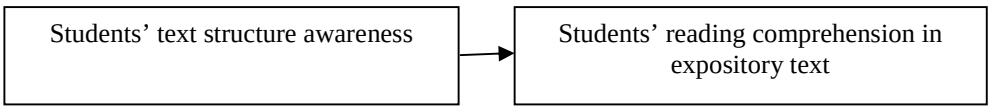
CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

The method of this research is a correlational research that involves two variables; students' text structure awareness is independent variable (X) while students' reading comprehension in expository text is dependent variable (Y). According to John W. Creswell, correlational design is a quantitave reasearch in which researcher measures the degree of association (relation) between two or more variables using statistical procedure of correlational analysis. This degree of association expressed as a number, indicates whether the two variables are related or whether one can predict another.[1] The table below draws the design of this research.

Table III.1
The Design of Correlational Research



B. Location and Time of the Research

The location of this research is SMAN 1 Bangko Pusako, Rokan Hilir, Riau. This research was conducted from March to April 2014.

[1] John W. Cresswell. *Educaitonal research*. (New Jersey : Pearson Prentice Hall, 2008), P. 60

C. Subject and Object of the Research

The subject of the research was the second grade students of SMAN 1 Bangko Pusako in Rokan Hilir Regency, and the object of the research was the students' text structure awareness on expository text and reading comprehension on expository text.

D. Population and Sample of the Research

Target of population of this research was the second grade students of SMAN 1 Bangko Pusako in 2013-2014 academic years. They had 3 classes which consisted of 70 students. The population of this research can be described as follows:

Table III.2
The Population of the Second Grade Students of SMAN 1 Bangko Pusako

No	Class	Male	Female	Total
1	XI IPA 1	10	11	21
2	XI IPA 2	6	13	19
3	XI IPS	11	19	30
Total		27	43	70

Considering the limited time and cost spent in this research, The researcher took only 1 class as a sample of the research. After doing simple random sampling technique, which gives the opportunity to all of population to be selected, the writer took XI 1IPA as a sample which consisted of 21 students. The sample of the research can be described as follows:

Table III.3
The Sample of the Research

Class	Male	Female	Total
XI IPA	10	11	21

E. Technique of Collecting the Data

The data of this research were collected by using two kinds of test that were given to the students. They were structure awareness on expository test and reading expository test. The type of the test was multiple choices test. The scale score of the students' text structure awareness was taken from one of the most popular theories of consciousness was proposed by Sigmund Freud, who described the level of awareness into three levels. They are; the unconscious (unaware), the preconscious (pre-aware), and the conscious (aware).[2] The scale score can be seen as follows:

Table III.4
The Classification of Students' Text Structure Awareness Score

Category	Range
Aware	67-100
Pre-aware	34-66
Unaware	0-33

[2] Wikipedia.org/wiki/Level_of_consciousness_%28Esotericism%29

In the other hand, the scale score of the students' reading comprehension test was classified as follows:[3]

Table III.5
The Classification of Students' Reading Comprehension Score

Category	Range
Very good	80-100
Good	66-79
Enough	56-65
Less	46-55
Bad	0-45

It means that to get the students' score, the following formula was used:

$$S = \frac{R}{N} x\ 100$$

Where:

S = Individual score

R = Right answer

N = Number of items

F. Technique of Data Analysis

To find out whether there is a significant contribution of students' text structure awareness toward their reading comprehension in expository

[3] Anas Sudijono. *Pengantar Evaluasi Pendidikan*. (Jakarta: PT. Raja Grafindo Persada, 2003).

text, the data were analyzed statistically. The researcher used SPSS 16 windows program in analyzing the data.[4]

In deciding which hypotheses are accepted, the simple linear regression coefficient found after the calculation by using SPSS 16 was compared with the critical value of F for the 0.05 significance level. Statistically it can be described as follows:

$H_a : F_{observed} > F_{table}$

$H_o : F_{observed} \leq F_{table}$

1. H_a is accepted if $F_{observed} > F_{table}$ or there is a significant contribution of students' text structure awareness in expository text toward their reading comprehension in expository text.
2. H_o is accepted if $F_{observed} \leq F_{table}$ or there is no significant contribution of students' text structure awareness in expository text toward their reading comprehension in expository text.

G. Validity and Reliability of the Test

The validity and reliability of the research instrument is very important in a research. Research result is valid and trusted if the research instrument which is used to collect the data is valid and reliable.[5]

[4] Syofian Siregar. Statistik Parametrik Untuk Penelitian Kuantitatif. (Jakarta: Bumi Aksara, 2013), P. 393

[5] Sugiyono. *Statistika Untuk Penelitian*. (Bandung: Alfabeta, 2013) P. 348

Therefore, it is a must for all of researchers to measure the validity and reliability of their research instruments.

