

## CHAPTER III

### RESEARCH METHOD

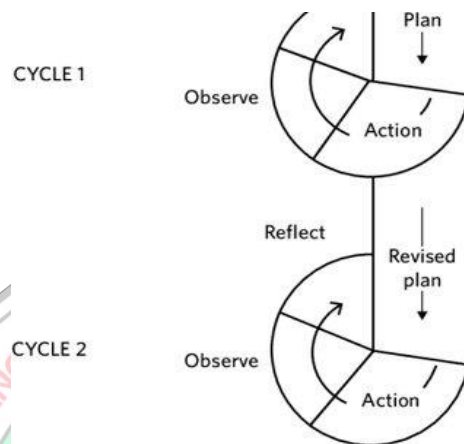
This chapter discusses the research design, subject of the research, time of the research, instrument of the research, technique of data collecting, and techniques of data analysis.

#### A. Research Design

In this study, the researcher used classroom action research (CAR). Classroom Action Research (CAR) used for inquiry into investigative classroom teachers initiated by teachers. It is needed to improve the teacher's understanding of classroom learning, and to bring about changes in classroom teaching activities, McTaggart and Kemmis (1988). Moreover, action research is a research carried out in the classroom by teachers mainly to solve the problems, improve teaching and learning processes, and have a significant impact on achieving learning outcomes. In other words, the purposes of classroom action research were to find out the problems that occur in the classroom during the learning process and how to solve these problems in the class. In this study, classroom action research was aimed to apply clustering technique to improve students' achievement in writing descriptive text to tenth graders of SMK Negeri Kebonagung Pacitan in the academic year of 2022/2023.

This classroom action research used the McTaggart and Kemmis (1988). Action research activities in the classroom involve several steps for

repetition cycle. Each cycle consists of four steps, namely planning, action, observation, and reflection. The results of one cycle were used to determine the needs of the next cycle until the strategy that will be used to solve the problem. The cycle is described as follows:



**Figure 3.1 Kemmis and Mc Taggart Model of Classroom Action Research**

In planning, the researcher provided the lesson plans and equipments needed for the first cycle. The second step was action. At this stage, the researcher began implementing the plan about the lesson plan created. The next step was observation. This step discussed the process of recording and gathering all relevant data about any aspect occurred during the implementation of the action. Based on the observations, researcher look back at what happened and evaluate the outcome. Finally, the researcher decided if improvements were needed for the next cycle. However, the first cycle was unsatisfying, the researcher modified the plan and moved to another plan.

## B. Subject of the Research

The researcher conducted this research at the senior high school level. The subjects of this research were the tenth graders in X APHP 2 class of SMK N Kebonagung. This class consisted of 20 students. The school was located at Pacitan-Lorok Street, Ketro Kebonagung, Pacitan Regency, East Java Province. The researcher chose tenth graders students as the subjects of this research because of several reasons. The first reason, they still have difficulties with the five aspects of writing in compiling descriptive text. And the second, the techniques that researcher will apply had not applied in their learning activities. Moreover, writing is an important skill in learning English. So, they need a variety of teaching-learning activities achieve their improvement in writing.

## C. Time of the Research

The researcher managed the time of the research in order to make the research effective and efficient. Time table is essential for researcher as a schedule for doing research. So, all the steps and procedures of the research could be done orderly. The researcher started to write the proposal in October 2022. The report was arranged until June 2023. The time of the research is presented in the table below:

**Table 3. 1 Time of the Research**

No	Activities	Time									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Ma	Jun
1.	Research										

No	Activities	Time									
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Ma	Jun
	preparation										
2.	Research proposal writing										
3.	Proposal Seminar										
4.	Research approval										
5.	Treatment and gathering the data										
6.	Data analysis										
7.	Repot arrangement										
8.	Thesis examination										

