate data, the degree of variability have to be measured. It can be gotten from the measure of central tendency. There are three ways to get the degree of variability: the range, the standard deviation, and variance. The range is obtained by subtracting the lowest score from the highest score (Hatch and Farhady, 1982). The highest score of the students was 99. And the lowest score was 45. So the range score of the students was 54. After that, the

standard deviation "looks at the average variability of all the score around the mean" (Hatch and Farhady, 1982). Standard deviation has the formula as follows:

$$S = \sqrt{\frac{\sum (x - \bar{x})^2}{n}}$$

Therefore, the standard deviation score was 12.94. It is appropriate with the SPSS version 14.0 counting. Furthermore, "variance is the sum of the squared deviation score divided by *N*-1" (Hatch and Farhady, 1982). It also has a formula as follows:

$$\text{variance} = \frac{\sum (x - \bar{x})^2}{n}$$

Hence, the variance score was 167.51. It is appropriate with the SPSS version 14.0 counting. After that, from the table above, it can be known that there four students do not pass in the test. Since their scores are below the standard minimum score (65).

To make it easy to understand, they are shown in the following table:

Table 4.3 Descriptive Statistic of Sample
in Reading Comprehension of Indonesian Fiction

TOTAL	**3437**
MEAN	**81.833**
MAX	**99**
MEDIAN	**85**
MIN	**45**
MODE	**89**
RANGE	**54**
S.DEVIATION	**12.942**
VARIANCE	**167.51**

Since the data is in the large number, the data is transferred in distribution frequency as the following table:

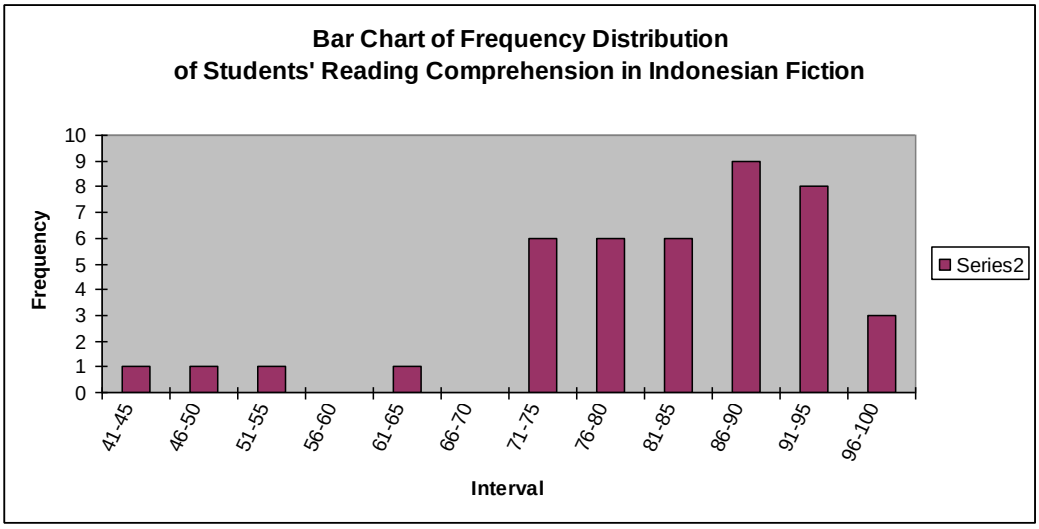
Table 4.4 Distribution Frequency of Students' Reading Comprehension Scores

INTERVAL	Frequency		
	Absolute	Cum	Rel (%)
41-45	1	1	2.381
46-50	1	2	2.381
51-55	1	3	2.381
56-60	0	3	0
61-65	1	4	2.381
66-70	0	4	0
71-75	6	10	14.286
76-80	6	16	14.286
81-85	6	22	14.286
86-90	9	31	21.429
91-95	8	39	19.048
96-100	3	42	7.1429
	42		100

From the table above, it can be inferred that there are 21 students or 50 % who have scores less than the mean score and there are 21 students or 50 % who have score more than the mean score.

