

CHAPTER III

RESEARCH METHODOLOGY

This chapter discussed about the research design used in this research, the subject of the study, technique of data collection and the instrumentation used in collected the data, validity and reliability and also the stages in analyze the data.

A. Research Design

The design of the research used in this research was a Classroom Action Research (CAR). The researcher chose this design because it was according to the teaching learning process in the classroom to confirm how or to see an improvement and to describe the respond of the students to the use of Anagram in the classroom, so the researcher chose the design of Classroom Action Research (CAR) because CAR met the requirements of this research. Classroom Action Research (CAR) is research that is applied directly in the classroom. Action research is a systematic approach to research that enables people to find effective solutions to problems they confront in their everyday lives (Stringer, 2007:1). Classroom Action Research (CAR) can be interpreted as research conducted by teachers in the classroom to improve their performance as teachers so that student learning outcomes can be improved.

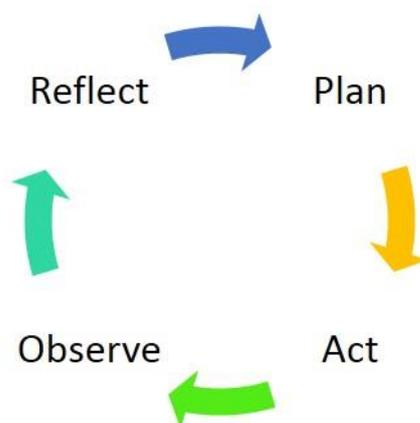
The purpose of used Classroom Action Research (CAR) is to encourage the improvement of all participants in the process of teaching and learning during the class. It could be said that the aimed of used the Classroom Action

Research (CAR) is to increase the process of teaching and learning activity in the classroom. Through the use of Classroom Action Research (CAR), the researcher improved two aspects, the students' vocabulary mastery and also improved the students' participation in learning activities.

The researcher chose this method based on the problem in SMPN 04 Dedai, particularly with seventh grade. This is in line with expert research that the purpose of Classroom Action Research (CAR) is to determine the quality of improved educational practices. To carry out the research using Classroom Action Research (CAR) methods, four stages should be passed, namely (1) plan, (2) action, (3) observation, (4) reflection. The four stages are an element in the formation of a cycle. This action research in the classroom (CAR) is carried out in a participatory and collaborative way and is explored through collaboration and discussion between teacher and researcher.

There were two cycles to teach vocabulary to students in this research. The first cycle was carried out in three meeting and the second cycle was conducted in two meeting. The implementation of the Anagram technique in the classroom consisted of four stages. The four stages were plan, action, observation and the last is reflection. A Kurt Lewin cycle model was used as the Classroom Action Research design. According to Kurt Lewin (1996) (in Sari, 2011: 20), the fundamental component to design Action Research in the Classroom consists of four stages, that are; plan, act, observe and reflect. This cycle is carried out not just once, but several times to achieve the expected objectives. The design of this research is the planning, implementation of the

research action and strategy, data collection through observation and reflection of each cycle in order to evaluate the data. Following the principle of action research, this research consists of four stages that are: (1) plan, (2) action, (3) observation, and (4) reflection. The principle of procedure for this Classroom Action Research was suggested from the design proposed by Kurt Lewin, the procedure are:



Picture 3.1 CAR model based on Kurt Lewin

1. Plan (planning)

The planning here is based on diagnosing and identifying the problem that happened in the classroom. The classroom action research (CAR) plan should be flexible enough to accommodate unexpected effects and invisible obstacles. The Classroom Action Research (CAR) plan should be based on initial reflective observations. The results of preliminary observations of the process occurring in the situation to be corrected are described in the form of comprehensive field notes that clearly illustrate images of the learning process in the situation to be improved or corrected. In planning, the researcher prepared what is going to be done in the

classroom, prepared the strategy during the teaching and learning activity, created the lesson plan, prepared the learning tool, and also prepared the criteria for success in a cycle. The researcher planned to carry out two cycles in this research.