Validity is one of the characteristics that marks a good learning outcome tests. A research instrument will be valid if it successfully measures the phenomenon. Bailey in Siregar stated that to find out the validity of the test, we can use three categories of validity. They are; face (construct) validity, criterion validity, and construct validity.[6] To measure the validity of variable Y (students' reading comprehension on expository text), the researcher used content validity. The researcher arranged the test instrument based on the materials that had been studied by the students. So, the test was valid because it has been tested based on school based curriculum of senior high school.

To measure the validity of variable X (students' text structure awareness), the researcher gave try out to the students. The items are valid if Pearson Correlation Coefficients are bigger than critical values of r for the 0.05 significance level. The data of try out had been analyzed by using SPSS 16, the data presentation can be seen as follows:

[6] Syofian Siregar. Op. Cit., P. 75

Table III.6
Indicator I:
Ability to Identify the Structure of Expository Text

Correlations

		item 1	item 5	item 9	item 13	item 17	TOTAL
item 1	Pearson Correlation	1	-.102	.394	-.180	-.102	.188
	Sig. (2-tailed)		.678	.095	.461	.678	.442
	N	19	19	19	19	19	19
item 5	Pearson Correlation	-.102	1	.397	.567*	.208	.689**
	Sig. (2-tailed)	.678		.093	.011	.392	.001
	N	19	19	19	19	19	19
item 9	Pearson Correlation	.394	.397	1	.535*	.397	.856**
	Sig. (2-tailed)	.095	.093		.018	.093	.000
	N	19	19	19	19	19	19
item 13	Pearson Correlation	-.180	.567*	.535*	1	.268	.781**
	Sig. (2-tailed)	.461	.011	.018		.268	.000
	N	19	19	19	19	19	19
item 17	Pearson Correlation	-.102	.208	.397	.268	1	.574*
	Sig. (2-tailed)	.678	.392	.093	.268		.010
	N	19	19	19	19	19	19
TOTAL	Pearson Correlation	.188	.689**	.856**	.781**	.574*	1
	Sig. (2-tailed)	.442	.001	.000	.000	.010	
	N	19	19	19	19	19	19

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

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

Based on the table above, it can be seen that item 5,9,13, and 17 are valid. Because $r_{observed} > r_{table}$, (0.689 > 0.482, 0.856 > 0.482, 0.781 > 0.482, and 0.574 > 0.482). But, item 1 is not valid because $r_{observed} < r_{table}$ (0.188 < 0.482). So, the items for indicator I are valid, only the item number 1 is not valid.

Table III.7
Indicator II:
Ability to Define Each Structure of Expository Text

Correlations

		item 2	item 6	item 10	item 14	item 18	TOTAL
item 2	Pearson Correlation	1	.069	-.262	.233	.127	.524*
	Sig. (2-tailed)		.779	.279	.338	.605	.021
	N	19	19	19	19	19	19
item 6	Pearson Correlation	.069	1	-.018	-.045	.286	.540*
	Sig. (2-tailed)	.779		.941	.855	.236	.017
	N	19	19	19	19	19	19
item 10	Pearson Correlation	-.262	-.018	1	.055	-.244	.086
	Sig. (2-tailed)	.279	.941		.824	.315	.725
	N	19	19	19	19	19	19
item 14	Pearson Correlation	.233	-.045	.055	1	.440	.678**
	Sig. (2-tailed)	.338	.855	.824		.059	.001
	N	19	19	19	19	19	19
item 18	Pearson Correlation	.127	.286	-.244	.440	1	.655**
	Sig. (2-tailed)	.605	.236	.315	.059		.002
	N	19	19	19	19	19	19
TOTAL	Pearson Correlation	.524*	.540*	.086	.678**	.655**	1
	Sig. (2-tailed)	.021	.017	.725	.001	.002	
	N	19	19	19	19	19	19

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

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

The table above describes the validity of items in indicator II. It can be seen that the item number 2 is valid, because 0.524 > 0.482. The item number 6, 14, and 18 are also valid. Because $r_{observed} > r_{table}$, (0.540 > 0.482, 0.678 > 0.482, and 0.665 > 0.482). The item 10 is not valid, because 0.86 < 0.482). It can be concluded that the items that pictured indicator II are mostly valid. The only item that is not valid is the item number 10.