To make it easy to understand, it is shown the following bar chart:

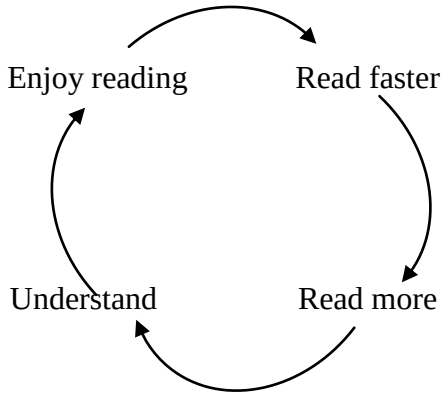
Figure 4.1 Bar Chart of Frequency Distribution of Students' Reading Comprehension



All of the data above mean students are able to comprehend Indonesian fiction since the text of the test was in their mother tongue language or in their first language.

In other word, the students are regarded as into good readers since they enjoy reading and have high understanding in reading it. This is in line with Nuttall (1988) who argues that someone can be said good reader if he enjoys reading, reads faster, reads more, and understand what he reads. Nuttall describes good reader as in the following figure:

Figure 4.2 Good Reader



Meanwhile, Markskettel (1966) describes the criteria of a good reader as the one who almost instinctively reaches for something to read when he has completed assigned school task or when he is not engaged in other activities. Further, Baker and Brown (1984 cited flood *et al.*, 1991) claim, "Good readers are strategic readers who actively construct meaning as they read; they are self-motivated and self-directed; they monitor their own comprehension by questioning, reviewing, revising, and rereading to enhance their overall comprehension".

4.1.2 Data Description of Students' Writing Ability in Writing Narrative Text

The data of students' writing ability of writing narrative text was obtained from score of writing narrative text test. As written in Chapter III, writing narrative test was arranged by the researcher. The test instructions are written in English. The students are asked to write a narrative text in the free title. The highest score was 100 and the lowest was 0. The results of the test were assessed to get quantitative data. The data can be shown in the following table (for more detail data, it is attached in Appendix 14):

Table 4.5 Writing Ability of Social Class

NO	SS CODE	F/M	SCORE
1	R# 1	M	**66**
2	R# 2	F	**67**
3	R# 3	M	**57**
4	R# 4	M	**50**
5	R# 5	M	**53**
6	R# 6	F	**80**
7	R# 7	F	**83**
8	R# 8	M	**58**
9	R# 9	M	**57**
10	R# 10	M	**61**
11	R# 11	F	**49**
12	R# 12	F	**53**
13	R# 13	F	**59**
14	R# 14	F	**74**
15	R# 15	F	**54**
16	R# 16	F	**46**
17	R# 17	M	**61**
18	R# 18	F	**73**
19	R# 19	M	**62**
20	R# 20	M	**70**
21	R# 21	F	**60**

Table 4.6 Writing Ability of Science Class

22	R# 22	M	**65**
23	R# 23	M	**67**
24	R# 24	M	**68**
25	R# 25	F	**66**
26	R# 26	F	**72**

27	R# 27	M	**69**
28	R# 28	F	**74**
29	R# 29	M	**63**
30	R# 30	M	**77**
31	R# 31	F	**78**
32	R# 32	M	**66**
33	R# 33	F	**74**
34	R# 34	M	**72**
35	R# 35	M	**65**
36	R# 36	F	**82**
37	R# 37	F	**63**
38	R# 38	F	**74**
39	R# 39	F	**66**
40	R# 40	F	**69**
41	R# 41	F	**77**
42	R# 42	M	**68**

From the table above, it can be found the central tendency of the scores. There are three measures of central tendency: the mode, median, and the mean. It can be inferred that the mode of this scores was 66. Next, the median of the scores was 66. After that, the mean of the scores was 65.90. It is appropriate with the SPSS version 14.0 counting.

