

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Place of The Research**

The study was conducted at SMP Negeri 1 Rantau Utara, located on Jl. Majapahit No.19 Rantauprapat, Cendana Village, Kec. North Rantau, Kab. Labuhan Batu, Prov. North Sumatra. The focus of this research is ninth grade for the students of SMP Negeri 1 Rantau Utara academic year 2022/2023.

#### **3.2 Population and Sample**

##### **3.2.1 Population**

The population in this research are students of class IX SMP Negeri 1 Rantau Utara for the academic year 2022/2023.

##### **3.2.2 Sample**

The sampling technique employed in this research was total sampling, where an entire class of third-grade students from SMP Negeri 1 Rantau Utara was selected as the sample for the study.

#### **3.3 Method and Research Procedure**

##### **3.3.1 Method**

This research adopted a quantitative approach, which involved gathering data in numerical form for subsequent statistical analysis. It utilized a quasi-experimental research approach to investigate the effectiveness of the POWER strategy in enhancing students' proficiency in writing descriptive texts. According to Creswell (2014), a quasi-experimental design aims to establish causal relationships between variables. The study employed a pre-test/post-test control group design, where one group received instruction using the POWER strategy (experimental group), while another group received conventional writing instruction (control group). Before the intervention, all students completed a pre-test involving descriptive writing tasks. After the intervention, both groups underwent a post-test to assess any changes in their abilities to write descriptive texts.

### 3.3.2 Research Procedure

The procedures of this research are :

a. Pre-test

Both the experimental and control groups will participate in the pre-test, which will evaluate their initial proficiency in writing descriptive texts.

b. Treatment

The experimental group will be taught the POWER strategy, emphasizing each component (Plan, Organize, Write, Edit, and Revise), and will have opportunities to apply this strategy in writing descriptive texts. Meanwhile, the control group will receive conventional writing instruction during the same period.

#### In-class activity

- The experimental group will engage in writing activities and assignments where they practice applying the POWER Strategy.

-The control group will continue with their regular writing instruction.

a. Post- test

After the treatment period, both groups will take a post-test to assess their proficiency in writing descriptive texts. Both the control group and the experimental group will receive identical assessments. Subsequently, the researcher will compare the results from both groups to assess the impact of the POWER strategy on students' writing skills.

### 3.4 Research Instrument

The following instruments were used in this study:

1. Observation includes taking notes on the interactions between teachers and students, as well as among students, throughout the teaching and learning process.
2. A questionnaire is devised with specific questions for students to respond to, with all students serving as respondents for this instrument. It is employed during the preliminary study and comprises five items aimed at gathering information about students' English learning preferences, particularly regarding writing skills, and their perceptions of the teaching techniques employed by the teacher.
3. Test: This assessment evaluates students' writing proficiency utilizing the POWER Strategy, specifically focusing on their progress in composing descriptive paragraphs. The test is administered at the conclusion of cycle one.

### 3.5 Data Analysis Technique

After collecting the data, the researcher analyzes it through the following steps:

The researcher evaluates the writing test scores of both the experimental and control

groups in the pre-test and post-test.

1. The researcher compiles the scores of the experimental group as variable X and the control group as variable Y in a table.

2. The Normality Test

- a. If the significance value (sig)  $> 0.05$ , then the data exhibits a normal distribution.
- b. If the significance value (sig)  $< 0.05$ , then the research data does not follow a normal distribution.

4. The Homogeneity Test

- a. If the significance value (sig) for Based on Mean  $> 0.05$ , then the data is considered homogeneous.
- b. If the significance value (sig) for Based on Mean  $< 0.05$ , then the research data is not homogeneous.

5. Hypothesis Test

The data analysis technique that the researcher uses for hypothesis testing with a post-test only design is independent t-test. Nuryadi et al., (2017) state that independent t-test is used to determine the difference in means between two independent populations/groups of data. This test is used to compare the means or medians between two different groups, in this case, the experimental group of students who receive treatment, and the control group who do not receive treatment.

This section will test the significance differences of students' writing ability of descriptive text both in experimental group and control group:

1.  $t_{test} < t_{table}$  -> significantly different (null hypothesis rejected)
2.  $t_{test} > t_{table}$  -> not significantly different (null hypothesis accepted)

### **Statistical Hypothesis**

$H_0 : A \neq B$

$H_a : A > B$

Where :

$H_0$  : There is so significant effect of POWER strategy on students' writing ability of descriptive text of SMP Negeri 1 Rantauprapat.

$H_a$  : there is a significant effect of POWER Strategy on students' writing ability of descriptive text of SMP Negeri 1 Rantauprapat.