# CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the writer described the methodology that used in conducting this research. The methodology in this research consist of the research design, the subject of the research, data collection technique, instrumentation and data analysis. The following is the explanation of research methodology.

A. Research Design

The design of the research was classroom action research. In the school setting, classroom action research defined as a simple process in which use systematic approach to improve teaching practice and achieve the learning goals (Pelton, 2010. p. 3). In this case, the writer would improve students' vocabulary mastery through Anagram game. The research started from the problems that found in pre-observation.

The purpose of classroom action research is to improve educational practice by asking researchers to investigate teacher own problems or problems that occur in schools or educational setting (Creswell, 2014, p. 624). The writer reflects on these problems, collect and analyze data, then implement changes or action plans based on the results. The term of action research always refers to process how people interact with one another. What the researchers do in action research wasshare a set of teaching practices which show beliefs, commitments and hopes (McNiff & Whitehead, 2002. p.16). Therefore, the writer applied Anagram game for teaching vocabulary.

The method of classroom action research was depicted in terms of a spiral of self-reflective cycle namely planning, acting, observing and reflecting (Kemmis & McTaggart, 2014. p. 18). The writer utilized classroom action research design by Kemmis & McTaggart model (see figure 3.1).
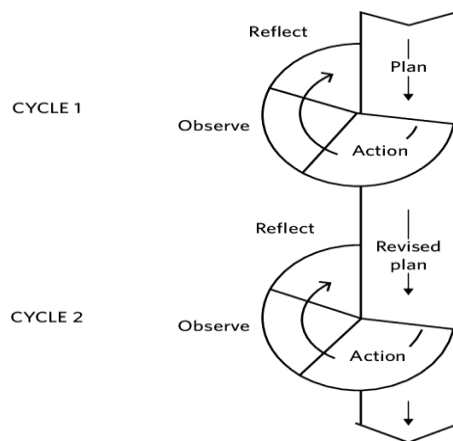
The figure adapted from McNiff & Whitehead (2002, p.45)

Figure 3.1 CAR model by Kemmis & McTaggart

Based on the figure 3.2 above, process or mechanical sequence of classroom action research consists of four steps, they were planning, acting, observing, and reflecting. These steps were made in each cycle. Cycles were done depending on the issues needed to solve. In the research, there were two cycles. The writer decided to continue the second cycle because she wanted to make improvement in the second cycle and she wanted to improve vocabulary mastery of some students who were still low. The activities in each cycle were described as follows:

1. The First Cycle

    a. Planning

    In this step, the writer planed all things that related to the research that conducted. The following points were the specification of the planning in the first cycle:

    1) Arranging the lesson plan based on the vocabulary learning.

    2) Preparing the materials for learning vocabulary.

    3) Preparing the research instruments for collecting the data, such as observation sheet, field note (for qualitative data) and test sheet (for quantitative data).

    b. Acting

    In this step, the writer did activities in the classroom based on the planning have arranged (see lesson plan in page 95). In this case, the students learned vocabulary by using Anagram game and then they did test to find out the improvement of students' vocabulary mastery after using Anagram game.

    c. Observing

    In this step, the writer and collaborator teacher observed what happen in the learning process by using research instruments (observation sheet, field note). They observed the classroom atmosphere in applying Anagram game for teaching vocabulary. The purpose of this observation was to get information from the actions and to see students' understanding about applying of Anagram game.

d. Reflecting

In this step, the writer and collaborator teacher evaluated the learning process that conducted based on the result of the observation and test. The writer and collaborator teacher discussed about advantages and disadvantages of the first cycle and what solutions to solve it.

2. The Second Cycle
   a. Planning

In this step, the writer planed all things that related to the research that conducted in the second cycle. The following points were the specification of the planning in the second cycle:

1) Arranging the lesson plan based on the vocabulary learning.

2) Preparing the materials for learning vocabulary.