Then, in order to get more accurate data, the degree of variability have to be measured. There are three ways to get the degree of variability: the range, the standard deviation, and variance. The range is obtained by subtracting the lowest score from the highest score. The highest score of the students was 83 and the lowest score was 46. Therefore, the range score of the students was 37. After that, the standard deviation score was 9.06. It is appropriate with the SPSS counting. Furthermore, the variance score was 82.23. It is appropriate with the SPSS version 14.0 counting.

To make it easy to understand, they are shown in the following table:

Table 4.7 Descriptive Statistic of Students' Writing Ability of Narrative Text

TOTAL	**2768**
AVERAGE	**65.90476**
MAX	**83**
MEDIAN	**66**
MIN	**46**
MODE	**66**
S.DEVIATION	**9.06833**
VARIANCE	**82.23461**

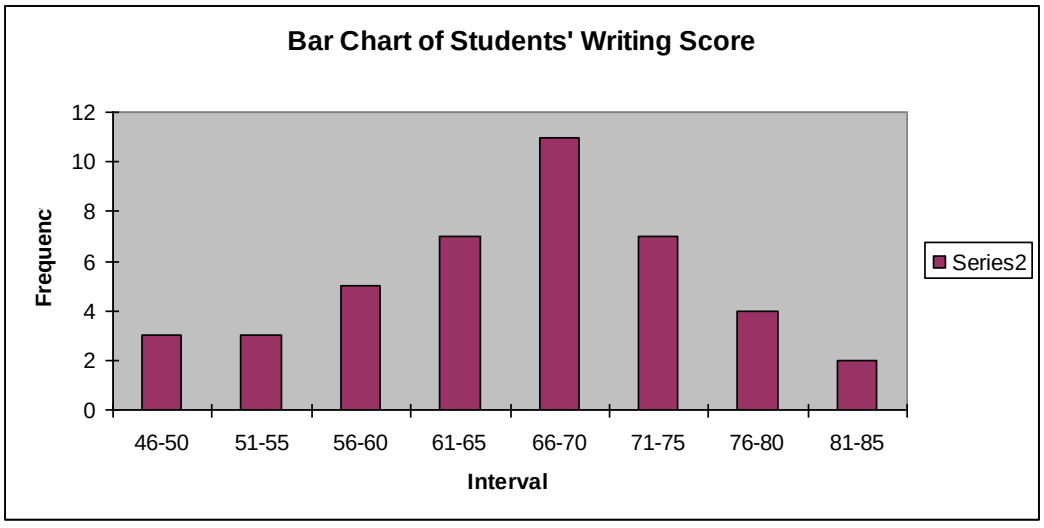
Since the data is in the large number, the data is transferred in distribution frequency as the following table:

Table 4.8 Distribution Frequency of Students' Writing Ability of Narrative Text

	Frequency		
INTERVAL	**Abs**	**Cum**	**Rel (%)**
46-50	3	3	7.142857
51-55	3	6	7.142857
56-60	5	11	11.90476
61-65	7	18	16.66667
66-70	11	29	26.19048
71-75	7	36	16.66667
76-80	4	40	9.52381
81-85	2	42	4.761905
	42		100

To make it easy to understand, it is shown the following bar chart:

Figure 4.3 Bar Chart of Frequency Distribution of Students' Writing Scores

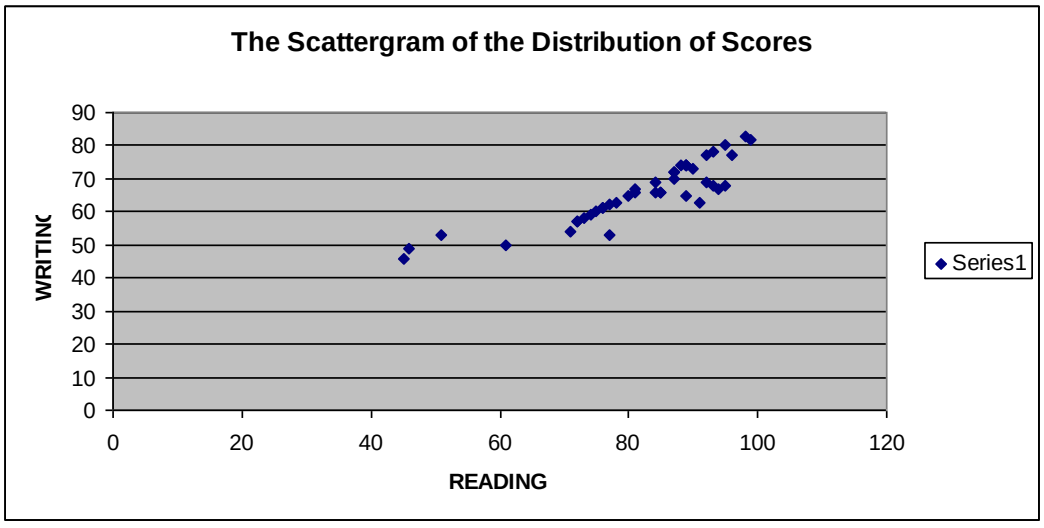


All of the data above show the normal distribution since mean, median, and mode are all the same and the curve shape (such as in the figure 4.3) is bell-shaped and symmetric (Hatch and Farhady, 1982). Those data also mean the students are able to compose narrative texts in English. It could be generalized that the population of this study is able to write English narrative text.

4.2 Correlational Analysis

Correlational analysis was conducted to find the answer of the problem whether there is a correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative text. Hatch and Farhady (1982) explain, "The easiest way to see the relationship between the two sets of scores is to represent them graphically. This representation, called a scatter plot or scattergram, is done by plotting the scores". The following figure shows the scattergram of the distribution of scores to show clearer the positive correlation of the scores:

Figure 4.4 The Scattergram of the Distribution of Scores



Furthermore, "scatter plots do not give us any quantitative measure of the degree of the relationship between the two variables. Therefore, we will use certain statistics which have been developed to measure the degree of relationship" (Hatch & Farhady, 1982). Statistical analysis for correlational studies is Pearson Product moment. It was used to analyze the data since the data was in the interval. The formula for the correlation coefficient using the raw data based on Hatch & Farhady (1982) is presented as follows:

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

There are three kinds of calculation (The manual calculation, Microsoft Excel calculation, and SPSS version 14.0 calculation) used to get the convincing data as follows:

a. Manual calculation and Microsoft excel calculation

Manual calculation should be used in discussion besides SPSS program in order to convince that SPSS is used in the right way. It also has function to teach and remind us to calculate manually (Arikunto, 2007).

Table 4.9 Manual Calculation to Find Correlation

NO	Ss CODE	F/M	X	Y	X^2	Y^2	XY
1	R# 1	M	84	66	7056	4356	5544
2	R# 2	F	81	67	6561	4489	5427
3	R# 3	M	72	57	5184	3249	4104
4	R# 4	M	61	50	3721	2500	3050
5	R# 5	M	77	53	5929	2809	4081
6	R# 6	F	95	80	9025	6400	7600
7	R# 7	F	98	83	9604	6889	8134
8	R# 8	M	73	58	5329	3364	4234
9	R# 9	M	72	57	5184	3249	4104
10	R# 10	M	76	61	5776	3721	4636

