

CHAPTER III

RESEARCH METHODOLOGY

A. Research Design

This type of research is Classroom Action Research (CAR). This research carried out through a process of collaboration between principals, teachers, and researchers in school environment in an effort to improve students' vocabulary skills through the implementation of Word Wall media in learning English. Classroom Action Research according to Iskandar and Nasim (2015) states that: Classroom action research is a type of research conducted by teachers (as researcher) on a real problem encountered during the learning process in order to improve the quality of learning continuously and the quality of education in a broader sense. The implementation of action in Classroom Action Research (CAR) consists of several cycles, which are represented in a spiral form developed by Kemmis and Mc. Teggart (in Iskandar and Narsim, 2015,). These cycles include planning, action, observation of the process and consequences of change, and reflection on the process and its consequences. The research begins with the planning phase, followed by action, observation, and reflection. These four stages are interconnected because each action starts with the planning phase. During the planning phase, the research formulates a learning plan, prepares activity sheets, and creates research instruments to be used during the implementation phase. Additionally, observations are conducted on teachers and students as the research subjects. In the reflection phase, the researcher and observer discuss the activities that have been implemented in the learning process and deliberate on the design of future actions.

1. The Procedure Of CAR

A classroom action research usually is conducted in a certain cycle. There are four steps in each cycle. They are planning, acting, observing, and reflecting. To make it clear the researcher present the concept of cycle in action research as follow :

a. Planning

At this stage, the researcher prepares everything to complete the classroom activity, such as interviewing the teacher to find out the status of the students and their vocabulary problems. find a solution to overcome the problem. Afterwards, schedules such as learning activity plans, prepared class plans, materials, media and data collection tools used in this stage field notes , and the Vocabulary test.

According to Arikunto in Iskandar and Narsim (2015), "planning is the step taken by teachers when they are about to initiate their actions." Planning is the critical development of an action plan to enhance the efforts that have been made. This stage is the initial phase in implementing action research. During the planning phase, a learning plan is formulated based on problem identification from the pre-research observations. The plan serves as a reference for carrying out actions that aim to achieve optimal results.

b. Acting

At this stage, the researcher played the role of a teacher, threatening students with information, using multimedia technology to improve students' understanding of content, particularly the content of words and the use of words. Researchers also act as facilitators as students discuss the material and try to make the classroom more dynamic than before. During the study, the researcher will use the phones in the classroom.

c. Observing

The next stage is for the research to conduct or observe the actions carried out in the field and determine whether they align with the planned objectives. According to Arikunto as cited in Iskandar and Narsim (2015.), the observation activities can be performed by the following individuals:

1) Observation conducted by others, which refers to observations requested by the researcher to observe the process of implementation, including the actions of teachers, students, and related events.

2) Observation carried out by the teacher conducting the Classroom Action Research (CAR). In this case, the teacher must be capable of "ngrohoh sukmo," a Javanese term meaning to detach oneself from the body in order to observe one's own actions, as well as to observe the actions of students and the progress of the process.

d. Reflecting

After these three steps, the next step is to reflecting . The next step is conducting research to reflecting on the results of the observations that have been carried out, whether the required data for the research is complete or not. The reflection stage, according to Arikunto in Iskandar and Nasim (2015: 26), states that: In this stage, the results obtained from the observation phase will be evaluated and analyzed. Then, the teacher, along with the observer and the students, engages in self-reflection by examining the observational data. They assess whether the activities carried out can improve the quality of learning, especially the targets that will be enhanced in the research, such as learning outcomes, motivation, and so on.

B. Subject of the Research

In this study, researcher chose students of English Parit Baru Parit Baru Village as subjects to conduct this research. The subjects consisted of 30 students who have problems in mastering vocabulary. The research subjects in this study the research conducted is homogeneous which means that the level of students in one class is not different. in one class there is no difference. Based on these considerations, the researcher made the decision to choose students with levels ranging from small classes to large classes in order to fulfill the quota of 30 students.