3) Preparing the research instruments for collecting the data in the second cycle, such as observation sheet, field note and interview guideline (for qualitative data) and test sheet (for quantitative data).

   b. Acting

In this step, the writer did activities in the classroom based on the planning have arranged (see lesson plan in page 107). In this case, the students still learned vocabulary by using Anagram gamebut the students learned about how to know vocabulary well. Then, they did test to find out the improvement of students' vocabulary mastery after using Anagram game in the second cycle.

c. Observing

In this step, the writer and collaborator teacher observed what happen in the learning process of the second cycle by using reserach instruments (observation sheet, field note). They observed the classroom atmosphere in applying Anagram game for teaching vocabulary. The purpose of this observation was to get information from the actions and to see the students' understanding about applying of Anagram game.

d. Reflecting

In this step, the writer and collaborator teacher evaluated the learning process that conducted in the second cycle based on the result of the observation and test. The writer and collaborator teacher discussed the results to decide whether to do the next cycle or not. If there is an improvement between the first cycle and the second cycle so the next cycle does not need to be done.

B. **The Subject of the Research**

The subject of the research was the students of the second semester of 2021/2022 at eighth grade especially at class VIII A in SMPN 1 Kayan Hilir. The total number of the students was 39 students which consist of 15 males and 24 females. The writer chose this class because in pre-observation, the students in that class had lack of vocabulary and they had low participation in learning English.

C. **Data Collection Technique and Instrumentation**

In this research, data collection techniques and the instrumentation that is used are very important. These are way and tools to find out whether the research that was going to conduct is valid and has actual results.

1. Data Collection Technique

Data collection technique is the way how the writer attempt to collect the data for the research. Mills organized techniques for collecting data in Classroom Action Research which consist of three dimensions such as: Experiencing (through observing and taking field notes), Inquiring (the writer asks people for information) and Examining (using and making records) (as cited in Cresswell, 2014, p. 622). In this research, the writer was going to use observation, interview and measurement as the technique to collect the data.

a. Observation

Observation means purposefull observing which about people, events, and interactions that occur (Efron & Ravid, 2013. p. 68). In this case, the observer observed the learning process which includes all activities that students and the teacher did in the classroom. In this case, there were two kinds of observations. They were observation for students which aimed to know activities that the students did in the learning process and observation for teacher which aimed to know whether or not the teacher did activities clearly so it can be a material of evaluation in the next meeting.

b. Interview

Interview means a meaningful conversation between two or more people in which they exchange of views about particular topic (Efron & Ravid, 2013, p. 68). In this case, the writer interviewed six of students in class VIII A as representative of the students. The writer interviewed about applying Anagram game for teaching vocabulary.

In this research, the writer used semi-structured interview which is based on questions that prepared before the interview. These are open-ended questions. Open-ended questions are structured questions that asking interviewee to respond with one or more statements (Tomal, 2013. p. 37). Efron & Ravid wrote that during the interview, students explain their opinion according to a list of questions. In addition, if information is needed to be explaned in detailor information obtained is unexpected, interviewer can ask further questions to students so that they give more descriptions about the questions (Efron & Ravid, 2013, p. 98)

c. Measurement

Measurement or assessment is another technique that used to collect the data in action research. Assessment is defined as the evaluation of individuals' work by using tests, portfolios, records, or through the direct observation toward skills and behaviors of individual and group (Tomal, 2003, pp. 70-71). Thus, measurement means technique to evaluate or monitor students' progress and

performance about the certain topic (Efron & Ravid, 2013, p. 135). Thus, measurement in the research is the technique to evaluate students' vocabulary mastery through Anagram game.

2. Instrumentation

Instrumentation is a tool to collect the data. Instrumentations of the research are important document how to collect the data. In this case, the writer used observation sheet, field note, interview guideline and test as instrument. In this research, these instruments were related to the data collection about applying Anagram game for teaching vocabulary.

a. Observation Sheet

Observation sheet is the sheet that used to observe the teaching and learning process. The observation sheet provided information about all things that happen in the class. There were two kinds of observation sheet namely observation sheet for teacher and observation sheet for students.

Observation sheet for teacher aimed to know what the teacher did in the classroom when teaching vocabulary by using Anagram game and to know whether or not the teacher did activities clearly so it can be a evaluation material for the next cycle. While, observation sheet for students aimed to know what the students did in the classroom and how many students did the activity. In this case, the observer was the collaborator English teacher at SMPN 1 Kayan Hilir so all sheets would be given to the observer

Observation sheet for teacher used checklist. Checklist was used to know list of predetermined behaviors or activities that are being the objectives of the research (Efron & Ravid, 2013, p. 96). In this case, the activities that would be observed was whether or not the teacher did activities well. Thus, the response choice ranged was yes or no.