11	R# 11	F	46	49	2116	2401	2254
12	R# 12	F	51	53	2601	2809	2703
13	R# 13	F	74	59	5476	3481	4366
14	R# 14	F	89	74	7921	5476	6586
15	R# 15	F	71	54	5041	2916	3834
16	R# 16	F	45	46	2025	2116	2070
17	R# 17	M	76	61	5776	3721	4636
18	R# 18	F	90	73	8100	5329	6570
19	R# 19	M	77	62	5929	3844	4774
20	R# 20	M	87	70	7569	4900	6090
21	R# 21	F	75	60	5625	3600	4500
22	R# 22	M	89	65	7921	4225	5785
23	R# 23	M	94	67	8836	4489	6298
24	R# 24	M	95	68	9025	4624	6460
25	R# 25	F	85	66	7225	4356	5610
26	R# 26	F	87	72	7569	5184	6264
27	R# 27	M	92	69	8464	4761	6348
28	R# 28	F	88	74	7744	5476	6512
29	R# 29	M	78	63	6084	3969	4914
30	R# 30	M	96	77	9216	5929	7392
31	R# 31	F	93	78	8649	6084	7254
32	R# 32	M	81	66	6561	4356	5346
33	R# 33	F	89	74	7921	5476	6586
34	R# 34	M	87	72	7569	5184	6264
35	R# 35	M	80	65	6400	4225	5200
36	R# 36	F	99	82	9801	6724	8118
37	R# 37	F	91	63	8281	3969	5733
38	R# 38	F	89	74	7921	5476	6586
39	R# 39	F	85	66	7225	4356	5610
40	R# 40	F	84	69	7056	4761	5796
41	R# 41	F	92	77	8464	5929	7084
42	R# 42	M	93	68	8649	4624	6324
	TOTAL	Σ	3437	2768	288129	185796	230781
	CORRELATION=			**0.886595783**		M.EXCEL	

This calculation is put into the following formula:

$$r = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{[N\Sigma X^2 - (\Sigma X)^2][N\Sigma Y^2 - (\Sigma Y)^2]}}$$

$$= \frac{42(230781) - (3437)(2768)}{\sqrt{[42x288129 - (3437)^2][42x\ 185796 - (2768)^2]}}$$

$$= \frac{9692802 - 9513616}{\sqrt{[12101418 - 11812969][7803432 - 7661824]}}$$

$$= \frac{179186}{\sqrt{[288449][141608]}}$$

$$= \frac{179186}{\sqrt{40846685992}}$$

$$= \frac{179186}{202105.6}$$

= **+ 0.8866**

Thus, manual calculation and Microsoft Excel Program shows that coefficient correlation between the two variables is **+ 0.8866.**

b. SPSS version 14.0 calculation

SPSS version 14.0 computation is the most commonly calculation used in the language and social studies. It can be drawn as the following table:

Table 4.10 SPSS version 14.0 Output of Correlation 3
Correlations

		VAR X	VAR Y
VAR X	Pearson Correlation	1	**.887(**)**
	Sig. (2-tailed)		.000
	N	42	42
VAR Y	Pearson Correlation	**.887(**)**	1
	Sig. (2-tailed)	.000	
	N	42	42

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

The able also indicates that correlation coefficients between X and Y is **0.887** (Pointed by an arrow) rounded from 0.8866.

Therefore, all calculations above give the same result that the correlation coefficients between X and Y is **0.8866.** The value of the observed r is consulted to the value of the critical r (r table). In other words, the result of correlation coefficients between X and Y is consulted to Pearson Product moment table on the level of significant 5%. The value of the critical r (r table) is 0.3044 (see Appendix 15).

So, | r observe > r table
0.8866 > 0.3044

It means that there is a significant correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative text.