C. Technique of Data Collection

In collecting the data, researcher used Participant observation and measurement test as techniques.

1. Observation

The distinctive feature of observation as a research process is that it offers an investigator the opportunity to gather live data from naturally occurring social situations. It can also focus on events as they happen in a classroom. According to Creswell (2014 : 77), observation is a data collection method in social research that involves direct observation of the phenomena being studied. Observation can be conducted with various levels of researcher involvement, such as participant observation, non-participant observation, or active participant observation. In observation, it is important to pay attention to the context, environment, and social interactions, as well as to maintain objectivity and avoid researcher bias in data interpretation.

Here the researcher uses participant observation. In participant observation, the researcher's role as a research teacher is not only to record what happens, but also to take part in the activity, interact with the students observed, and try to understand their perspectives and values. This allows the researcher to gain a deeper understanding of the context of increasing students' vocabulary with the media used by the researcher, namely Word Wall where the study was conducted.

The researcher was also assisted by one of the tutors in the English Village Parit Baru to record what happened in the classroom when the researcher applied Word Wall medium in the learning process.

2. Measurement

Gupta (2015: 5) mentions that measurement is the set of operations having the object of determining the value of a specific quantity. The measurement was given to the students in Vocabulary test where students' performance in front of the class. The result of the test showed whether the students' Vocabulary had improved or not.

D. Tools of Data Collection

The researcher used Vocabulary test, and field note as the tools of collecting data in this research.

1. Field note

Field notes (unprocessed) contain scribbles as needed, abbreviated, containing keywords, phrases, talking points/observations, pictures, sketches, diagrams, sociograms, etc. Field notes according to Moleong L. J (2019: 209) are written notes on what is heard, seen, experienced, and thought in the context of data collection and reflection on data in qualitative research. Therefore, in this study, various aspects was observed, namely classroom learning, classroom atmosphere, classroom management, tutor interaction with students and student interaction with students so that it can be used as a data source to answer research problems regarding the classroom atmosphere when using word Wall media.

With the help of collaborators, observations are carried out flexibly, accurately and without coercion. During the observation, the researcher acts as the teacher, while the collaborator takes notes and observes the activities of the situation in the classroom.

2. Vocabulary test

The researcher gave a Vocabulary test for student to get a students score. The researcher will conduct Pre-Test and Post-Test. The Pre-Test is used to measure students' vocabulary skills before using Word Wall in the English language learning process. This test taken the form of multiple-choice questions, consisting of 15 items, with the aim of assessing students' ability to understand words and meaning in order to measure their ability to spell vocabulary words. Furthermore, a post-test was conducted, which is the second test after the researcher uses the Word Wall media in the English language learning process. This is done to compare students' abilities before and after using the Word Wall media, thus serving as a benchmark for the next cycle. The indicators of vocabulary mastery assessment.

a. Pre-Test

A pre-test is an assessment or trial conducted before a program, training, or research begins. Its purpose is to measure participants' baseline knowledge or abilities before they engage in the activity.

Individual score is the score obtained by each students based on the worksheet that has been prepared by the researcher. The presentation of individual scores will be displayed in the form of a table below.

Table 3.1
Pre-Test

NO	NAME	SCORE VOCABULARY
1	AL	11
2	DO	10
3	FA	9
4	HM	13
5	HA	14
6	HH	12
7	HK	14
8	KA	10
9	CI	10
10	NA	13
11	N	14
12	NAA	12
13	RA	9
14	NAZ	10
15	SFA	13

The table above shows the results of the trial before the researcher carried out further research. The researcher took 15 students as samples.

b. Validity and Reliability

Test validity basically refers to the measurement function and accuracy of a test. Validity testing questions whether the test it actually measures what it is intended to measure or no. Suryabrata, (2000 in Haq, V.A. 2022). What this means is how far a test is able to accurately express the characteristics or circumstances actually from the object to be studied. It depends on the level of validity of the test in question.