2. Action

Action here is the implementation of planning in order to implement appropriate strategies in the classroom. By taking action, the researcher will work with the teacher in guiding the teaching and learning activities. Researcher will complete two cycles in this research, three meetings for cycle one and two meetings for cycle two. In the show, researcher will carry out several activities such as applying anagram techniques used during the class, implementing lesson plans, teaching students the material that has been prepared and also participating in the teaching and learning process.

3. Observation

The role of observation was to observe all activities carried out in the action phase. The subject of this observation is all student actions in the process of teaching and learning activities. Observation aims to describe everything that has to do with the research topic, find out the difficulties faced by students and see the answers given by students. Observation is also used to collect data needed in research.

4. Reflection

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. Through discussion, reflection forms the basis for improving plans. Reflection was a process of analyzing, interpreting and recognizing all the data obtained by observing the implementation of the measures.

The second cycle plan is according to the reflections obtained from observations to obtain the better outcome. The rearrangement of plan consists of two areas of application; they are fluent in vocabulary and in classroom situations when Anagrams are applied to students in class. In the next cycle, the researcher compiled lesson plans which consisted of material preparation, class media, student exercises and everything related to action. The second cycle took place in two meetings. The second cycle is based on reflection in the first cycle, so it can make the teaching-learning process through Anagrams better than the first cycle.

B. The Subject of The Study

In the research, the researcher needs a population to study as a research object. This research was conducted in SMPN 04 Dedai. So in this research, the researcher used the sample of 7th grade students from SMPN 04 Dedai in the 2021/2022 academic year. According to Lodico et al. (2010: 25), a sample is selected from a larger population through random selection. A sample is a smaller version of the population, the group to which the researcher would

ultimately like to generalize or apply the results of the study. Meanwhile Cohen et al. (2007: 105) said that with both qualitative and quantitative data, the essential requirement is that the sample is representative of the population from which it is drawn, sample is the population. The research objective can be a research item in the research that has been observed by the researcher so that the researcher only focuses on a research objective to obtain the necessary information. The subject of this research was seventh grade students, who are made up of 25 students, 12 males and 13 females. The sample was drawn due to the researcher' interest in the problem of learning English at school, which students in class VII SMPN 04 Dedai still need to deal with English subjects, especially to master vocabulary.

C. Data Collection Technique and Instrumentation

1. Data Collection Techniques

In this research the researcher used Observation, Test, Interview and Documentation in collecting the data.

a. Observation

Observation is often used in research to observe what is happening in the field. According to (Kothari, 2004: 96), the observation technique is the most generally used method especially in behavioral research studies, the way in which we all observe the things around us. Observation is one of the most important techniques in data collection to gain deep insight into how students experience, feel, and interpret the classroom situation. In the other hand, it could be said that

observation means monitor closely how situation happens or how someone's activities during the time, especially in the process of teaching and learning activities. The researcher has to create observations because it used to observe something happen in the classroom. The researcher also would like to see the reaction of the student when the Anagram technique is used.

Before the treatments, a set of observations is made to establish a baseline. Following the treatment, further observations are made to ascertain the effects of the treatment (Gass & Mackey, 2005: 153). The researcher monitor the behavior of the students and observed the process of teaching and learning activities in the classroom to find the problems faced by the students and to find out the improvement in the student's ability after applying the technique used by the researcher and the teacher.

The observation in this research, the researcher used participant observation to observe the activities of students in the classroom. Based on Cohen et al. (2007: 405), participant observation is often combined with other forms of data collection which, together, give rise to participants' definitions of the situation and their organizational constructs taking into account situations and behaviors. By participating in a situation for a long time, the researcher could be also saw how events develop over time; understand the change of the condition, person, characteristic, contexture, atmosphere, environment

and etc. In participatory observation, the researcher monitoring what someone activities, listens to their communication and followed in their activities. The observation in this research is employed to determine the atmosphere of the process in learning activities and students' behavior in taking action. In conducting this observation, the researcher was helped by the collaborator during the teaching and learning process.

According to the purpose of observation, the researcher was monitoring the students' behavior during the process of teaching and learning activities. The researcher noted that the students saw that the Anagram technique could improve student learning activities. Researcher monitor the activities of students during the teaching and learning process before applying anagram techniques and after applying anagram techniques so that researcher could make comparisons between using anagrams and not using anagrams.

b. Interview

The interview was utilized to collect data related to what the informant said about the questions asked during the interview. The interview is one of the techniques to collect the data. According to Kumar (2011: 144), interview method is generally formed as a technique to collect information from the subject. In the others aspect of life, we gained the information through kind forms of interaction with the others.