Table III.8
Indicator III:
Ability to Decide the Purpose of Each Structures of Expository Text

Correlations

		item 3	item 7	item 11	item 15	item 19	total
item 3	Pearson Correlation	1	.258	-.056	.045	.150	.548*
	Sig. (2-tailed)		.285	.821	.855	.541	.015
	N	19	19	19	19	19	19
item 7	Pearson Correlation	.258	1	-.169	-.295	-.430	.197
	Sig. (2-tailed)	.285		.490	.219	.066	.418
	N	19	19	19	19	19	19
item 11	Pearson Correlation	-.056	-.169	1	.258	.368	.548*
	Sig. (2-tailed)	.821	.490		.285	.121	.015
	N	19	19	19	19	19	19
item 15	Pearson Correlation	.045	-.295	.258	1	.454	.563*
	Sig. (2-tailed)	.855	.219	.285		.051	.012
	N	19	19	19	19	19	19
item 19	Pearson Correlation	.150	-.430	.368	.454	1	.587**
	Sig. (2-tailed)	.541	.066	.121	.051		.008
	N	19	19	19	19	19	19
total	Pearson Correlation	.548*	.197	.548*	.563*	.587**	1
	Sig. (2-tailed)	.015	.418	.015	.012	.008	
	N	19	19	19	19	19	19

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

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

The description of the table above can describe the validity of the item is for indicator III. It can be seen that the correlation coefficients for the items 3, 11, 15, and 19 are bigger than critical values of r for the 0.05

significance level. (0.548 >0.482, 0.548 > 0.482, 0.563 > 0.482, and 0.587 > 0.482). Therefore, the items are valid, but the items number 7 was not valid because the correlation coefficients are smaller than critical values of r for the 0.05 significance level.

Table III.9
Indicator IV:
Ability to Decide the Signal Words Used in Each Structure of Expository Text

Correlations

		item 4	item 8	item 12	item 16	item 20	TOTAL
item 4	Pearson Correlation	1	.073	-.083	-.179	-.231	.174
	Sig. (2-tailed)		.766	.737	.464	.341	.477
	N	19	19	19	19	19	19
item 8	Pearson Correlation	.073	1	-.121	.350	-.036	.520*
	Sig. (2-tailed)	.766		.623	.142	.884	.022
	N	19	19	19	19	19	19
item 12	Pearson Correlation	-.083	-.121	1	.080	-.045	.371
	Sig. (2-tailed)	.737	.623		.746	.855	.118
	N	19	19	19	19	19	19
item 16	Pearson Correlation	-.179	.350	.080	1	.472*	.757**
	Sig. (2-tailed)	.464	.142	.746		.041	.000
	N	19	19	19	19	19	19
item 20	Pearson Correlation	-.231	-.036	-.045	.472*	1	.528*
	Sig. (2-tailed)	.341	.884	.855	.041		.020
	N	19	19	19	19	19	19
TOTAL	Pearson Correlation	.174	.520*	.371	.757**	.528*	1
	Sig. (2-tailed)	.477	.022	.118	.000	.020	
	N	19	19	19	19	19	19

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

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

The table above described the validity of items in indicator IV. It can be seen that the item number 8 is valid because 0.520 is higher than 0.482. The item number 16 and 20 are also valid. Because $r_{observed} > r_{table}$, (0.757 > 0.482 and 0.528 > 0.482). The items number 4 and 12 is not valid because 0.174 < 0.482 and 0.371 < 0.482. It can be concluded that the items that pictured indicator IV are mostly valid.

Validity in general refers to appropriateness of a given test or any of it component parts as measurement of what it is purposed to measure. It means that the test will be valid to be measured about what it is supposed to measure. The validity and reliability is a relation. It is possible for a test to be reliable without being valid for a specified purpose, but it is impossible for a test to be valid without being reliable.[7]

Reliability of the test is also very important to be known because the test that is reliable will be accurate in measurement. This kind of accuracy is reflected in obtaining of similar results when measurement is repeated on different occasions or with different instruments or by different persons.[8] To obtain the reliability of the test, researcher can use external reliability or internal reliability. In this research, the researcher used internal reliability in order to obtain the reliability of the test. Statistical analysis was done by using SPSS 16, reliability coefficient

[7] Nurhikmah. *"The Correlation Between Verb Mastery and Writing Ability on Narrative Text at the Second Year Students of Islamic Senior High School Tarbiyah Islamiyah Kotabaru Seberida in Indragiri Hilir Regency"*. (Pekanbaru: Unpublished, 2012). P. 42

[8] Op. Cit. Syofian Siregar. P. 87

which was found was compared to the value of r for the 0.05 significance level. Statistically it can be described as follows:

$H_a : r_{ii} > r_{table}$

$H_o : r_{ii} \leq r_{table}$

Where:

r_{ii} : Reliability coefficient

r_{table} : Product moment coefficient

The reliability of the test for variable X and Y can be seen in the table below:

Table III.10
Reliability of Variable X

Reliability Statistics

Cronbach's Alpha	N of Items
.630	20

The table above pictured the reliability coefficient of variable X. It was 0.630. The test is reliable, and H_a is accepted because r_{ii} is higher than r_{table} (0.630 > 0.482).

Table III.11
Reliability of Variable Y

Reliability Statistics

Cronbach's Alpha	N of Items
.507	20

The table III.11 described the reliability coefficient of variable Y. It was 0.478. Based on the statistical analysis above, it can be concluded that the test to measure students' reading comprehension on expository text is reliable. Because 0.507 is higher than 0.482.