CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This research is a correlational research. Creswell (2008, p. 60) stated that Correlational research design is procedures in quantitative research in which investigators measure the degree of association (relationship) between two or more variables or sets of scores. This research consisted of two variables. Students' anxiety was an independent variable symbolized by "X", while the students speaking ability was a dependent variable symbolized by "Y".

B. The location and the time of the research

1. Time of the Research

This research was conducted from Augustus to September in 2017 of academic year.

2. Location of the Research

This research was conducted at the eleventh grade Senior High School 1 Bukit Batu. It is located on Ahmad Yani Street, Sejangat, Bukit Batu, Bengkalis, Riau Province.

C. Subject and Object of the Research

The subject of this research was the eleventh grade Senior High School 1 Bukit Batu in 2017-2018 academic years. While the object of this

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research was the correlation between students' anxiety and their speaking ability at eleventh grade of Senior High School 1 Bukit Batu.

D. The Population and the Sample of the Research

1. The Population of the Research

Creswell (2012, p. 381) noted that the population is the group of individuals having one characteristic that distinguishes them from other groups. The population of this research was the eleventh grade students of Senior High School 1 Bukit Batu. There were four classes consisting of 108 students as the total of population. It can be seen in the following table:

TABLE III. 1
THE TOTAL POPULATION AT THE ELEVENTH GRADE OF SENIOR HIGH SCHOOL 1 BUKIT BATU

No	Classes	Population
1	XI Social 1	27
2	XI Social 2	27
3	XI Social 3	27
4	XI Social 4	27
5	XI Science 1	28
6	XI Science 2	28
7	XI Science 3	28
	Total	192

There were two major at the eleventh grade of Senior High School 1 Bukit Batu. They were social and science that consisted of 192 students. In this research, the writer chose the social class as the suggestion from the headmaster of the school. Because both of social and science class had different teachers, the writer chose social class to be the sample of this research.

2. The Sample of the Research

In this research, the writer considered that the population was large. Because the population was more than 100 persons, the writer used simple random sampling to take the sample. Gay (2012, p. 131) argued that simple random sampling is the process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of selection for the sample. It means that simple random sampling is the way to choose individuals to be sample who is representative of the population.

Arikunto (2006, p. 134) suggested that simple random sampling is if the population is more than 100 persons, the sample can be taken between 10-15%, 20-25% or more. In this research, there were 108 persons as the population and the writer took 50% of the population as the sample. So, the total sample that the writer took was 54 students.

TABLE III. 2
THE TOTAL SAMPLE AT THE ELEVENTH GRADE OF SENIOR HIGH SCHOOL 1 BUKIT BATU

No	Classes	Population	50%
1	XI social 1	27	14
2	XI social 2	27	14
3	XI social 3	27	13
4	XI social 4	27	13
	Total	108	54

E. Technique of Collecting Data

To collect data from sample of this research, the writer used two techniques as follows:

1. Questionnaire

Arikunto (2006, p. 151) said that questionnaires are the statements or questions used to get the particular information from the respondent. In other words, this technique is used to collect the data about the students' anxiety. In this research, the writer adopted the questionnaire from Hotwitz that consisted of 20 items related to the indicators. The questionnaire dealt with respondents' opinions in responding to the following options based on the likert' – scale:

a. Strongly agree

b. Agree

c. Neither agree or disagree

d. Disagree

e. Strongly disagree

TABLE III. 3
BLUE PRINT OF STUDENTS' ANXIETY

VARIABLE	INDICATORS	ITEMS
Students' Anxiety (X)	Communication Anxiety	1, 6, 9, 11, 16, 18, 19, 21
	Fear or Negative Evaluation	3, 4, 8, 10, 13, 15, 17, 20, 22
	Test Anxiety	2, 5, 7, 12, 14,

2. Oral Test.

The writer used an oral test related to the indicators of speaking that consisted of vocabulary, grammar, fluency, comprehension and pronunciation to know the students' ability in speaking English. In order to give the test, the writer used an oral presentation in form opinion and giving suggestion about the topic that is related to the material. In order

to give scoring, the writer was helped by two raters. They were Mrs. Endah Sutristyowati, S. Pd., and Nopri Malia, M. Pd

Furthermore, in order to assess the students' speaking ability, the researcher used the assessment aspects of speaking ability from Teacher's Book 2013 curriculum. The assessment can be described as follows:

TABLE III. 4
ASSESSMENT ASPECT OF SPEAKING ABILITY

Criteria	SKOR 4	SKOR 3	SKOR 2	SKOR 1
Pronouncing (Pelafalan)				
Grammar (Tata Bahasa)				
Vocabulary (Kosakata)				
Fluency (Kelancaran)				
Comprehension				

(Source from the rubric of Teacher's Book 2013 curriculum)

Next, the students' scores of speaking ability were classified based on the classification of English teacher at Senior High School 1 Bukit Batu

TABLE III. 5
CLASSIFICATION OF STUDENTS' SCORE

No	The score level	Category
1	80-100	Very good
2	66-79	Good
3	56-65	Enough
4	40-55	Poor
5	30-39	Fail