There were three types of interviews based on Creswell W. & Creswell D. (2018: 263), in interviews to the object the researcher could be take a personal interviews with the participants, telephone interviews or focus group interviews with six to eight respondents in a group. These interviews are unstructured and generally open-ended questions that ask few questions and are used to obtain views and opinions of the participants. There were three types of interviews: 1) face-to-face interviews, 2) telephone interviews, 3) focus group interviews.

In this research, the researcher used face-to-face interviews to obtain the opinion from the students and the teacher. The face-to-face interview is the interview that the researcher conducts with the participants individually and personally in order to obtain the required data. The researcher conducted interviews with some students to see the responses and what the students thought about using the anagram technique in the classroom.

In conducted the interview the researcher should consider the participant of the interview. Qualitative researcher selected their participants by using purposeful sampling. Purposeful sampling involves the selection of participants who have key knowledge or information related to the purpose of the study (Lodico et al., 2010: 34). In this research the researcher applied a purposeful sampling method to interview the students and the teachers about teaching

learning vocabulary through Anagram techniques. Purposeful sampling method in which cases are selected based on key knowledge or information in cases is based on the ability of the students. The object of interview are selected considered to the score of the students, the researcher would like to know the opinion of the student who got the top, medium and lowest score. The researcher would like to collect the data of interview based on the students score because the different student score has meet the standard characteristic of the interview needed and it provide the key knowledge and information needed. This interview is based on focus questions developed by researcher so that the interview does not deviate from the problem. In addition to the interviews with the students, interviews with the teachers were also carried out to validate the data collected. The interviews are used to obtain data directly on various topics related to the ability to master vocabulary using Anagram techniques. Data gotten from the impressions, respond and opinions of students and teachers of the vocabulary learning using Anagram techniques. The interviews in this research use open-ended interview techniques so that respondents can answer questions based on their knowledge without limitation of their opinions.

In this interview the researcher only interviews some students. The researcher chose the students according to the students' score. The researcher interview two students who get a high score, two students

that get a medium score and two students that get low score. The researcher also chose the students according to the observation in the classroom during the process of teaching and learning, if students' score are same the researcher will chose the students based on the participation of students in the class, the researcher would like to interview two most active students in the class, two students who are moderately active and two students who are not active to participate during the process of teaching and learning. There were two types of interviews that are often used by researcher, namely:

1. Open interview, which is an open question. When researcher ask subjects to respond with their own ideas. The answer can be long or short, it really depends on the personality of the subject. According to Creswell (2009: 26), open question more better to use, as the researcher pay attention accurately to what people say or do in their life settings, researcher tend to use open questions so that the participants can share their opinions.
2. Closed interview, they are interviews with closed answers. When the subject chooses the answer to the question through multiple choice or a combination of two types of questions or statements. Based on Kumar (2011: 151), in a closed interview the answers from the subject are arrange in the yes or no question, the answer only to confirm there is no explanation more from the respondent about their view.

In this research, the researcher applied open interviews when interviewing the person. The researcher used open interview techniques because the researcher wants to gain the information and the researcher wants to learn more about the students' responses to the implementation of anagram techniques to improve vocabulary mastery. The researcher also wants to know the opinion of the students after participating in the learning activities through the anagram technique.

c. Test

The researcher delivered the test to the students with the aim to see the improvement in the students' scores in mastering vocabulary. The test is with the purpose to gain the quantitative data in the form of student scores. According to Johnston and Vanderstoep (2006: 122), the test is arranged to recognize whether the levels of the students could be mastering or improving their ability in the form of score. The test given in this research was a vocabulary proficiency test. The test is an experiment that is done to find out if there are any results of certain learning outcomes for students. The test is an incentive for someone to receive responses that can be used as the basis for determining their score. This test contains topics that correspond to the content of the Class VII curriculum.

