

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the researcher provides some steps on how to conduct this research. There are research design, the subject of the study, data collection technique, instrumentation and data analysis.

A. Research Design

In this research the researcher will apply Classroom Action Research (CAR). The researcher choose this design because this related to learning activity in the classroom to confirm how or to see the improvement of students' responses by using mnemonic technique in the tenth grade at SMK Negeri 1 Belimbing Hulu.

According to Mills (in Hopkins, 2014:88) action research is a systematic investigation carried out by teacher-researchers by collecting information about how their school works, how they teaching, and how students learn. This information is collected with the aim of gaining understanding, developing practice reflective, influencing positive changes in the environment schools and educational practice in general, and for improve student learning outcomes. Talking about classroom action research, "action research is part of a broad movement that has been going on education generally for some time. It is related to the ideas of 'reflective practice' and 'the teacher as researcher'" (Anne Burns, 2010:2).

Meanwhile according to Arikunto et al. (2010:3) "Classroom Action Research is an observation of learning activities in the form of an action, that

was deliberately raised and happened in a class together.” In classroom action research there are several processes as follows according to Kemmis and Taggart (in Wiriaatmadja 2012:66) Namely planning (plan), action (act), observation (observe), and reflection (reflex). Through the process of problems encountered so far in learning can be resolved and is a strategic way to improve teacher performance through the experience gained reflectively.

Meantime Burns (2010:9) Research is process that is step combination that is done systematically and logically to get the solution of the problems or to design of this study uses Classroom Action Research (CAR).

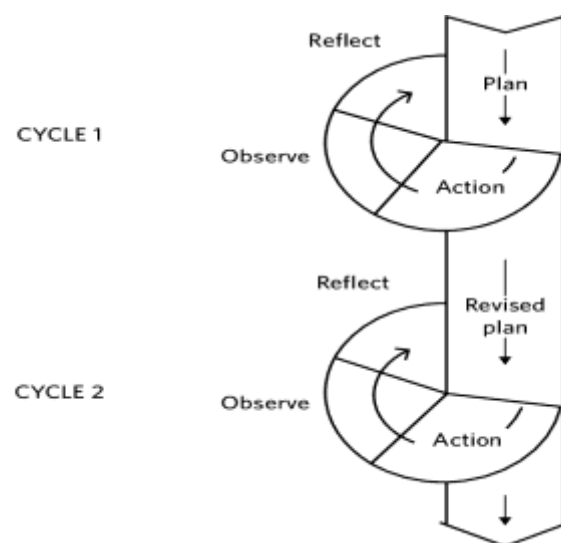


figure 3.1 Cyclical AR model based on Kemmis and McTaggart

classroom action research. This research did in two cycles to overcome all students' problem in vocabulary. There were 2 meeting in each cycle. In each cycle divided into two activities.

Each cycle consists of four steps, they are planning, action, acting, observing and reflecting the result of observation. The teacher applied the steps in the class based on lesson plan. The research design as follows:

1. Cycle 1

a) Planning

There are some preparations that prepared by the researcher related to the action as follows:

- 1) Preparing the materials
- 2) Preparing lesson plan and designing the steps in doing the action
- 3) Preparing list of students' name and scoring
- 4) Preparing sheets for classroom observation. It was prepared to know the situation of teaching-learning process when the technique applied
- 5) Preparing teaching aids
- 6) Preparing test using mnemonic technique

b) Action

Action here is a plan to implement the right strategy to be use in classroom. In acting, the researcher will cooperate with the teacher in guiding the teaching and learning process. Researcher will take two cycles in this study, two meetings in one cycle. In action, the researcher will carry out several activities, such as applying mnemonic technique that will be use in class, implementing lesson plan, teaching students

about the material that has been prepared and also participating in the teaching learning process.

c) Observing the action

Observation is one of the instruments use in collecting the data. The writer observed the students' activities while teaching and learning process occur. The next stage is observing the actions that are being and have been implemented. Observations can be carried out by other parties who have been assigned by the researcher to do so called observers. This observation is carried out to determine the extent to which the actual action takes place in the field, especially in the learning process and capacity building.

d) Reflection

The researcher was made evaluation. The test in the form of multiple-choice tests. In this test, the students asked to answer the question in the form of objective action. Reflection means remembering, evaluating and reflecting on an action exactly as it was recorded in the observation. The function of reflection is to understand the real processes, problems and obstacles in strategic action. Reflection is often supported by discussions between researcher and teacher.