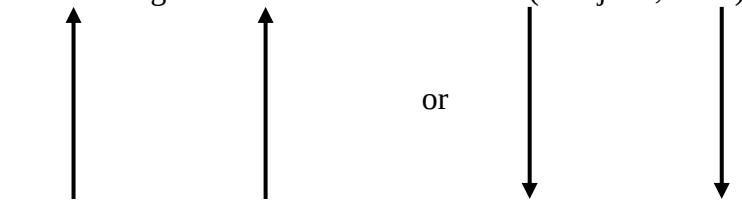
As Gay (1987) proposes more explanation in interpreting the data as the following criteria:

a. If the coefficient is near +1.00, the variables are positively related
b. If the coefficient is near .00, the variables are not related
c. If the coefficient is near -1.00, the variables are inversely related

The plus (+) sign does not mean as Algebra sign but it means the positive correlation. The positive correlation means a linier relationship between two variables X and Y (Sudijono, 1995), (Woods *et al.*, 1985). In other word, the correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative texts go parallel or the same way. It means the higher students' reading comprehension of Indonesian fiction tend to be the higher

writing ability of English narrative texts. And vice versa, the lower students' reading comprehension of Indonesian fiction tend to be the lower writing ability of English narrative texts. To make it clear, it can be shown in the following figure:

Figure 4.5 Positive Correlation (Sudijono, 1995)



As a result, all of the analysis show the same conclusion that there is a significant correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative text. This finding and analysis are believed valid since they are used several ways of instruments and computation. This finding can test the hypothesis as the following part.

4.3 Testing Hypothesis

The interpretation also tests the hypothesis by using the following criteria:

a. Ho is rejected and Hi is accepted if the observed r is bigger than the critical r at the significant level of 5%, it means that there is positive correlation between variable X and Y.
b. Ho is accepted and Hi is rejected if the observed r is bigger than the critical r at the significant level of 5%, it means that there is no correlation between variable X and Y.

Based on the calculation above it can be concluded that Ho is rejected and Hi is accepted since the observed r is bigger than the critical r at the significant level of 5%, it means that there is a positive and significant correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative text. Moreover, according to Emra (1998), Sudijono (1995), r observes from +0.8 to +0.10 means very high degree of positive correlation.

4.4 Discussion

The problem of this research that is whether there is a correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative text has been already answered statistically that there is positive and significant correlation between students' reading comprehension of Indonesian fiction and writing ability of English narrative text. This finding is in line with the previous related research. Even though the perfect same problem of the research do not found, the following research are considered related to this research such as Stotsky (1983 cited in Kroll, 1991) surveyed first language correlational studies and found the following:

- There are correlations between reading achievement and writing ability. Better writers tend to be better readers.
- There are correlations between writing quality and reading experience as reported through questionnaires. Better writers read more than poorer writers.
- There seem to be correlations between reading ability and measures of syntactic complexity in writing. Better readers tend to produce more syntactically mature writing than poorer readers.

Those findings are confirmed by Eisterhold cited in Kroll (1991) that notes down reading-writing connection is directional. Other research from Collier

(1989); Cummins (1989); Krashen and Biber (1988) cited in Freeman and Freeman (1992) found, "Students who speak, read, and write their first language well are more apt to succeed academically in English".

This finding is also supported by previous research that has found:

> When children read extensively they become better writers. Reading a variety of genres helps children learn text structures and language that they can then transfer to their own writing. In addition, reading provides young people with prior knowledge that they can use in their stories. (http://www.k12reader.com/the-relationship-between-reading-and-writing)

Moreover, it also can be compared between male students and female students in reading comprehension of Indonesian fiction based on the average score. The average score of male students is 79.6 (See Table 4.11) and the average score of female students is 80.3 (See Table 4.12). The difference between the groups is 0.72. 0.72 is not too high difference. Both male group scores and female scores are also compared by using t-test. The result showed that t observe= 0.733 < t table = 2.021 with df (n_1-1+ n_2-1) = 40 at 0.05 level of significant. It means that there is no difference between male students of reading comprehension score of Indonesian fiction and female students of reading comprehension score of Indonesian fiction. It can be shown detail in the following table:

Table 4.11 Male Students' Reading Comprehension of Indonesian Fiction

NO	SS CODE	F/M	RCIF
1	R# 1	M	**79.5**
3	R# 3	M	**73.5**
4	R# 4	M	**68**
5	R# 5	M	**77**
8	R# 8	M	**74**
9	R# 9	M	**74**
10	R# 10	M	**76**
17	R# 17	M	**78**
19	R# 19	M	**77.5**
20	R# 20	M	**82**

