

## **CHAPTER III**

### **RESEARCH METHOD**

#### **3.1. Research Design**

The method used in this research is Classroom Action Research. Classroom Action Research is an activity to improve learning practices on learning activities from problems that arise in learning situations.

According to Suhardjono in Iskandar (2015), the definition of Classroom Action Research is: Action research conducted with the aim of improving the quality of learning practices in the classroom. The results of the research are then reported in accordance with the real conditions carried out by teachers in their classrooms in an effort to improve the quality of learning with methods, strategies or learning models that are tailored to classroom conditions and the characteristics of the subject matter.

Arikunto in Dadang Iskandar (2015) says "the term Classroom Action Research can be abbreviated as Action Research only because the term "class" only indicates a number of subjects that are targeted for improvement". Furthermore, Arikunto in Dadang Iskandar (2015) says: The purpose of Action Research is to solve problems through a real action, not just observe the phenomena concerned. The above definition can be understood that Classroom Action Research is action research conducted on the basis of learning problems that arise in the classroom in order to improve the learning process so that learning objectives can be achieved.

Based on the description above, it can be concluded that the classroom action research method is research carried out through real actions to improve problems that occur in the learning process in the classroom.

### **3.2. Research Subjects**

The subjects of this study are the VIII-1 grade students of SMP Swasta Al-Washliyah 26 Medan, the number of students are 30 students, which consisted of 12 boys and 18 girls. The object of the research is the implementation of problem plane game method in improving students' vocabulary mastery in English subjects especially verbs and adjectives. The researcher chose SMP Swasta Al-Washliyah 26 Medan as the location of the research. Time started from may 27, 2023 to june 7, 2023.

### **3.3. Research Procedures**

#### **3.3.1. Cycle I**

##### **a) Planning**

- 1) The researcher determined several problems and analyzed them.
- 2) After determining the problems, the researcher planed some actions in increasing students' vocabulary mastery.
- 3) The researcher prepared the lesson plan based on the curriculum and the syllabus from the school. Meanwhile, the materials and other instruments needed in the research were selected based on the media that was implemented in the action.
- 4) The researcher also tried to find the suitable materials based on the syllabus and lesson plans.

- 5) The researcher organized the steps in implementing problem plane game method in the teaching and learning process of vocabulary mastery.
- 6) The researcher prepared the observation sheet.
- 7) The researcher prepared the evaluation form to evaluated the students' activities after teaching learning process.

b) Action/ Implementing

After planning the actions, the researcher implemented the actions in the teaching and learning process. The action was conduct until the increasing had been achieved. The researcher did the actions in two cycle with two meetings for each cycle. Acting described about teaching procedures of the research. There were many steps that the researcher did in the action:

- 1) The researcher applied the lesson plan.
- 2) The researcher explained the advantages of using problem plane game method in teaching vocabulary mastery.
- 3) The researcher taught by using problem plane game method.
- 4) The researcher guided the students in teaching learning process based on the lesson plan.

a) Observing

At this stage what must be done is to observe the behavior of students who are participating in learning activities. Monitor discussion activities or cooperation with groups to observe students' understanding in mastering learning materials.

b) Reflecting

At this stage what needs to be done is to record the results of observations, evaluate the results of observations, analyze learning outcomes, record weaknesses to be used as material for designing the next cycle.

**3.3.2. Cycle II**

a) Planning

- 1) The researcher identified the problems and found the problems from the first cycle.
- 2) The researcher made a lesson plan.
- 3) The researcher prepared the material, method and teaching.
- 4) The researcher prepared the source of learning.
- 5) The researcher prepared the observation sheet.
- 6) The researcher prepared the evaluation format to evaluate the students' activities after teaching learning process.

b) Action/ Implementing

- 1) The researcher applying the lesson plan of cycle II.
- 2) The researcher guides the students in teaching learning process based on the lesson plan.

c) Observing

In this step, the researcher observed the process of teaching learning by using observation sheet to collect the data in action plan II.

d) Reflecting

In this step, the researcher compared the score of pre-test and post-test. The researcher reviewed and reflected on students's activities whether there was positive or negative, the second cycle enough or need for the next step.

### **3.4. Data Collection Technique**

1) Source of data

a) Students

Data sources from students come from students of class VIII-1 of SMP Swasta Al-Washliyah 26 Medan. The number of students are 30 students.

b) Teacher

The sources of data from the teacher's activities originated from the English teacher of English class VIII-1 of SMP Swasta Al-Washliyah 26 Medan.

2) Types of data analysis

In the implementation of Classroom Action Research, there are two types of data that can be collected by researcher, namely: Quantitative data (students' learning outcomes) and qualitative data, namely in the form of sentence-shaped information that gives an overview of student expressions in learning.