B. The Subject of The Study

In a research the researcher needs a population to be studied as a research subject. This research would conduct at SMK Negeri 1 Belimbing Hulu. So, in this research, the researcher uses a sample of tenth grade students at SMK N 1

Belimbing Hulu for the 2022/2023 school year. Research targets can be research subjects in research that are observed by researcher, so researcher will only focus on a research target to get the information needed. The subjects of this study were tenth grade students consist of 22 students, 9 male and 13 females. The sample was taken based on the researcher's interest in the problem of learning English at school that the tenth-grade students of SMK Negeri 1 Belimbing Hulu were still lacking in vocabulary, were not motivated and had difficulty remembering, therefore the researcher conducted this study to overcome the existing problem.

C. Data Collection Technique and Instrumentation

1. Data Collection Technique

In qualitative research, researcher is the key instrument. According to Burhan and Bugin (2007:24) in qualitative research the researcher is the key instrument. The meaning of this opinion is that research instrument are tools needed or use to collect data. In qualitative research, or the main instrument in data collection is the human, himself or another person who helps.

While according to Lincoln and Guba's argumentation which is cited by Sugiyono (2009:223) "The instrument of choice in naturalistic inquiry is the human. We should see that other forms of instrumentation may be use in letter phase s of the in query, but the human is the initial and continuing mainstay. But the human instrument has been used extensively in earlier stages of inquiry, so that the instrument can be constructed that

is grounded in the data that the human instrument has product.” The qualitative data used was observation of activities in the classroom and interviews that were presented to the teacher. The distinctive of qualitative research was given in clear. Data collection methods in qualitative research can be divided into four basic types: observations, interviews, and documents. But it wants the reader to have qualitative data namely:

a. Observation

In this case, the researcher observes the behavior in teaching and learning activities. Researcher observe students to determine whether there was an increase in student learning activities through mnemonic technique. Researcher observe students during the teaching and learning process before using mnemonic technique and after using mnemonic technique, so that researcher could make comparisons between using and without using mnemonic technique.

b. Interview

Interview is an oral question and answer activity to obtain information. The form of information obtained is stated in writing, or recorded audio, visual, or audio visual. Interview is the main activity in observation. So, the instrument for collecting data using this kind of technique is interview guide. Researcher take some steps to collect data from the interview. These are the preparation of the concept of the question to be asked, on the other hand, the researcher is to print the results of the interview, So, the interview only be conducted in

analyzing the situation that some of the students about their difficulties in learning vocabulary. According to Creswell (2009:166) data collection steps include setting research boundaries, chaotic or semi-structured observations and interviews, collecting information in written and visual material, and setting protocols for recording information.

By this technique the researcher interviews sixes students in each cycle to ask how they felt when learning vocabulary using mnemonic technique. Then the researcher will also ask whether there was any progress in understanding vocabulary using mnemonic technique.

c. Test

A test is assessment for measuring the knowledge, skills aptitude, physical fitness, or classification of test takers in many other topics. For example, measuring the increase students' vocabulary using mnemonic techniques. Therefore, "test is a tool or procedure to know or amount something in the condition, by the manner and arrangement that has been decided" (Arikunto, 2008:52). The test use in this research was in the form of a student vocabulary test. The test is an experiment conducted to find out whether or not there are results of certain learning outcomes for students. The test is a stimulus (stimulus) given to someone with a view to getting answers that can be used as a basis to determining the score.

The researcher gave 20 items vocabularies about Acronym of name to the students and they must interpret and memorize the vocabulary given by the researcher. The test is in the form of a test of the ability to remember and understand and know the meaning of vocabulary, how many students are able to remember the vocabulary given by the researcher. The researcher asked the students one by one to stand in front of class and the students had to mention the abbreviations given by the researcher and the vocabulary based on these abbreviations and mention the meanings that the students had memorized.

The researcher would see how many vocabulary words about the acronym of name or the abbreviation of each first word are combined into one name, which students can say at that time. The researcher also asked to name the names of abbreviations with good and correct pronunciation. The researcher will count how many vocabularies the students can mention, the researcher will also assess pronunciation, spelling and assess pronunciation, spelling and assess whether students can say the meaning of each vocabulary that has been shortened to one word, for example “HOMES” students must pronounce the word correctly. In the test here, the researcher using scoring rubric below as a guide in assessing students’ vocabulary.