In this research, the form of test delivered to the students was in the format of an oral test. The test is in the form of a test of the ability to

memorize and also know the meaning of vocabulary, how much vocabulary that could be able to memorize by the students. The students were asked one by one to advance in front of the class and the students should mention and spell the Animals' names that the students have memorized. The researcher gave 5 minutes to each student and the researcher will see how much vocabulary of the Animal' names that the students can mention in that time. The students were also requested to mention the Animals' names with their meanings while also spelling the Animals' names, the students were also requested to mention the Animals' names with good and right pronunciation. The researcher calculated how much vocabulary the students were able to mention, the researcher also assessed pronunciation, spelling and assessed whether the students could be mention the correct meaning of Animal's names. In the test here, the researcher used the scoring rubric below as a guide in assessing students' vocabulary mastery.

- Scoring rubric and assessment indicators

This assessment rubric was arranged based on the indicators of vocabulary mastery in the student's vocabulary in related theories used in this research. This assessment rubric was taken from Cameron (2001), the researcher took only three aspects of Cameron's opinion, the three aspects are the meaning, spelling and pronunciation, while the grammatical aspect was not taken because the researcher in this

the research put more emphasis on the quantity of the student's vocabulary, the quantity of vocabulary that the students were able to memorize. The researcher emphasized the amount of student in mastering the vocabularies because the researcher would like to find out the students' vocabulary mastery improve after implementing the Anagram technique. In this research, the researcher changes the grammatical aspect to the quantity of vocabulary mastery of the students. The researcher calculates the students' scores using the following scoring rubric below:

Table 3.1 Scoring rubrics and assessment indicator

Aspect	Score	Description	Actual score
Quantity (30 %)	4	Students were capable to mention between 31 to 40 vocabulary	X 7,5
	3	Students were capable to mention between 21 to 30 vocabulary	
	2	Students were capable to mention between 11 to 20 vocabulary	
	1	Students were capable to mention between 1 to 10 vocabulary	
Meaning (30 %)	4	Students were capable to mention the meaning in Indonesian of vocabulary between 31 to 40	X 7,5
	3	Students were capable to mention the meaning in Indonesian of vocabulary between 21 to 30	
	2	Students were capable to mention the meaning in Indonesian of vocabulary between 11 to 20	
	1	Students were capable to mention the meaning in Indonesian of vocabulary between 1 to 10	
Spelling (20%)	4	Students were capable to spell the vocabulary between 31 to 40	X 5
	3	Students were capable to spell the vocabulary between 21 to 30	
	2	Students were capable to spell the vocabulary	

		between 11 to 20	
	1	Students were capable to spell the vocabulary between 1 to 10	
Pronunciation (20%)	4	Students were capable to pronoun the vocabulary correctly between 31 to 40	X 5
	3	Students were capable to pronoun the vocabulary correctly between 21 to 30	
	2	Students were capable to pronoun the vocabulary correctly between 11 to 20	
	1	Students were capable to pronoun the vocabulary correctly between 1 to 10	

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

- Level of student's vocabulary mastery

After conducted the test, the researcher will determine the level of vocabulary mastery at this school, the vocabulary level is determined based on the table below.

Table 3.2 Level of student's vocabulary mastery

Criteria	Score range
Excellent	81-100
Good	71-80
Fair	51-70

Less	31-50
Poor	0-30

The level of students' vocabulary mastery is gained from the students' score after the learning process, thus researcher can determine the vocabulary level of the student in this class. For example, if most of the students got score among 71-80, it could be said that the level of the student's vocabulary was classified as 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 Kawulich (2005: 12), a major deliberation in a research study is to conduct the research in an ethical manner and to let the subject or people know that the purpose of the observation is to monitor their activities. Documentation is a type of data made up of notes, book transcripts, photos, videos, summaries, agendas, and soon. This method has been used to recognize the situation of teachers and students, the profile and the location of the school. In this research, the researcher used photos and videos as documentation.