#### D. Research Instrument

##### 1. Pre-test and post-test worksheet

Research instrument is an important component in scientific research because the possibility of the instrument of a study can reused by other studies that have relevance and the same needs, Adib (2017). This means that research instruments can become scientific assets for a researcher who developed it. In this study, the researcher used the pre-test and post-test worksheets. The pre-test worksheet contained instructions for compiling descriptive text with random themes in two paragraphs. While the worksheet in the first post-test contained instructions for compiling a descriptive text in two paragraphs with random themes by applying the clustering technique that has been studied previously. The second post-test worksheet contained instructions for compiling a descriptive text on the theme of SMK Negeri

Kebonagung in two paragraphs by applying the clustering technique. In each task given by the researcher, all students must carried it out according to the instructions given.

## 2. Observation sheet

Observation sheet used to record detailed information about the teaching-learning activity through clustering technique. In addition it used to know the good point and the problems from the students to consider for the next meeting. The researcher and observer recorded about the students' knowledge, activeness, independence, and problem during the applied of clustering technique.

## 3. Questionnaire Sheet

Questionnaire is a written of questions to be answered by the students. This instrument took all students as the respondents. It was applied at the preliminary study. It consists of 25 questions in order to get the data about students' interest in learning English through clustering technique. Also, it used after classroom action research to know the students' response toward teaching and learning activities through Clustering technique.

## E. Research Procedures of Classroom Action Research

This classroom action research used the design by Mctaggart and Kemmis (1988). Action research activities in the classroom involve several steps for repetition cycle. Each cycle consists of four steps, namely planning, action, observation, and reflection. The results of one cycle were used to determine the needs of the next cycle until the strategy that will be used to solve the problem. The classroom action research is presented as follows:

### **1. Procedure of Cycle I**

#### **a. Planning**

Planning was the first step in this cycle. Researcher made plan in order to achieve the research objectives. The steps in planning as follows:

- 1) The researcher prepared lesson plan;
- 2) The researcher prepared the instrument for writing test;
- 3) The researcher prepared observation sheet;
- 4) The researcher prepared questionnaire.

#### **b. Acting**

In this step, the researcher conducted some activities in the classroom as follows:

- 1) Pre-Activities
  - a) The researcher lead the students to prayer and greeted them;
  - b) The researcher checked the present list;



- c) The researcher prepared the class by remembering the students to make sure that the class clean and they ready to study.

## 2) Main Activities

- a) The researcher applied the lesson plan to the teaching-learning activities;
- b) The researcher explained the procedures of clustering technique;
- c) The researcher asked the students to make a descriptive text by applied clustering technique;
- d) The researcher gave the correction to the students' task.

## 3) Post Activities

- a) The researcher gave some questions to students about the material and technique;
- b) The researcher gave a conclusion of the material;
- c) The researcher gave a score to students.

## c. Observing

In this step, there were some activities as follows:

- 1) The teacher observed the teaching-learning activities;
- 2) The researcher calculated students' scores after cycle I had been done and compared the pre-test and post-test score to measure the improvement.

## d. Reflecting

The last step in this cycle was reflecting. The researcher analyzed the result of both the observation and test. There were some activities as follows:

- 1) The researcher analyzed the problem in cycle I and also found the solution;
- 2) The researcher prepared the instruments for the next cycle to repair the process in cycle II.

## 2. Procedure of Cycle II

If in the cycle I the student results have not improve their skill and still have some problems, then the researcher conducted cycle II to achieve the research objective. The steps as follows:

### a. Planning

There are some steps in planning:

- 1) The researcher prepared the lesson plan;
- 2) The researcher prepared the instrument for writing test;
- 3) The researcher prepared observation sheet;
- 4) The researcher prepared questionnaire.

### b. Acting

In this step, the researcher conducted some activities in the classroom as follows:



### 1) Pre-Activities

- a) The researcher led the students to prayer and greeted them;
- b) The researcher checked the present list;
- c) The researcher prepared the class by remembering the students to make sure that the class clean and they ready to study.