1) Scoring rubric and assessment indicators

Scoring rubric, is a technique that aims to assess property with a score that is in accordance with the specified conditions, and determine the level of performance that differs superficially. This scoring rubric is adapted from Cameron (2001), the researcher only adapted three aspects of Cameron's opinion, the three aspects are meaning, spelling and pronunciation, while the grammar aspect was not taken because in this research the researcher more emphasized on the quantity of students' vocabulary how much vocabulary the students were able to remember. So, in this research the researcher changes the grammar aspect to quantity of students' vocabulary mastery. The researcher will calculate the students' score based on the scoring rubric below:

Table 3.1 Scoring rubric and Assessment Indicator

Aspect	Score	Description	Actual score
Quantity (30 %)	4	Students are able to mention and understand between 15 to 20 vocabulary	X 7,5
	3	Students are able to mention and understand between 10 to 14 vocabulary	
	2	Students are able to mention and understand between 5 to 9 vocabulary	
	1	Students are able to mention and understand between 1 to 4 vocabulary	
Meaning (30 %)	4	Students are able to mention and understand the meaning of vocabulary between 15 to 20	X 7,5
	3	Students are able to mention and understand the meaning of vocabulary between 10 to 14	
	2	Students are able to mention and understand the meaning of vocabulary between 5 to 9	
	1	Students are able to mention and understand the meaning of vocabulary between 1 to 4	
Spelling (20%)	4	Students are able to spell the vocabulary between 15 to 20	X 5
	3	Students are able to spell the vocabulary between 10 to 14	

Pronunciati on (20%)	2	Students are able to spell the vocabulary between 5 to 9	X 5
	1	Students are able to spell the vocabulary between 1 to 4	
	4	Students are able to pronun the vocabulary correctly between 15 to 20	
	3	Students are able to pronun the vocabulary correctly between 10 to 14	
	2	Students are able to pronun the vocabulary correctly between 5 to 9	
	1	Students are able to pronun the vocabulary correctly between 1 to 4	

This is the formula to calculate the students' score:

$$\text{Total score} = (A \times \Omega) + (B \times \Omega) + (C \times \Omega) + (D \times \Omega)$$

A = obtain score from aspect quantity

B = obtain score from aspect meaning

C = obtain score from aspect spelling

D = obtain score from aspect pronunciation

Ω = actual score for each aspect

2) Level of student's vocabulary

After the test is done, the researcher will determine the increase in vocabulary in this school, the vocabulary level is determined based on the table below.

Table 3.2 level of students improve vocabulary

Criteria	Score range
Excellent	80-100
Good	72-80
Fair	52-70
Less	32-50
Poor	0-30

Calculating the rate percentage of the students score (Gay 1981:448):

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

Where

P: Percentage

F: The frequency

N: Total number

After the learning process, the researcher looks at vocabulary obtained from the overall average score of the students so that the researcher could determine the vocabulary level of each student. For example, if student A gets a score of 72, it means that the student's vocabulary level is quite good.

d. Documentation

Documentation is also used to collect the data to provide tangible evidence of the research process that has been carried out. According to Sugiyono (2018:476) documentation is a method used to obtain data and information in the form of books, archives, documents, written numbers and pictures in the form of reports and information that can support research. This method used to know the condition of teacher and student, profile and location of school. In

this research the researcher uses photos and videos as a documentation.

2. Instrument of Data Collection

In this research, to collect the data the researcher uses some tools of data collection, namely observation sheets, interview guideline, test sheet, and field note.

a. Observation sheet

This observation sheet is a record of the results of observations that observed by teachers who act as observers. This observation sheet contains a record of the learning process that is observed as it is in accordance with what occurs in the process of action that includes teacher activities, student activities and environmental conditions in the learning process. According to Burns, (2010:62) “this type of observation involves using a coding system or checklist framed before the lesson begins.” Observation sheets are used to determine the vocabulary breath of students before and after using mnemonic technique.

b. Interview guideline

Interview guides are also commonly known as interview guidelines which are made to capture research patterns that have the special nature of verbal interactions between researcher and

respondents, which is initiated for purpose of research. An interview guides is simply a list of the high-level topics that you plan on covering in the interview with high level questions that you want to answer under each topic (C. Bird, 2016:125). The guidelines for the interview are to determine to whom the interview will conducted, to prepare the main issues be discuss, and to identify the follow-up of the interview results that have been obtain.

c. Test sheet

The test sheet contains questions that refer to the learning indicators that are test on students which aim to determine the increase in students' vocabulary skills, by using the test sheet as a tool to determine improving vocabulary after or before using mnemonic techniques in class.

d. Field note

Field note is used the researcher peer collaborator. According to Bogdan and Biklen (2007:119) written notes about what is seen, experienced, and in the context of collecting data reflecting on data in qualitative research. Basically, field notes consist of two parts, namely a descriptive part and a reflective part. Based on the opinion side, the researcher makes field notes during the teaching and learning process in the classroom to observe what is happening, especially for students.

