

CHAPTER III

RESEARCH METHODOLOGY

This chapter presents an in-depth evaluation of the research design, the population and sample in the study, the research instrument employed, the reliability and validity of the instruments, the technique employed for data collection, and the approach used for data analysis.

3.1 Research Design

This study employed a quantitative approach with a correlational design. It focused on the correlation between reading habits and vocabulary knowledge of pre-service English teachers. Both reading habits and vocabulary knowledge were measured and analyzed statistically in order to draw a conclusion about their relationships.

3.2 Population and Sample

1. Population

The research population was students of English Education Program at Universitas Muhammadiyah Kalimantan Timur in Academic Year 2022/2023. The students are expected to be English teachers once they finished their study. In total, the number of populations in this study was 204 students, in which 52 students from second semester, 58 from fourth semester, 48 from sixth semester, and 41 from eighth semesters, and 5 students from tenth semesters.

2. Sample

The sample of this research was selected by using simple random sampling techniques. Students from one out of four available classes from four different semesters were randomly assigned to participate in this study. The selection of the sample class was based on a simple draw. First, the researcher made four paper lots in which each paper lot will represent one available class. Then, researcher conducted a draw by randomly taking one paper lot. The class stated on the paper lot and was selected as sample of this study. As the result, 41 students were selected as the samples in this research. From a total of 52 students in second semesters, there are 8 students were absent during the data collection and 3 students did not complete all of the tests given.

3.3 Research Instruments

In this study the researcher used questionnaires, Vocabulary Levels Test (VLT), and Word Associate Test (WAT). Questionnaires was used to assess students' reading habits, while Vocabulary Levels Test (VLT) and Word Associate Test (WAT) measured the students' vocabulary knowledge.

1. Questionnaires

The researcher adopted the reading habits questionnaire used in this research from Muawanah's (2014) research. The questionnaire consisted of 30 questions. The researcher converted the questions to English because this research was done for English Language Education students. The students were given a questionnaire that contained a few indicators of reading habits

from Gaona & Gonzales's theory, and the table below provided the indicators.

Table 3. 1 Indicators for Reading Habits

Indicator	Number items
Reading a number of books	1,2,3,4,5
Reading Frequency	6,7,8,9,10
Time spent on reading	11,12,13,14,15,16,17,18,19,20
Motivation in academic environment	21,22,23,24,25
Motivation in the family environment	26,27,28,29,30

2. Vocabulary Levels Test

The researchers employed the Vocabulary Levels Test (VLT) developed by Schmitt et al. (2001) in order to assess the students' vocabulary size. This test is utilized by numerous vocabulary knowledge assessments (Nation, 2008). The Vocabulary Levels Test (VLT) is a diagnostic assessment that can also be utilized for measuring the breadth of an individual's vocabulary (Nation, 2008). This diagnostic test established to be beneficial in assessing students' vocabulary proficiency and helping the instructor in determining appropriate vocabulary levels for education.

This test included five levels: 2.000-word, 3.000-word, 5.000-word, academic Vocabulary, and 10.000-word levels, whether the learners could identify the definition of the word. Each level included 30 items and 60 choices. In every question of this test, participants had six words with three definitions, and they needed to match the most appropriate definition to the correct word by writing the number in the box provided.

3. Word Associate Test

The goal of the depth vocabulary knowledge measure was to enhance our understanding of the test takers' depth of receptive English vocabulary knowledge, as defined by Read (1995) read as cited Teng (2014). By measuring three vocabulary elements: synonymy, polysemy, and collocation, originally called the Word Associates Test (WAT) by Read (1995). It was used to test the knowledge of a specific word group, for example, adjectives or verbs.

The test consisted of an extensive set of 40 items designed to evaluate the learners' proficiency in recognizing the collocation, synonymous, part-whole, and whole-part connections between the provided stimulus word and a selection of eight possible options. These aspects indicated test sitters' deep understanding of words. Test sitters were considered to know words more deeply if they knew more about the word's aspects and use, not just the meaning. From the two boxes, participants must select four words that they think are relevant to the stimulus word.