F. Validity and Reliability of Instrument

1. The Validity

Gay (2012, p. 160-164) mentioned that there are three kinds of validity. They are content validity, criterion-related validity, and construct validity. In this research, the writer used content validity to know the validity of speaking ability test. Content validity is if a test actually samples the subject matter about which conclusion is to be drawn, and if it requires the test taker to perform the behavior that is being measured (Brown, 2003, p. 22). Meanwhile, in this research, the writer used construct validity to know the validity of the questioner. Siregar (2013, p. 77) described that construct validity means the validity that is related to the ability of instrument to measure the concept of being measured. Non-test instrument is used to measure the attitude in construct validity.

a. Validity of Anxiety

To analyze the validity of variable X, the writer used SPSS 23.0 program version. Based on the try out result of the instrument validity to the 20 items, it's showed that all the item were valid. It means that there were 20 items that could be used in this research. In the following table is the result of the instrument validity.

TABLE III. 6
THE ANALYSIS OF ANXIETY QUESTIONNAIRE VALIDITY

No	r count	r table	status
1	0.5570	≥ 0.3809	Valid
2	0.6446	≥ 0.3809	Valid
3	0.5120	≥ 0.3809	Valid
4	0.6217	≥ 0.3809	Valid
5	0.6129	≥ 0.3809	Valid
6	0.7987	≥ 0.3809	Valid
7	0.6501	≥ 0.3809	Valid
8	0.5819	≥ 0.3809	Valid
9	0.6883	≥ 0.3809	Valid
10	0.6398	≥ 0.3809	Valid
11	0.6656	≥ 0.3809	Valid
12	0.6372	≥ 0.3809	Valid
13	0.5596	≥ 0.3809	Valid
14	0.4966	≥ 0.3809	Valid
15	0.6536	≥ 0.3809	Valid
16	0.6987	≥ 0.3809	Valid
17	0.6597	≥ 0.3809	Valid
18	0.7239	≥ 0.3809	Valid
19	0.6129	≥ 0.3809	Valid
20	0.6710	≥ 0.3809	Valid

TABLE III. 7
THE ANALYSIS OF SPEAKING ABILITY TEST VALIDITY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60	3	5.6	5.6	5.6
	62.	2	3.7	3.7	9.3
	65	3	5.6	5.6	14.8
	67.	2	3.7	3.7	18.5
	70	10	18.5	18.5	37.0
	72.	2	3.7	3.7	40.7
	75	10	18.5	18.5	59.3
	77.	6	11.1	11.1	70.4
	80	3	5.6	5.6	75.9
	82.	2	3.7	3.7	79.6
	85	3	5.6	5.6	85.2
	87.	4	7.4	7.4	92.6
	90	4	7.4	7.4	100.0
	Total	54	100.0	100.0	

2. The Reliability

Brown (2003, p. 20) stated that a reliable test is consistent and dependable. If you give the same students or matched students on two different occasions, the test should yield similar result. He also said that there are four types of reliability, they are students-related reliability, rater reliability, test administration reliability and test reliability.

The table below is the category of reliability test used in determining the level of reliability of the tests (Cohen, Manion, & Morrison, 2007).

TABLE III.8
THE LEVEL OF RELIABILITY

No	Reliability	Level of Reliability
1.	>0.90	Very High
2.	0.80-0.90	High
3.	0.70-0.79	Reliable
4.	0.60-0.69	Marginally/Minimally
5.	<0.60	Unacceptably Low

To obtain the reliability of the questionnaire given, the writer used SPSS 23.00 program to find out whether or not the questionnaire is reliable.

For X variable (students' anxiety), the writer gave the try out to 28 students. After getting the result, the writer used *Cronbach's Alpha* formula to find out the reliability of the test through

TABLE III. 9
CRONBACH ALPHA RELIABILITY OF STUDENTS' ANXIETY

Reliability Statistics

Cronbach's Alpha	N of Items
.918	20

For speaking test, the writer used inter-rater reliability formula because the writer used two raters in assessing and giving the score of the students' ability in speaking ability. Creswell (2012, p. 161) mentioned that the writer compared scores from two raters (rater 1 and rater 2) in order to find out if the scores were similar or different. After the raters compared the scores, the writer determined how closes the scores from two raters.

G. Technique of Data Analysis

In order to find out whether there is a significant correlation or not between students' anxiety and their speaking ability, the writer used the score of questionnaire of variable X and test score of variable Y. In analyzing the data, the writer used a *Pearson Product-Moment Correlation coefficient* (r) through SPSS 23.00 version program.

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

r_{xy} = coefficient of correlation between variable X and Y

x = sum of score in X distribution

y = sum of score in Y distribution

xy = sum of multiplication of X and Y

x^2 = sum of X quadrate

y^2 = sum of Y quadrate

Siregar (2013) stated that H_0 is accepted if the significance 2- tailed value is bigger than α (sig-t > α, in this case α value is 0.05.

Moreover, statistically, the hypotheses are:

$H_a : r_o > r_{table}$

$H_o : r_o \leq r_{table}$

H_a is accepted if $r_o > r_{table}$ there is a significant correlation between students' anxiety and their speaking ability.

H_o is accepted if $r_o \leq r_{table}$ there is no significant correlation between the students' anxiety and speaking ability.