D. Data Analysis

Based on the data collection and instrument above, this study uses a Classroom Action Research (CAR) uses both of qualitative and quantitative data. In this research, the techniques used for collecting the data are qualitative and quantitative data. Qualitative data were taken from observation, sheets, interviews and documentation. Quantitative data were taken from the test sheet.

1. Qualitative data

Qualitative data analysis “involves reducing and organizing the data, synthesizing, searching for significant patterns, discovering what is important” Ary et al (2010:481). In this study, the researcher will analyze the data gathered from observation, interview, and documents. furthermore, it is important to order and classify the data to answer each research question and also withdraw the conclusion. Based on John W. Creswell and J. David Creswell (2018:41) qualitative research is an approach to deepening and understanding the meaning that an individual or group attaches to social or human problems. Based on statements in addition to qualitative research is to find out the problems of a person or group that must be known by researcher through questions, researcher will know, understand and researcher will approach and deepen the problems experienced, so researcher will easily find solutions.

Therefore, Burns (2010:104) states that the data analysis of this study can be divided into three phases. They are coding, data reduction, and data display.

a. Coding

The first stage in analyzing qualitative data here the researcher involves coding. Coding is the steps taken by researcher to obtain an overview of facts as unit of qualitative data analysis and techniques for collecting and drawing conclusions from psychological analysis strengthening qualitative data analysis through coding the data obtained. The data can be in form of interview transcripts, observation sheets, documents, videos and recordings. This coding is very important to get data analysis.

b. Data Reduction

Reducing data includes summarizing, selecting the main things, focusing on the important things, pattern and themes and discarding the unnecessary. Thus, data that has been reduced will provide a clear picture and make it easier for researcher to collect further data, and look for it when needed. Data reduction can be assisted by the results of interview between teacher and students. The results of interview also show how the student's vocabulary increases after using mnemonic technique. By providing codes on certain aspects. In this study data reduction was carried out by recording interviews, then making verbatim from the interviews,

after that selecting data that could be used in research reports and extracting data that still needed to be explained.

c. **Data display**

After the data is reduced, the next step is to display the data. In qualitative research, data presentation can be done in the form of short descriptions, charts, relationships between categories, field notes and others. By displaying the data, it will be easier to understand what is happening, and plan further work according to that understanding. In this study, the presentation of data is done by compiling a description or story text based on the results of data reduction on the results of the interview

2. Quantitative data

Quantitative data is referred to as the process of collecting as well as analyzing numerical data. “quantitative research is means for testing objective theories by examining the relationship among variables” (Creswell, 2009:22). We can conclude that quantitative data is a type of research conducted by collecting data in numerical form; this can be done by comparing the number of variables or assessing the effectiveness of several intervention.

Quantitative data analysis is also in interviews, namely conducting interviews with teaching asking teachers about students’ understanding of learning vocabulary using mnemonic technique. For quantitative data, researchers record the data on test sheets. After the

test is done, the researcher will classify the students' vocabulary scores, the vocabulary is determined based on table 3.2. Thus, researcher can determine the level of each student. Quantitative data is a vocabulary test and students are asked to mention, spell, pronounce 20 vocabularies well. For example, if student A gets a score of 72, it means that the level of the student's vocabulary is classified as good.

a. Criteria of success

In this research, the researcher carried out two cycles, namely cycle 1 and cycle 2 of course, the researcher will look at the success criteria in each of these cycles to find out whether one of the cycles is successful or not. The criteria of success in this research are described in the table below:

Table 3.3 criteria of success	
Aspect	Description
Observations	If 80% of students participate, are enthusiastic, motivated to learn, and are active during class, the cycle considered to be successful.
Interview	If 80% of students can give good answers, opinions and good responses, the cycle considered to be successful.
Test	If 80% of students' scores are increase, the cycle considered to be successful.

In this research, a cycle will be successful if 80% students participate, are enthusiastic, motivated to learn, and are active during class, the cycle considered to be successful. Meanwhile

the other criteria of success were also seen from the observation checklist, interviews, field notes and documentation in the form of videos. Therefore if 80% of students can give good answers, opinions and good responses, the cycle considered to be successful. A cycle will be said to be successful if 80% of students are able to get score at least in good criteria with the score range between 71-80 then the cycle will be considered successful.