### 2) Main Activities

- a) The researcher applied the lesson plan to the teaching-learning activities;
- b) The researcher explained the procedures of clustering technique;
- c) The researcher asked the students to make a descriptive text by applied clustering technique;
- d) The researcher gave the correction to the students' task.

### 3) Post Activities

- a) The researcher gave some questions to students about the material and technique;
- b) The researcher gave a conclusion of the material;
- c) The researcher gave a score to students.

## c. Observing

In this step, the researcher observed the teaching-learning process in cycle II. There are some steps as follows:

- 1) The researcher observed the teaching-learning activities;

- 2) The researcher gave post-test to students;
- 3) The researcher gave questionnaire to students;
- 4) The researcher calculated students' scores after cycle II and compared them with the scores in cycle I to measure the improvement.

#### **d. Reflecting**

In this last step, the researcher corrected and analyzed the result of the actions in cycle II. The steps as follows:

- 1) The researcher checked the result of the use of clustering technique to improve students' writing skill in descriptive text;
- 2) The researcher analyzed the result of the questionnaire;
- 3) The researcher decided to stop in cycle II.

#### **F. Technique of Data Collecting**

This research has two kinds of data, qualitative and quantitative data. Qualitative data are collected in words, pictures, and documentation (Aspers & Corte, 2019). Quantitative data refer to numerical information that includes standardized test scores to measure educational outcomes, Arias et al.,(2021).

Quantitative data aim to determine students' achievement and improvement in writing descriptive text using the clustering technique, Lestari (2022). To collect the quantitative data the researcher used the tests below:

1. Pre-test

Pre-test was given to know the students' knowledge before the treatment. The results of the pre-test were used to find out their problems in writing clearly and to consider for the next treatment.

## 2. Post-test

Post-test was given to know the students' ability in writing after the treatment. It was given in the end of each cycle in research. The results of post-test were use to consider the cycle should be continued or stopped.

To collect the qualitative data, the researcher used observation and questionnaire. It can be explained below:

### 1. Observation

The researcher did the observation to the students during the teaching-learning proses. The observation process was to tell how well the clustering technique was applied in the class and how far this technique could achieve the results to satisfy the success criteria in teaching writing descriptive text.

### 2. Questionnaire

The researcher gave questionnaire to students after treatment had been carried out. The questionnaire aims to find out students' responses to the use of clustering techniques for teaching writing in descriptive text.

Students were required to fill out the questionnaire honestly according to the situation and what they really feel.

Qualitative data intend to discover the implementation of the clustering technique and students' participation in the learning-teaching process using the clustering technique.

## G. Techniques of Data Analysis

### 1. Data Analysis of Quantitative Data

To analyze the data related to the students' test of writing skill in descriptive text, the researcher used analytical scoring rubric adapted from Weigle. There are five components in the analytical scoring rubric for writing, as follows: content, organization, vocabulary, mechanic, and grammar. In this research, the researcher combined vocabulary and mechanic component. The following table is the analytical scoring rubric used by the researcher to analyze the students' writing in descriptive text.

**Table 3. 2 Analytical Scoring Rubric adapted from Weigle**

Components of Writing	Scores	Indicators
Content	4	relevant to the topic and easy to understand
	3	rather relevant to the topic and easy to understand
	2	relevant to the topic but is not quite easy to understand
	1	quite relevant to the topic but is not quite easy to understand
Organization	4	most of the sentences are related to the main idea some
	3	some sentences are related to the main idea

Components of Writing	Scores	Indicators
	2	few sentences related to the main idea
	1	the sentences are unrelated to each other
Vocabulary & Mechanic	4	a few errors in choice of words, spelling and punctuation some
	3	some errors in choice of words, spelling and punctuation
	2	occasional errors in choice of words, spelling and punctuation
	1	frequent errors in choice of words, spelling and punctuation
Grammar	4	a few grammatical inaccuracies
	3	some grammatical inaccuracies
	2	numerous grammatical inaccuracies frequent
	1	frequent grammatical inaccuracies