3) Data collection method

a) Interview

As for those who will be interviewed in this study are all those in SMP Swasta Al-Washliyah 26 Medan, both teachers and students. In this interview, it is hoped that it can be clearly known that there is an increase in learning outcomes in learning English vocabulary by using problem plane game method.

b) Observation

Observation is an observation (data collection) activity to photograph how far the effect of the action has reached the target. The observation will be use is the type of active participation observation. Where in this observation the researcher participates in doing what the source does. This observation is use by researcher to obtain data about the learning process of both teacher and student activities using an observation sheet that contains several predetermined measurement criteria.

In this case, researcher used a lot of direct observation types, the efforts that researcher use are to explore data about the state of teachers and children in the classroom, facilities and infrastructure. Observation is carried out with several tools, namely the learning implementation observation sheet, as well as the lesson plan validation sheet.

c) Documentation

Documentation is using to show how the teaching and learning process uses photos. The documentation method means how to collect data by recording data that already occurs. All the teaching and learning activities

included discipliness and students' learning outcomes documented and carried out in this study. Documentation shown by using photos.

d) Test

The tests given to students focus on vocabulary mastery. The result of this tests is an increase in students' vocabulary. The purpose of this test is to measure students' vocabulary. The tests use in this research are pre-test and post-test. The pre-test will be conducted before implementing problem plane game method in the preliminary study. The post-test will be conducted after implementing problem plane game method. Table 3.1 presents the outline of vocabulary test.

| Variabel           | Topic        | Number of Items                                     | Total Numbers |
|--------------------|--------------|-----------------------------------------------------|---------------|
| Vocabulary Mastery | 1. Noun      | 1,2,3,4,5,6,7,8,9,10,11,12, 13,14,15,16,17,18,19,20 | 20            |
|                    | 2. Adjective | 1,2,3,4,5,6,7,8,9,10,11,12, 13,14,15,16,17,18,19,20 | 20            |
|                    | 3. Verb      | 1,2,3,4,5,6,7,8,9,10,11,12, 13,14,15,16,17,18,19,20 | 20            |
|                    |              | Total                                               | 60 question   |

**Table 3.1 The Specification of Students' Vocabulary Test**

### **3.5. Data Analysis Technique**

In this classroom action research, qualitative description analysis is used, which is a research method that describes reality or facts in accordance with the data obtained with the aim of knowing the learning outcomes achieved by students as well as to determine students response to activities and students activities during the learning process.

The purpose of this analysis is to describe student activities during the teaching and learning process. The descriptive analysis was carried out as follows:

#### **1) Qualitative Descriptive Analysis**

Qualitative descriptive analysis is to give production to the variables mentioned according to the actual combination. This technique is used to analyze qualitative data. This qualitative descriptive analysis is obtained from qualitative data collected in the study which includes:

- a) Teacher observation sheet
- b) Student observation sheet
- c) Teacher and student interview results

#### **2) Quantitative Descriptive Analysis**

Quantitative is a statistic that serves to describe or provide an overview of the object under study through sample or population data as it is without conducting analysis and making conclusions that apply to the public. What includes quantitative data is student learning outcomes.



To analyze student learning outcomes after the learning process of each cycle is done by providing an evaluation in the form of competency test questions. The analysis was calculated using simple statistics, namely:

a) Formative Test Score

Students' score of vocabulary test is counted by using the formula, as follow:

$$S = \frac{R}{N} \times 100\%$$

Where :

S : Score

R : The number of correct answer

N : The number of question

b) Student Completion Data

Based on the instructions for teaching and learning, that the achievement level for the formative test is 85%, then the researcher considers that the use of problem plane game method is said to be successful in improving vocabulary mastery if students are able to complete and meet learning completeness, which is at least 85% or a standard score of around 75 with the criteria for learning success.

Sudjana stated that to determine the percentage of learning completeness using the following formula:

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

Description:

P : Percentage of learning completeness to be sought

F : Frequency (many students who are complete)

N : Number of students

c) Class Average

While the class average is calculated using the formula as follows:

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

Description:

X : Average (mean)

$\sum x$  : The sum of all student scores

$\sum N$ : Number of students

d) Improvement Score

After getting mean of the students' score per actions, the researcher identifies whether or not there might have students' improvement score on vocabulary comprehension from pre-test up to post-test score in cycle 1 and cycle 2. In analyzing that, the researcher uses the formula:

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

Where:

P: Percentage of students' improvement

y: Pre-test result

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

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

Where:

P : Percentage of students' improvement

y : Pre-test result

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

From the results of the average score obtained by students, the achievement of learning indicators can be categorized based on the following provisions. After this is expressed with quantitative criteria, namely:

| No | Interval | Criteria  |
|----|----------|-----------|
| 1  | 86-100   | Excellent |
| 2  | 66-85    | Good      |
| 3  | 46-65    | Enough    |
| 4  | 26-45    | Poor      |
| 5  | Under 25 | Failed    |

**Table 3.2 The Classification of Students' Vocabulary Mastery Score  
Depdikbud, 2004:10 in Nurhidayah 2018**