The reliability of an instrument shows the consistency of results measurement, even if the instrument is used by someone who the same at different times. In other words, reliability contains objectivity, because the measurement results are not influenced by anyone the meter. Reliability refers to the consistency of the scores obtained. For example, a test is said to be reliable if students get a score high on the first test and got a high score on second test. Fraenkel, (1990 in Haq. V.A 2022)

Researcher use Excel formulas to calculate the results of validity and reliability.

Validity Formula :

1) Mencari nilai P

$$P = \frac{P}{N} \text{ atau } \frac{B}{J}$$

2) Mencari nilai Q

$$Q = 1 - p$$

3) Menjumlahlah $p \times Q$

4) Mencari mean total :

$$M_t = \frac{\sum X_t}{N}$$

$$SD_t = \sqrt{\frac{\sum X_t^2}{N} - \left(\frac{\sum X_t}{N}\right)^2}$$

$$r_{pbi} = \frac{M_p - M_t}{SD_t} \sqrt{\frac{p}{q}}$$

Reliability testing using the Alpha Cronbach formula is as follows:

$$r_{11} = \left(\frac{n}{n-1}\right) \left(1 - \frac{\sum a_t^2}{a^2}\right)$$

VALIDITY AND REABILITY

No	Responden	soal 1	soal 2	soal 3	soal 4	soal 5	soa 6	soal 7	soal 8	soal 9	soal 10	soal 11	soal 12	soal 13	soa 14	soal 15	HASIL (XT)
1	AL	0	1	0	1	1	1	1	1	0	1	1	1	1	0	1	11
2	DO	0	1	0	1	1	1	0	1	1	0	1	1	1	0	1	10
3	FA	0	1	0	1	1	0	0	0	1	0	1	1	1	1	1	9
4	HM	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	13
5	HA	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	14
6	HH	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	12
7	HK	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14
8	KA	0	1	0	0	1	0	1	1	1	1	0	1	1	1	1	10
9	CI	1	1	1	1	0	1	1	0	0	0	1	1	1	1	0	10
10	NA	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	13
11	N	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	14
12	NAA	1	1	0	1	1	1	0	1	1	1	1	0	1	1	1	12
13	RA	1	0	0	1	1	1	1	0	1	1	0	1	0	0	1	9
14	NAZ	1	0	1	0	1	1	0	1	1	1	1	0	0	1	1	10
15	SFA	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	13
	JB	10	12	6	12	14	12	10	12	12	11	13	13	12	12	13	
	P	0,667	0,800	0,400	0,800	0,933	0,800	0,667	0,800	0,800	0,733	0,867	0,867	0,800	0,800	0,867	
	Q	0,333	0,200	0,600	0,200	0,067	0,200	0,333	0,200	0,200	0,267	0,133	0,133	0,200	0,200	0,133	
	PQ	0,222	0,160	0,240	0,160	0,062	0,160	0,222	0,160	0,160	0,196	0,116	0,116	0,160	0,160	0,116	
	Mt	0,867															
	Sdt	3,243															
	mp	12,200	11,917	12,000	11,667	11,714	11,833	12,100	12,167	11,667	12,000	11,923	11,692	11,833	12,000	11,615	
	rpbi/uji validaty	4,943	6,815	2,803	6,661	12,516	6,764	4,899	6,969	6,661	5,693	8,693	8,511	6,764	6,867	8,451	
	r tabel	0,4227															
	Hasil	valid	valid	valid	valid	valid	valid	valid	valid	valid	valid	valid	valid	valid	valid	valid	
	varians	0,238	0,171	0,257	0,171	0,067	0,171	0,238	0,171	0,171	0,210	0,124	0,124	0,171	0,171	0,124	3,400
	jumlah varians	5,981															
Reability	CA	0,813325															