2. Instrumentation

In this research, in collecting the data the researcher used some tools of data collection, namely: Observation sheets, Interview guideline, Test sheet and field notes.

a. Observation sheets

The observation sheet was prepared by the researcher to be used by the collaborator in the observation process. According to Kothari (2004: 96), in terms of observation, it is characterized by a careful definition of the units to be observed, the style of recording the information observed, standardized observation conditions and the selection of relevant observational data. Observation sheet is a detailed guide that contains the steps for observation, beginning with the formulation of the problem, the theoretical framework that describes the behavior to be observed, the recording methods and techniques, the analysis criteria and the interpretation. An observation sheet is carried out to measure the learning independence of the student during the learning process. This observation sheet is also used below as a cyclic reflection material. The observation sheet is a worksheet used to observe and measure the success or achievement of learning goals in the process of teaching and learning in the classroom.

b. Interview guideline

The interview guide was prepared by the researcher to make it easier for the researcher to interview the subject. Quoted from Boyce and Neale (2006: 5), they develop an interview guide that lists the aspect to be asked or issues to be explored during interviews to the subject and include an informed consent form. Before conducting an

interview, you will need an interview guide to help guide the conversation toward the research topic and the formulation of the problem under research. An interview guide is a list of instruction about topics you will want to ask in the interview, with list of a topic to be asked you will easy to interview the object related to the topic. Interview guides range from very detailed to relatively loose, but are basically designed to help you know what to ask, in what order, how to ask questions, and how to send follow-ups. This provides guidance on what to do or say after the person you interviewed answers the last question. Interview guides are used to identify student responses to the learning they have undertaken and to find out whether or not there are barriers to learning.

c. Test sheet

The test sheet is used as an instrument to obtain the data in the form of student scores. Tests, in general form are methods for measuring a person's skills, knowledge, or performance in a mastering the ability of something (Brown, 2004: 3). In this research, the researcher did not give test sheets to students because the test in this research was in the form of an oral test. Test sheet was prepared by the research that used to record students' outcome in an oral test. On this test sheet, the researcher wrote the name of the student, the aspect to be evaluated, the score gained by the student and the total score of the student. According to the result of this test sheet, the researcher

calculated the student's score. The researcher calculates how much vocabulary the students could be mentioned, the researcher also scored the pronunciation, spelling and scored whether the students could be mentioned the correct meaning of the Animals' names. The researcher used the scoring rubric in Table 3.1 as a guideline to calculate the students' score.

d. Field Notes

Field notes are used by collaborator to record what happens in the research process. According to Demunck and Sobo, 1998, (in Kawulich, 2005: 22), recommend took the two notebooks to wrote notes in the field, one with questions to answer, the other with more personal observations that may not fit the topic discussed in the first section. The purpose of two notebooks is to reduce the clutter of extraneous information that can occur while retrieving. Field notes in the first notebook should include annotations, maps, diagrams, interview notes, and observations. In the second notebook, they suggested making random notes, "mused, questions, comments, odd notes, and journal-like entries."

The field notes were used by the collaborator to write down the process of teaching and learning. According to Lodico et al. (2010: 113, 332), observations are often recorded in the format of field notes. Field notes should be recorded as soon as possible. If you don't, you will forget much of the important detail. Field notes used to record

brief notes to document what happens during a specific day, event, or activity. The collaborator noted the effects of the action and noted them on the field note. The collaborator collected all the information about what happens during the process of teaching and learning activities, the collaborator wrote comments, suggestions and some obstacles or problems that students and teachers face in class. The collaborator also notes the researcher' strengths and weaknesses in teaching students. In classroom action research, field notes were used to record things according to the activities of teachers or students during the process of learning activities. It aims to strengthen the research results so that the entire process of learning activities related to the behavior or attitudes of students and teachers can be recorded in field notes.

D. Validity and Reliability

In this research, related to validity of the data was carried out through Triangulation, according to Burns (2010: 97), these included different ways of triangulation:

1. Time triangulation (data were obtained from the different time and days), the researcher may collected data in first, second or third meeting or the other meeting, so the researcher could be compared all of the data gotten.
2. Space triangulation (data were obtained from the different subject or people), the researcher collected data in different group of the subject so that it could be compared between two different subjects.

3. Researcher triangulation (data were obtained according to more than one researcher), the research could be conducted the research collaborated with the collaborator or teacher, so it could be find out the different perspective and suggestion from the others.
4. Theory triangulation (data were analyzed based on more than one theory of expert), the researcher may consulted documents related to learner autonomy but also developed theoretical ideas from her own and others' observations and reflections.

