CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the researcher discussed about research design, Source of data, Data collecting technique, instrument of the research and data analysis.

A. Research Design

Creswell (2011:3) explains that research is a process of steps used to collect and analyze the information to increase understanding of a topic or issue. Then, research design is needed to analyze and identify the subject of the study in order to make the research going in the right way. This part explains about research design that used in this study also the consideration of the applying research design. Here, all of the researcher plan and strategy to answer the research problem. The purpose of this research is to expose the content in the textbook. Therefor this study used quantitative research with descriptive study as the research design because the data is presented in numerical and descriptive form.

Descriptive research is a study conducted to determine variables, either the variable is one or even more without making comparison or connect with other variables. The objective of descriptive method is to describe the facts about the object that is analyzed. Then, quantitative research is the research that relies primarily on the collection form of of number (Johnson & Christensen:2006). The process of collecting quantitative data consist of more than simply collecting data. This research does not only focus on understanding and meaning through a narrative description and observation

but also through the number (McMilan:1992:9). Quantitative research emphasize objective measurements and the statistical, mathematical and numerical analysis. It can be produced by a variety of research methods, such as questionnaires, interview, observation, surveys, documents, etc. The primary data was analyzed quantitatively by using Flesch ease readability formula and Flesch Kincaid Grade formula.

B. Data and Data Sources

The data sources are words and actions, written sources, and photographs, obtained from the principal or vice-principal, subject teachers, homeroom teachers, special supervisors and students. The data is a collection of facts, such as measurements or values. It can be measurements, members, observation, words or even just description of things. So, data or data source is a source where the data are collected. Data is significant feature of a research therefore a research is meaningless without a source.

In this research, the data was a reading text which was taken from an English textbook. The tittle of the textbook was *"Forward an English (Course for Vocational School Students Grade XI)"*. The textbook was created for eleventh grade high school. It was published by Erlangga in 2017. This textbook was composed by Shyla K, Lande and Eka Mulya Astuti and printed by PT Gelora Aksara Pratama. The textbook consist of 170 pages and 9 chapters which the whole contents represent the basic competence of the syllabus for the eleventh grade of vocational school. There are many session in each chapter which differ by the needs of material delivery, such as vocabulary session, listening session, writing session, speaking session, reading

comprehension, text structure session, dialog session, etc. Since the research focused on the readability of reading text, the researcher only focused on the reading session of the textbook. There are 13 reading texts in the textbook include of short and long text. The 13 reading textbook itself are explained:

Table 2.1
The Tittle of Reading Text

No	The Tittle of Reading Text	Pages
1.	Fast Food	66
2.	Smoking Ban in Public Places	67
3.	Playing Extreme Sports	68
4.	Why Do We Need Enough Sleep?	69
5.	Public Transport is a Real Winner	72
6.	Text A	92
7.	Text B	93
8.	Making Flat Glass	103
9.	Text C	104
10.	How Does the Water Cycle Work?	139
11.	Should We Wear a Protection When We are Under the Sun?	144
12.	Text D	165
13.	Text E	167

The reding text include of 5 exposition texts those are Fast Food, *Smoking Ban in Public Places, Playing Extreme Sports, Why Do We Need Enough Sleep, Public Transport is a Real Winner*. There are 2 procedure texts; *Making Flat Glass and Reading Text C,* 4 explanation texts; *Reading Text A, Reading Text B, How Does The Water Cycle Work?, Should We Wear a*

Protection When We are Under the Sun?, and *2 descriptive Text, Reading Text D and Reading Text E.*

C. Data Collecting Technique

To make the reader understand easily, the researcher analyze the process of arranging raw the data. It is organizing, arranging, categorizing and basic arrangement so that the researcher can find themes and enable to hypothesis of research as what the data propose. The researcher will use some tools which are called by instrument. An instrument used to get deep understanding about the object of the research, the researcher should use some technique of collecting the data simultaneously. In the form of written text; such as books, newspaper, articles, magazines, regulation, etc is the kind the documents of data. The documents is one of the represents a good source for text (word) data.

Meanwhile in this research, the researcher used publish textbook as the document in collecting data. The researcher chose the textbook used by the eleventh grade students of Vocational school at Buay Madang district entitled *"Forward an English (Course for Vocational School Students Grade XI)"*. In analyzing the textbook, the researcher ask permission to borrow the textbook to copy then.

D. Instrument of the Research

To get the accurate the data, an appropriate instrument is necessary to collect the data. It means that an instrument is some tools that were used to get data which was done by analyzing or observing certain object to collect the

appropriate data. There are two instruments of this research, they were Flesch ease readability formula and Flesch Kincaid Grade formula. The researcher employed the both Flesch ease readability formula and Flesch Kincaid Grade formula as the way to measurement, because there were mostly used, simple, and has easy step or direction to analyze. Both formulas are used as instruments in research because they have different assessment standards, namely higher and lower assessment standards.

E. Data Analysis

In this research, the researcher used *Flesch Reading Ease Scale formula and Flesch Kincaid Grade Level formula* because this formula are the easies to understand and easist to easure the readability of reading text. To make easier to analyze the text, the researcher arranges some steps to make easier to analyze the data, as follow:

1. Selecting the suitable textbook to research object

2. Finding the reading text in the textbook

3. Analyzing and counting the number of words, sentences, syllables of each reading text

4. Look for the Average Sentence Length (ASL) and the Average Number of Syllables (ASW) per word of each reading text. To analyze the Average Sentence Lenght (ASL) and the Average Number of Syllables

$$ASL = \frac{\text{Number of Words}}{\text{Number of Sentences}} \qquad ASW = \frac{\text{Number of Syllables}}{\text{Number of Words}}$$

5. Measuring the readability of text score based on Flesch ease readability formula and Flesch Kincaid Grade formula

6. Describe, giving explanation, and determining the grades of reading texts by comparing the results of the scores as shown in the readability tables related to the readability scores. To analyze the reading text by using flesch formula, the score is converted into readability level based on the scoring table made by Flesch (1948).