

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals with all of the research method. In the methodology, the researcher explained some of the subsets of methods that used in this research. It was divided into several sections, namely research design, the subject of the study, data collection technique and instrumentation, and data analysis.

A. Research Design

A research design is a plan made by a researcher that contains a strategy in it. The strategy is designed to organize research so that it looks practical. Then questions in research can be answered on the basis of evidence and warrants Louis et al., (2007, p. 297). The design used in this research was the Classroom Action Research (CAR) approach. Research design deals with some things, such as selecting participants for research and preparing for data collection.

The researcher chooses Classroom Action Research (CAR) because the design is related to the learning activities in the classroom. The purpose of this design was to confirm the teaching of reading comprehension and describe the process of using a REAP technique and also the students' improvement in reading comprehension. Classroom Action Research (CAR) is research that directly applies in the classroom, and it was chosen to meet the needs of this research. According to David Hopkins (2008, pp. 47, 49), action research is where considerable action with research course that is combined and then disciplined by investigation. And there is a personal effort to get involved in a process or activity that leads to improvement or change. In the current situation,

action research is said to be a methodology with critical aspiration theory and is considered a trend as an important method in the philosophy of social science and educational studies that may be realized.

The researcher used this method because there is a problem that has arisen in SMA N 1 Sungai Tebelian, especially among students at tenth grade. The difficulty of finding the information and the meaning in a text made the level of students' reading comprehension fall. Students also minim of vocabulary; they translate a text word by word. Not only that, they have no interest in reading because they are shy when pronouncing words and also the monotonous way of learning. From that problem, this is appropriate with the research done by experts. Classroom Action Research (CAR) aims to improve the quality of educational practices.

The Classroom Action Research (CAR) method is divided into four phases that must be completed in order to conduct this research method: 1) planning, 2) action, 3) observation, and 4) reflection. The research design that will be carried out in this research uses two cycles. Each cycle consists of one meeting. Then, each meeting consists of the four phases of activities that were mentioned. It means that if the target has not been achieved in cycle 1, the next cycle must be done after revising the plan. On the other hand, to find out the improvement of students' reading comprehension, including some indicators such as students becoming active and responsive in the classroom, the classroom is more lively than ever, and then the results obtained after conducting research are an increase in student scores and their understanding of a text.

The research design used in this research is in the form of the Kemmis and McTaggart model in Hopkins (2008, p. 51). The design was spiral shaped, which contained planning, action, observation, and reflection in each cycle, and the process of an action in this research can be seen in the following picture:

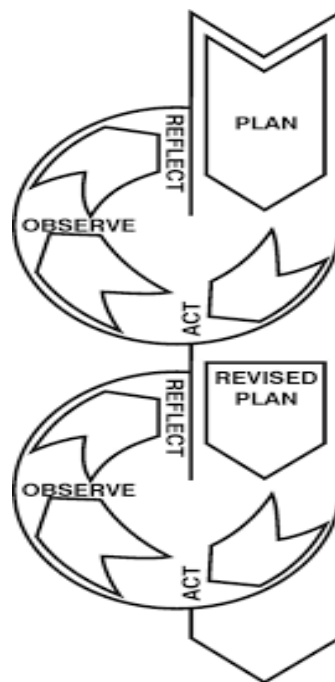


Figure 2. 2 CAR Model of Kemmis and McTaggart

1. Planning

The first phase is planning that is made based on the analysis and identification of the problems that are happening in the classroom. Classroom Action Research (CAR) is structured as well as possible (flexible) in order to overcome obstacles or unexpected things that will occur when conducting research. Therefore, preliminary observation must be made to see if there are any brief activities of the learning process in the situation to be improved. It can be explained through field notes or small talk in the form of an interview

completely and clearly. In this planning stage, the researcher prepares everything that is needed and used in this research. Some things that must be prepared are lesson plans (RPP), preparing techniques in teaching and learning activities, learning instruments, and also preparing criteria for success in learning.

2. Action

Action is the next phase that the researcher acts in after collecting and analyzing the data. In this action, the researcher implements what has been planned. That is, the researcher used a teaching technique that corresponded to the reading skills problems that will be addressed in class. In this case, it is necessary to have guidance from the teacher during the teaching and learning process, so the researcher will work closely with the teacher.

3. Observation

Observation is carried out when the action has been implemented. Observation is done to observe all forms of activities in the teaching and learning process in the classroom. The purpose of this observation phase is to describe everything related to the object under study. In addition, researcher have found out the problems faced by students in reading skill and how each student responds. The researcher has collected the necessary data.

4. Reflection

After doing the observation, the researcher moved to the next phase, namely reflection. Reflection is the last process in a cycle that aims to evaluate and reflect on an action that has been recorded. In other words, the

aim of this phase was to analyze the collected data through observation. It is aim to understand the process, problems, and real obstacles that occur during teaching and learning activities. In this phase, the researcher has found whether the research problem has been solved or not, and whether any problems have arisen during the acting phase. Not only that, researcher made a decision that the research be continued to the next cycle. In conclusion, the data collection is used to revise the planning in the first cycle, which will be carried out in cycle II if the research success criteria have not been achieved.

In this research, the researcher prepared a second cycle that was made based on the results of reflection that had used observation so that they could produce better results. In this second cycle, the process is the same as in cycle I. The scope that will be improved is the use of the REAP technique in teaching reading comprehension, starting from students' interests, their conditions, and the influence of reading comprehension on students' scores. What is done in the second cycle is the same as the first. The researcher prepared a lesson plan consisting of the subject matter, the media to be used, the REAP form that will be used, and everything related. This second cycle will be carried out in one meeting, where students will experience an increase in reading comprehension using the REAP technique.