Data reliability is carried out through several procedures which according to Lincoln and Guba, 1985 (in Stringer, 2007: 57) suggest that reliability can be determined through procedures that evaluate research attributes as follows:

1. Credibility: reasonableness and research integrity
2. Transferability: possibility of applying research results to other contexts
3. Reliability: research procedures are clearly defined and open to control
4. Conformability: evidence that the procedures described are actually performed

E. Data Analysis

This Classroom Action Research (CAR) used each qualitative and quantitative design. In this research, qualitative and quantitative design has been used to acquire the records. Qualitative have been accrued from observation, interview, field notes, and documentation. In accrued the quantitative, the researcher used a vocabulary test to gained the student's rating on vocabulary mastery. Once the data is accrued, the following step is

to investigate the records to be analyzed the use of qualitative and quantitative methods.

1. Qualitative data.

In analyze the data, there were some stages what researcher should do. The researcher took a qualitative design suggested by Burns (2010: 104), the process of qualitative data analysis consists of five stages.

- a. Assembling the Data

Collecting data or assembling the data is the first step in data analysis.

At this stage, the researcher collected all the data obtained from observations, tests, interviews, field notes and documentation. Next, the researcher explores all the data and looks at the questions and begins to find patterns or ideas to answer the questions.

- b. Coding the Data

In this step, the researcher grouped the data in a specific way. The researcher classify the data into two, namely qualitative data and quantitative data, to facilitate the analysis of the data collected by the researcher. The researcher has grouped the data according to the origin of the data source.

- c. Comparing the Data

The third step is to compare the data. In this step, the researcher compared all obtained data. The researcher compared the data between cycle one and cycle two with the pre-observation data. The aim is to see if the students' abilities increase.

d. Building Interpretations

In this phase, the researcher tries to understand each data collected. The researcher tries to understand the data from the data categories encodes the data and compares the data. The researcher analyzes the data several times to ask questions, re-understand the data, and develop explanations to conclude the research findings.

e. Reporting the Outcomes

In this final stage, the researcher represents the research context, elaborates the results and organizes the entire research.

2. Quantitative data

The descriptive statistical method was carrying out to analyze quantitative data. This is done to compare students' vocabulary fluency before and after the action by giving them a test to determine the students' skill level. In this research, quantitative data will be obtained from the results of the students' vocabulary tests. From the results of these tests, the researcher can determine an improvement in students' vocabulary mastery, characterized by an increase in student scores. The researcher analyzes the students' test results to obtain quantitative data. After completing the test, the researcher determines the level of vocabulary mastery at this class, the vocabulary level is determined using Table 3.2. The level of vocabulary in is obtained from the result of students' score after the learning process, thus researcher can determine the vocabulary level of the student. For example, if most of the students got a score of 75, it could be concluded

that the level of the student's vocabulary is classified as good. The level of student vocabulary is obtained from the scoring rubric was used as a guide in assessing students' vocabulary mastery.

- Criteria of success

To determine the indicator of success in this Classroom Action Research (CAR) is when the vocabulary mastery of students has increased. In this research, the researcher carried out two cycles, that are cycle 1 and cycle 2, of course the researcher needed several criteria to determine whether a cycle was successful or not. These criteria of success are used as a guide by researcher to decide whether this cycle has been successful or not and whether another cycle should be done. The criteria of success in this research are described in the table below:

Table 3.3 Criteria of success

Aspect	Description
Observation	If 80% of students are participate actively, enthusiastically, and enjoy during the lesson, the cycle considered to be successful
Interview	If 80% of students are respond positively and give good opinions to the learning process, 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 said to be successful if 80% of students are able to get score at least in good criteria with the score range between 70 until 80 then the cycle will be considered successful. While the other criteria of success were also seen according to the observation

checklist, interviews, field notes and documentation in the form of videos. The criteria of success in this research are also seen from the students are actives, motivated and enthusiasm in teaching learning process. If 80% or more students respond positively to learning using the Anagram technique, the cycle can be said to be successful and the researcher do not need to do the other cycles.