$$\frac{3C + 2,5V + 2,5G + 2O \times 100}{40}$$

40

Data analysis had been carried out in stages by finding the mean score of the pre-test and post-test. Furthermore, researcher compared the mean score between the pre-test and post-test. The formula for getting the mean by Singh (in Renny, 2018) as follows:

$$M = \frac{\sum x}{N}$$

M = mean/ mean

$\sum x$  = total of score

N = total of students

Individually, the students claimed to be successful in this test if they reached the standards of completeness or KKM (75 $\geq$ ). Collectively,

if as many as 85% of the students in the class were able to achieve the KKM, then it can be said that there was an improvement. The students' scores calculated using the formula by Urdan, (2015). To know the class percentage which passed KKM, the researcher used the formula:

$$P = \frac{F}{N} \times 100\%$$

P = The Class Percentage

F = Total Score

N = Number of Student

Next step, the writer identified the improvement score on students' descriptive paragraph from pre-test up to post-test score in cycle 1 and cycle 2 the writer used the formula:

$$P = \frac{y - y_1}{y} \times 100\%$$

P : Percentage of Students' Improvement

y : Pre- test Result

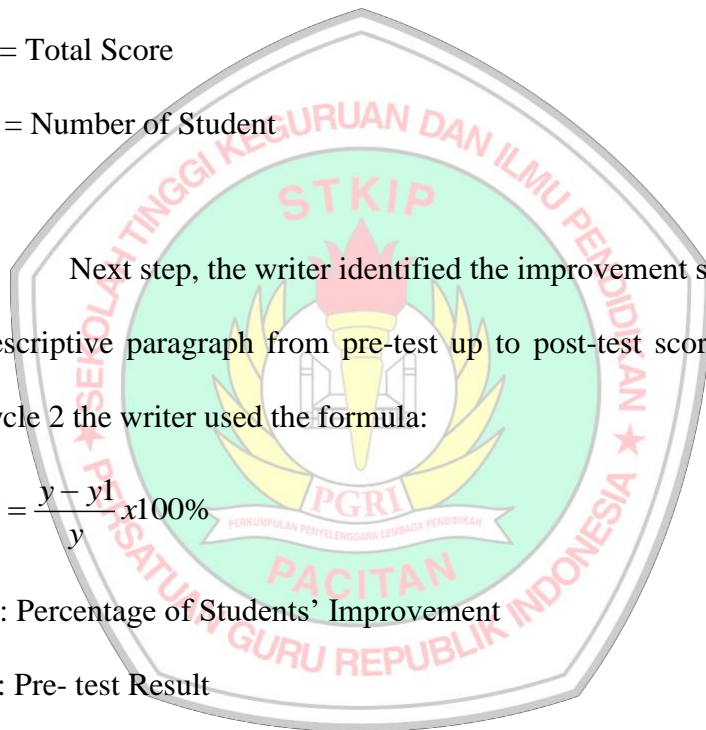
y<sub>1</sub> : Post-test 1

$$P = \frac{y_2 - y_1}{y_1} \times 100\%$$

P : Percentage of Students' Improvement

y : Pre- test Result

y<sub>2</sub> : Post-test 2





## 2. Data Analysis of Qualitative Data

Qualitative data in this study were analyzed based on Miles and Huberman (1984) method. The researcher analyzed through several stages, namely data reduction, data display, and conclusion.

### a. Data reduction

Data reduction refer to the process selecting, focusing, simplifying, abstracting, and transforming the data in written. Data reduction is part of the analysis. With data reduction researchers can get rid of unnecessary parts and organize data to get the final conclusions that can be drawn and verified.

### b. Data display

Data display aware the primary means for valid qualitative analysis, which consist of: various types of matrices, graphics, networks and charts. All of it was designed to combine information that is arranged in a coherent and easily accessible form. Thus an analyst can see what is happening, and determine whether to draw the correct conclusions.

### c. Conclusion

The final conclusion contains the process of data collection, data analysis, and the important one that the data must be verifiable and accountable.