While, observation sheet for students used rating scale type. Rating scale is used to record the extent of a particular behavior or situation happened. Response choices ranged on this rating scale are devided into five points namely, strongly agree or point 5, agree or point 4, undecided or point 3, disagree or point 2 and strongly disagree or point 1 (Efron & Ravid, 2013, pp. 96-97). The rating scale of observation is described as in the following table.

Table 3.1 Rating scale of observation

Point	Rating Scale	Description
1	Strongly disagree	1 to 10 students do the activity
2	Disagree	11 to 20 students do the activity
3	Undecided	21 to 29 students do the activity
4	Agree	30 to 38 students do the activity
5	Strongly agree	39 students do the activity

In this case, these points or rating scale described 12 activities on each observation sheet for students in which had 60 maximum points. Thus, the writer was going to use the formula below to calculate the observation score of observation sheet for students:

$$\text{Total Score/ percentages} = \frac{\text{Obtained score}}{60} \times 100\%$$

Interpretation:

Total score/percentages	: The observation score
Obtained score	: The observation total point
60	: Maximum point

After calculating the observation score, the writer was going to determine the qualification of observation score which is described as in the following table.

Table 3.2 Qualification of the observation score
in percentage

Percentage (%)	Qualification
1-20	Very poor
21-40	Fair
41-60	Good
61-80	Very Good
81-100	Excellent

The teaching and learning process would be declared successful if the observation score achieved at least very good qualification or achieved between 61% until 80%.

b. Field Note

Field note is the note that used to add information from the observation sheet about the teaching and learning process. Field note is the observation protocol that contains detail descriptions of what

researchers see, hear, and sense during the observation or a thoughts, feelings, and understandings these observations. The more researchers get description, the more meaningful the observation (Efron & Ravid, 2013. p. 88). In this case, field note would be given to the observer.

c. Interview Guideline

Interview guideline is the sheet that used to get information about applying Anagram game to teach vocabulary by asking some students in eighth grade especially some students in eighth A class. In this case, the writer and collaborator teacher decided to interview 6 of 39 students as representative of the students. The interview guideline used after the writer finish the action in both cycles because the research only had two cycles.

In this interview, there were 9 main questions which about the applying Anagram game. If information is needed to be explaned in detail or information obtained is unexpected, the writer or as the interviewer could ask further questions in order to know the students' responses deeply. Thus, the students are expacted to give more descriptions about the questions.

d. Test

Test was used to evaluate students' vocabulary achievement through applying Anagram game. In this research, the writer used teacher-made test such as quizzes to monitor students' vocabulary progress through applying Anagram game. In this test, the students

would be asked to make several objects from Anagram keywords given and placed the objects in the appropriate sentence.

The tool to evaluate students' progress in learning vocabulary through applying Anagram game, the writer used Analytical scoring rubric adapted from Stevens & Levi. There were five aspects of vocabulary in theresearch namely meaning, spelling, pronunciation, word usage and quantity. These aspects were the important point to know the word well. Thus, the students was expected to be able to understand these aspects in order to get the high point. Analytical scoring rubric of vocabulary achievement is described as in the following table.

Table 3.3 Analytical scoring rubric of vocabulary achievement

Aspects	Point			
	1 (Poor)	2 (Average)	3 (Good)	4 (Excellent)
Meaning	The student is able to understand 1-3 meanings of words	The student is able to understand 4-5 meanings of words	The student is able to understand 6-8 meanings of words	The student is able to understand 9-10 meanings of words
Spelling	The student is able to write and spell 1-3 words correctly	The student is able to write and spell 4-5 words correctly	The student is able to write and spell 6-8 words correctly	The student is able to write and spell 9-10 words correctly
Pronunciation	The student is able to pronounce 1-3 words correctly	The student is able to pronounce 4-5 words correctly	The student is able to pronounce 6-8 words correctly	The student is able to pronounce 9-10 words correctly
Word usage	The student is able to use 1-3 words according to the context	The student is able to use 4-5 words according to the context	The student is able to use 6-8 words according to the context	The student is able to use 9-10 words according to the context
Quantity	The student is able to write about 1-3 words	The student is able to write about 4-5 words	The student is able to write about 6-8 words	The student is able to write about 9-10 words

Adapted from Stevens & Levi (2005, pp. 5-6)

Based on the rubric table above, the maximum point of this rubric was 20. Thus, the writer was going to use the formula below to calculate the score:

$$Score = \frac{Obtained\ point}{Maximum\ point} \times 100$$

Interpretation:

Score : The student's score

Obtained point : The student's total point

Maximum point : 20

After giving the score to all students, the writer was going to determine the qualification of vocabulary achievement. It is described as in the following table.

