CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the researcher was to outline the research design, population, sample, treatment, research instrument, reliability and validity of instruments, the technique of data collection, and technique of data analysis.

3.1 Research Design and Methodology

In this research, the researcher employed a quasi-experimental design with pre-test and post-test to both control and experimental group. This study aime to explore effects of extensive reading towards writing skills in narrative texts of pre-service English teachers at Universitas Muhammadiyah Kalimantan Timur. The research design of this study is shown on the figure below.

$$
\begin{array}{llll}
\text{Exp. Class} & O_1 & X & O_2 \\
\hline
\text{Ctrl. Class} & O_3 & \text{------------} & O_4
\end{array}
$$
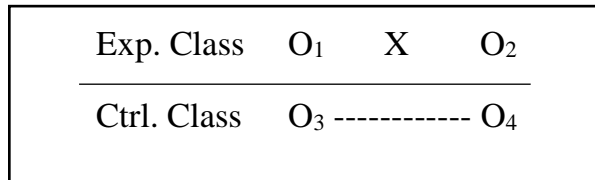
O1, O3   means the pre-test of both control and experimental class

X   means the treatment - implementation of extensive reading

O2, O4   means the post-test of both control and experimental class

The students in the experimental group were treated with extensive reading to improve their writing skills in narrative texts. On the other hand, the students from the control group were treated with the conventional method that they usually have in the class, which is using reading materials from their daily academic tasks.

The students' scores in the pre-test from the experimental class were compared to their scores in the post-test, and so were the scores of students in the control class. The scores from both groups were then compared and tested by using statistical analysis as discussed in the technique of data analysis below, which was to figure out the significant effects of the treatment.

3.2 Population and Sample

a. Population

The population of the research were students of English Education Program at Universitas Muhammadiyah Kalimantan Timur in Academic Year 2021/2022 who were also known as pre-service English teachers. The students were undergoing English teacher training program for four years. The students were expected to be English teachers once they had finished their study. In total, the number of population in this study was 168 students, in which 50 students were from second semester, 48 students from fourth semester, 42 students from sixth semester, and 26 students were from eighth semester.

b. Sample

The samples of this research were selected by using the convenience sampling technique because there were not many class available during the pandemic. Thus, the researcher decided to select participants for this study based on their availability. Consequently, the participants of this study were a group of students under the supervision of one lecturer. The students were from across batches that were undergoing their study in the second, fourth, sixth, and eighth semesters. The total number of the samples was 26 students that were classified into two groups namely experimental and control class. Half of the students from each semester were in the control class, and half are in the experimental class, so there are 13 students for each class. Students from the experimental class were given treatment by applying extensive reading, while

students from the control class were treated by using conventional method which was learning from reading materials of their daily academic tasks.

3.3 Treatment

Researchers used extensive reading as a treatment for students. The treatment was that the researcher collected as much extensive reading material as possible with different topics. The first day the researcher introduced and explained about Extensive reading and introduced the types of reading texts after that the students were asked to choose reading materials according to what they were interested in after that they were asked to read their respective reading materials. The second day the researchers asked to retell what they had read in order for the researchers to know whether they read correctly or not. After they recounted the students were asked to choose another reading material with a different topic and they read it again. The third day the researcher asked the students to retell what they read on the second day, and so on. This activity was carried out for the next nine days.

3.4 Reliability and Validity of Instruments

The writing test for narrative texts that were utilized in this study was adapted from Nengsi (2019). The instrument was used in her doctoral dissertation entitled Improving Students' Skill on Writing Narrative Texts by Using Spoof Text Technique at the Eleventh Grade of SMAN 4 Palopo. The instrument used in that study had been undergone validity and reliability checks before it was utilized. Therefore, the instrument that was utilized in the present study did not necessarily undergo reliability and validity checks anymore.

3.5 Research Instrument

To gather the quantitative data, the researcher administered a writing test to measure the students' writing skills in narrative writing. The researcher adopted a writing test for narrative texts developed by Nengsi (2019). The test format consisted of test takers' identity including names and class. The direction of the test required students to write narrative texts about their unforgettable experiences. Since the direction of the test was quite simple, the researcher added some more explanations to make the direction become clearer. The researcher required the students to complete the assignment by providing at least four paragraphs, consisting of an introductory paragraph, two main bodies of paragraphs, and a concluding paragraph. The test sitters were also required to write at least 150 words to complete the task. The students were given 60 minutes to complete the process. The test that was utilized in this study is attached in the appendices of this thesis.

3.6 Technique of Data Collection

Data was collected by using the following steps; first, the researcher gave a pretest to students using a writing skills test. This test was given to the experimental class and the control class. After the pre-test, students in both groups were undergone a different treatment for nine meetings. Students in experimental groups were taught through extensive reading, while those in control group used their daily reading materials as a treatment. Next, a post-test was administered to students in both groups to measure students' writing skills in narrative texts after being given treatment to see its effects. Finally, the results of the pre-test and post-test were compared to test the hypothesis.

3.7 Technique of Data Analysis

In order to answer to first research question, the researcher employed t-test to see whether the implementation of extensive reading significantly improved the participants' writing skills. The results of T-test were used to test the null hypothesis. The experimental class students' means score on the writing test in pre-test and post-test was compared to the mean scores of students from control class.

1) The polled variance model t-test

$$t = \frac{X_1 - X_2}{\sqrt{\frac{(n1 - 1)S_1^2 + (n_2 - 1)S_1^2}{n_1 + n_2 - 2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

If $\quad$ n1 = n2 homogeneous sample $\Leftrightarrow$ dk = n1 + n2 - 2

$\quad$ n1 $\neq$ n2 homogeneous sample $\Leftrightarrow$ dk = n1 + n2 - 2

$\quad$ n1 = n2 sample is not homogeneous $\Leftrightarrow$ dk = (n1 − 1) or (n2 − 1)

Explanation:

T $\quad$ = Value of T

X_1 $\quad$ = The average of the first group's data

X_2 $\quad$ = The average of the second group's data

X_1 $\quad$ = First group's data

X_2 $\quad$ = Second group's data

S^2 = Estimation of group differences

n_1 = The number of samples of the first group measurement

n^2 = The number of samples of the second group measurement

If the value of t-test is bigger than the value of t-table, the null hypothesis is rejected. It means that the implementation of extensive reading significantly improves the students' writing skills. On contrast, if the value of t-test is lower than the value of t-table, then, the null hypothesis is accepted, which means that there is no significant improvement on the students' writing skills after treatment of extensive reading.

In order to answer the research question 2, the researcher compared the mean scores in pre-test and post-test in both classes. In addition, the researcher compared the standard deviation from both classes to measure the students' score distribution.