22	R# 22	M	**84.5**
23	R# 23	M	**84.5**
24	R# 24	M	**86**
27	R# 27	M	**85**
29	R# 29	M	**77.5**
30	R# 30	M	**88**
32	R# 32	M	**81**
34	R# 34	M	**83.5**
35	R# 35	M	**78**
42	R# 42	M	**84**
Average			**79.6**

Table 4.12 Female Students' Reading Comprehension of Indonesian Fiction

NO	SS CODE	F/M	RCIF
2	R# 2	F	**80.5**
6	R# 6	F	**85.5**
7	R# 7	F	**89**
11	R# 11	F	**63**
12	R# 12	F	**63.5**
13	R# 13	F	**76**
14	R# 14	F	**83**
15	R# 15	F	**74.5**
16	R# 16	F	**61.5**
18	R# 18	F	**85**
21	R# 21	F	**77.5**
25	R# 25	F	**82.5**
26	R# 26	F	**82**
28	R# 28	F	**82**
31	R# 31	F	**89.5**
33	R# 33	F	**83**
36	R# 36	F	**91**
37	R# 37	F	**84**
38	R# 38	F	**83.5**
39	R# 39	F	**81.5**
40	R# 40	F	**81**
41	R# 41	F	**87.5**
Average			**80.3**

In addition, this research also gives another finding indirectly that first language has high correlation with foreign language. This finding is also in line with the previous research. Such as Friedlander (cited in Kroll, 1990) argues that there are many studies showing "regardless of a language prescription, writer will transfer writing ability and the strategies, whether good or deficient, from their

first language to their second language". It is also happened to the foreign language. For example, Molan and Lo (1985 cited in Kroll, 1990) state, "Students had similarly deficient rhetorical strategies in their first language and in English". It means that first language ability contributes to second or foreign language ability.

Meanwhile, Edelsky's finding (1982 cited in Kroll, 1990) concludes, "The writing of first, second, third graders in a bilingual program also indicates that writing knowledge transfers across languages". He shows, "Writers use first language strategies and knowledge to aid their second language writing". First language strategies are often used in learning foreign language. It can be proved from the result of writing narrative test, that many students write the stories or essay in Indonesian style, perhaps including the writer of this research too. This is confirmed by Jones and Tetroe (1987 cited in Kroll, 1990) who find:

> ESL writers transferred both good and weak writing skills from their first language to English. This transfer was independent of language proficiency, which affected only quantity of planning. They noted that weaker writers' failure to use writing strategies in English was based on their failure to use these strategies in their first language.

The next confirmation is proposed by Silvia (1986) who finds, "Subject had effective L1 strategies to transfer to the L2 writing context; her subject's first language and second language composing processes displayed similar high-level goal structures and problem representations".

After that, the usage of first language in foreign language composition is also found in the sample result of the test. They switch both languages especially in difficult vocabulary for the students. It is supported by Lay's study (1982 cited

in Kroll, 1990) which says, “The greater the number of switches into the first language, the better the quality of the essays in terms of organization and ideas”.

This description also give a horizon that how important reading and writing in supporting students success in learning. As Arends (1989) utters, “The success of students in school rest, in large extent, on their proficiency in reading and writing increasingly complex information”.

Consequently, it was found that there is positive and significant correlation between students’ reading comprehension of Indonesian fiction and writing ability of English narrative text. It also means there is positive and significant correlation between first language ability and foreign language ability. It means there is positive and significant correlation between students’ reading comprehension and their writing ability.

All of these finding and discussion were expected to be able to give some significant contributions and insights to teaching English as the foreign language. The long explanation of these research can be concluded in the next last chapter, which including conclusion and some suggestions or recommendations.