Table 3.4 Qualification of vocabulary achievement

Test Score	Qualification
0-54	Poor
55-74	Average
75-94	Good
95-100	Excellent

After determine the qualification of vocabulary achievement to all students, the writer calculated the mean of the students' vocabulary score. Thus, in order to get mean of students' vocabulary score, the writer used the formula as follows:

$$Mx = \frac{\sum x}{n}$$

Interpretation:

Mx : Mean score

$\sum x$: Total of individual score

N : Number of students who take the test

D. Data Analysis

After collecting the data, the next step of the research was analyzing the data. Data analysis is defined as a systematic process that produces reliable findings. These findings are transformed into new understandings, statements, explanations, and conclusions about the research (Efron & Ravid, 2013, p.165).

The research had quantitative and qualitative data because the writer used Classroom Action Research. The qualitative data were observation sheet, field note and interview guideline while the quantitative data was test. In data analysis, the writer was going to explain about qualitative data, quantitative data and the criteria of success. These parts are described as follows:

1. Qualitative data

    The qualitative data is the primary data in this research. It was going to analyze by using three activities such as data condensation, data display, and conclusion drawing or verification (Miles & et al, 2014, pp. 12-14).These activities are described as follows:

    a. Data condensation

        It refers to the process of selecting, focusing, simplifying, abstracting and changing the data such as observation sheets, field notes, interview, documents, and others empirical instrument. It makes the data stronger. In this case, the writer collected the data

such as observation sheets, field note, interview guideline and test then the writer focused about qualitative data and quantitative data.

b. Data display

It is an organized, compressed assembly of information that contains a conclusion, drawing, and action. It presents the information into design that in form of brief explanation, charts, graphs, frameworks, and networks. In this case, the writer interpreted the data then presented the data using charts and brief explanation.

c. Verification

The last stage was conclusion drawing and verification. Verification means that the writer makes a conclusion based on the research findings of the data. The writer cannot make a conclusion before does data condensation and data display because it is obtained after get the result from these steps.

2. Quantitative data

The quantitative data is the secondary data of the research. Quantitative data means declaring the data in numeric form but quantitative data are expressed in the form of observations and numbers because quantitative data is used to gain a concise numerical picture, to describe a set of numbers, to show numbers succinctly in terms of average, frequencies or percentages (Burns, 2010, p. 118).

The quantitative data was going to analyze by using descriptive statistics. It is the way of reducing numbers. One of categories to reduce

numbers is measures of central tendency. It is the way of reducing numbers by using mean, medium and mode of data (Burns, 2010, p. 121). Thus, the writer used the mean of students' score of each cycle to get the result.

In analyzing the quantitative data, the writer was going to use analytical scoring rubric of vocabulary adapted from Stevens & Levi as in table 3.3, qualification of vocabulary achievement as in table 3.4 and criteria of success as in table 3.5 as tools to measure students' vocabulary mastery through Anagram game.

3. The criteria of success

The writer made the criteria of success to measure the success of applying Anagram game for teaching vocabulary. It was obtained from the result of the instrumentations in the research such as observation sheet, field note, interview guideline and test. Indicator of successfull a research was when the students respond positively toward the applying Anagram game and students' vocabulary mastery improved.

The writer needed the criteria of success to find out whether the cycle is successful or not. Thus, it was used by the writer as a guide to decide whether to do the next cycle or not so the writer can do repairs. The criteria of success the research is described as in the following table.

Table 3.5 Criteria of success

No	Indicators	Instrument
1	If 75% of students have very good responses toward the applying Anagram game and they are active in the teaching and learning process through Anagram game	a. Observation sheet b. Field Note c. Interview guideline
2	If 70% of students achieve the minimum score or the test of the students achieve average score	Test

Based on the table above, a cycle would be declared successful if 75% of students have very good responses toward the applying Anagram game or achieved percentages between 75% until 80% on students' observation and they are active in the classroom during vocabulary learning through Anagram game and if 70% of students achieve the minimum score or achieve about average to good score or between 65 until 85.