3.4 Reliability and Validity of Instruments

Vocabulary Levels Test (VLT) by Schmitt et al.(2001) was used to know students' vocabulary size. This test has been widely used vocabulary knowledge assessment (Nation, 2008) and vocabulary research (Nirattisai & Chiramanee, 2014). This test has been widely used in research and has undergone validity and reliability checks. Thus, the researcher did not need to check the validity and reliability anymore to be used in this study.

Furthermore, Word Associates Test (WAT) by Read (1995) was also used in this study to understand various aspects of a given the word for students. This test is refined through a process of repeated piloting. Qian (1998) shows that WAT has a reliability of .91 with a sample of 74 Korean and Chinese speakers. The content validity or specifications of the instrument will be discovered in the appendix. Essentially, this test has also been utilized in research, so the validity and reliability index are assured.

Moreover, reading habits questionnaire used in this research is adopted from Muawanah's (2014) research. The questionnaire consisted of 30 questions. The questionnaire has been tested for reliability and has been validated by Muawanah (2014), the results were valid and reliable. Therefore, the instrument is ready to be utilized in this study without any additional reliability and validity checks.

3.5 Technique of Data Collection

To measure the correlation between reading habits and vocabulary knowledge, the researcher conducted a vocabulary test to measure the students'

vocabulary knowledge. First, vocabulary test consists of Vocabulary Levels Test (VLT) by Schmitt et al. (2001) and Word Associate Test (WAT) by Qian (1999). After giving the test, the researcher gave the questionnaire to measure the students' reading habits. Then, the researcher analyzed the scores of the vocabulary tests and data from the questionnaire to be statistically analyzed to sum up the correlation between vocabulary knowledge and reading habits.

3.6 Technique of Data Analysis

The technique of data analysis in this study study included the analysis of scores from Vocabulary Levels Test, Word Associate Test, and data from reading habit questionnaire.

3.6.1 Measuring Vocabulary Levels Test

The researcher measured the average of student's Vocabulary to know how well student's vocabulary knowledge. Since the VLT measures five levels of vocabulary; 2,000, 3,000, 5,000, academic vocabulary, and 10,000 levels, each level's scores are counted and later accumulated to get the total scores. All vocabulary levels represented 1,000 words except the academic Vocabulary, consisting of only 570 words. Therefore, the calculation of academic words was different from the others. The scores of 2,000, 3,000, 5,000, and 10,000 levels are counted by using the following formula:

$$\text{Vocabulary Scores} = \frac{\text{Total corrects item}}{30} \times 1000$$

Whereas, the scores of academic vocabulary level were counted based on the following equation:

$$\text{Vocabulary Scores} = \frac{\text{Total corrects item}}{30} \times 570$$

3.6.2 Measuring Word Associate Test

The researcher measured the average of the student's vocabulary by measuring three vocabulary elements: synonymy, polysemy, and collocation. In grading the objective test, the correct answers are counted as one point using the formula:

$$\text{Scores} = \frac{\text{Total number of correct answer}}{\text{Total number of item}} \times 100$$

3.6.3 Measuring Reading Habits Questionnaire

The questionnaire was given to students via a link to Google Forms and used five alternatives based on Likert's Scale Types; always, often, sometimes, rarely, and never. The Likert's scale is presented in the table below:

Table 3. 2 Range Score of Statements

Likert's scale types	Score
Always	5
Often	4
Sometimes	3
Rarely	2
Never	1

3.6.4 Correlational Analysis

Scores from the Vocabulary Level Test (VLT), Word Associate Test (WAT), and reading habits questionnaire were analyzed using inferential statistics to see if there is a relationship between the two variables, namely reading habits and vocabulary knowledge. The correlation analysis technique used was Pearson Product-moment Correlation using IBM SPSS Statistics 27.

The researcher used the categories in classifying the correlation submitted by Sugiyono (2016, p. 184). The level of correlation is measured based on the correlation coefficient interpretation table as follows:

Table 3. 3 Coefficient Correlation Inferential

Interval	Category
0.00 – 0.199	Very Low
0.20 – 0.399	Low
0.40 – 0.599	Moderate
0.60 – 0.799	Strong
0.80 – 1.000	Very Strong