E. Technique of data analysis

After collecting the data, the researcher analyzed the data using qualitative and quantitative data. The description of them as follows:

1. Qualitative Data Analysis

According to Creswell, (2014:145) the qualitative approach in research involves a deep understanding of phenomena naturally, from both the individual and group perspectives involved. The qualitative approach emphasizes the interpretation of meaning given by research participants regarding their experiences and the social context that surrounds them. In-Depth Data Collection: The qualitative approach involves collecting rich and in-depth data using various techniques such as in-depth interviews, participant observation, and document analysis. Data is gathered to gain a comprehensive understanding of research participants' experiences, perceptions, and understandings.

a. Thematic Analysis

Thematic analysis is one of the methods used to analyze data with the purpose of identifying patterns or discovering themes through data collected by researchers Braun & Clarke, (2006 In Heryanto 2018). This approach is highly effective when a study aims to thoroughly examine qualitative data to uncover interconnected patterns within a phenomenon and explain the extent to which a phenomenon occurs through the lens of the researcher Fereday & Muir-Cochrane, (2006 in Heryanto 2018).

b. The procedure of Thematic Analysis

1) Understanding Data

Obtaining desired data does not necessarily mean that researchers understand the phenomenon being studied. Since qualitative research aims to delve deep into what happens in an event from the participants' perspective, interview recordings and transcriptions are like treasures that researchers need to explore their meanings further. Here, researchers need to comprehend and engage with the qualitative data they have obtained.

The primary objective of this initial stage is for the researcher to start feeling an understanding of the content of the data they have acquired, and to begin discovering various aspects within the data that are relevant to their research questions.

2) Creating Codes

The second step in the thematic analysis process is to start coding. Coding can be likened to a librarian determining the subject of a book title or a reader trying to identify the main idea of a paragraph. Codes can be created either semantically, meaning they directly represent what is apparent from the data. Researchers write codes based on what is observable on the surface. This is typically done by the researcher by writing codes according to the words used by the participants

3) Searching for Themes

At this stage, the researcher begins to shift their focus from searching for codes to searching for themes. As recommended by Braun & Clarke (2006 in Heryanto 2018) the third stage in thematic analysis is searching for themes that align with the research objectives. These themes depict something important within the data that is relevant to the research question. Furthermore, as highlighted by Boyatzis (1998:97), these themes represent patterns within the phenomena under investigation. Although it is referred to as "searching for themes," it does not imply that the process is similar to an archaeologist digging into the ground to uncover hidden themes within the data.

2. Quantitative Data Analysis

According to Cresswell (2014:173) quantitative method is a research approach that involves the collection and analysis of data in the form of numbers or quantitative measures to answer research questions. This method is based on the assumption that social phenomena can be objectively measured and analyzed using statistical methods. Data collection: The quantitative method uses data collection instruments such as questionnaires,

surveys, or other measurement instruments designed to generate quantitative data. This quantitative data can be in the form of numbers or calculable measures.

There researcher used measurement technique to analyzed the quantitative data based on the students individual score and students mean score on the vocabulary test.

1) Individual Score

The data of individual score was collected from the students Vocabulary test. After the researcher got the data , it concluded to find the individual score of students Vocabulary Mastery. The researcher was used this formula to calculate the individual score:

$$X = \frac{A}{N} \times 100$$

Note :

X : The students individual score

A : The students individual scores

N : the total number of the questions

(Taken from Cohen 2007 :423)

2). Mean Score

After the researcher calculated the individual score of students, then the researcher counted the mean score by using the formula as follow:

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

NOTE :

M : The Student Average score

$\sum X$: the sum of score

N : the number of student

(Taken from Heaton 1998:176)

After the individual scores have been calculated, the results are categorized according to the following table:

Table 3. 1 Score Qualification

Categories	Range Score
Excellent	90 - 100
Good	80 - 89
Average	70 - 79
Poor	- 60

(Taken Heaton 1998:148)