B. The Subject of The Study

The research can be said to be successful and meet the criteria of having a subject. A research must have individuals or schools that being the main points. Individuals (students) were chosen as the targets or subjects for research based on the problems that will be addressed (Creswell, 2012, pp. 141). The students who served as the researcher's subjects in this reserach were seniors in high school. The researcher conducted this research at SMAN 1 Sungai Tebelian. The students who were being studied in this research have been observed previously. A tenth grade of IPA 1 is chosen by the researcher. It consisted of 25 students, 17 girls and 8 boys. The students who became the subject of this research have a low level of reading comprehension.

C. Data Collection Technique and Instrumentation

In research, it is necessary to collect data accurately as evidence of the results of research conducted. The objective data collection is interpreted using several techniques and instruments that have been designed. Data can be obtained by providing questionnaires, interviews, and tests, as well as documentation and other techniques to show quantitative and qualitative results Singh (2006, p. 212).

1. Data Collection Technique

In this research, the researcher used observation, interview, measurement, and documentation in collecting the data.

a. Observation

Observation is a technique to collect data that is very commonly used in research. The results of observations in the form of activities, events, certain objects, conditions, or atmospheres, and one's emotional feelings. According to Khotari (2004, p. 96), observation is a technique used in data collection in a study. In education-based research, there are two types of observation techniques: participant observation and non-participant observation. By using this tool, it can be easier to record or observe every learning process that is carried out according to research needs.

In this research, the observation used is participant observer or direct participation by observing actions or events, movements or processes from field data and participating in them. So the researcher acts actively as a researcher. Participant observation in this activity is used to determine the teaching reading comprehension process, the students' understanding of the text based on the material, and the use of REAP technique in the learning process. This observation was carried out by the researcher and one companion observer, who is the English subject teacher. Observations were carried out systematically by using guidelines as an instrument of observation.

b. Interview

An interview is one technique that can be used to collect data. Systematically, an interview is done by asking questions related to the aims and objectives of the research. According to Creswell (2012, pp. 217–

220), interviews are divided into four types. In this research, the researcher used a second interview, namely a special group interview, where the researcher interviewed several students with low scores and high scores to obtain information on reading comprehension.

According to Lodico et al (2010, p. 34), purposeful sampling is one of the techniques used by researchers if they want to take a sample in a study. In purposeful sampling, participants are selected who meet certain criteria; as a key or informants related to the research objectives. In this research, students as participants will be selected by some criteria which is students who have a low score, middle score and high score.

c. Measurement

Measurement is a technique used by researcher with the aim of getting results in the form of quantity data. In addition, measurement is an activity in the form of an assignment that leads to quantitative facts. On the other hand, measurement is a technique to determine the level of student ability in learning. It relates to the knowledge and skills of students in the learning process. To find out the extent of students' understanding of the subject matter, the instruments used in this measurement can be in the form of an assessment scale and a test Scriven cited in Adom et al. (2020, p. 111).

a. The Course Grid of Scoring and Assessment Indicators

The scoring rubric is designed according to aspects of reading comprehension based on the theory in this research. The researcher adapted some aspects in making a test and also in assessing reading comprehension based on Brown's opinion. Aspects included in making a test were: topic (main idea), detailed information, inferences, supporting ideas, and vocabulary. The students' scores have been calculated by the researcher based on the scoring rubric in the form of answer key below.

Table 3.1 The Course Grid of Reading Comprehension

No	Teaching Material	Types of questions	Number of questions
1.	Descriptive Text	The students identify topic and main idea of the text.	1, 4
2.	Descriptive Text	The students find out the supporting idea of the text.	7
3.	Descriptive Text	The students determine the vocabulary contained in the text. (unfamiliar word)	8
4.	Descriptive Text	The students find out the detail and specific information of the text.	2, 6, 9
5.	Descriptive Text	The students make interpretation and conclusion of the text.	3, 5, 10

Based on the needs of this study, the researcher has prepared a course grid in the table above to facilitate the assessment of reading comprehension. From the course grid, the researcher has prepared answer keys that are adapted to the types of questions used in assessing

student performance using descriptive text. The answer key has been formulated as follows:

Table 3.2 The Answer Key of Scoring Reading Comprehension

No	Questions	Answers	
1.	What is the best title of the text above?	Monas as a National Monument/Monas	4
		The national monument	3
		Monument	2
		Out of text/ not answered	1
2.	What does the first paragraph tell you about? (give your explanantion)	The identification of Monas. It's from the top to the bottom floor of the Monas.	4
		The identification of entire monas.	3
		The decription of monas building.	2
		Out of the text/not answered	1
3.	What is the purpose of the writer to write the text? (give your explanantion)	The writer's aim is to describe the Monas building as the national monument. It is explained starting from the shape and the size of the building, the objects in room and the purpose of the construction of Monas.	4
		The purpose of the text is to describe the Monas building from shape and size and the purpose of the construction.	3
		The purpose is to tell the reader about Monas.	2
		Out of the text/not answered	1
4.	What is the main idea of last paragraph?	The historical of the construction of Monas' Building.	4
		The historical of Monas started in 1981.	3
		The history of monas that has a couple museums.	2
		Out of the text/not answered.	1
5.	Write down the short description of Monas by using your own word!	Monas is the national monument that was built during the Soekarno era with the aim of being symbol of the people's determination at that time of the proclamation. Monas is built with the marble overlaid with 35 kg of gold in the top. This monument also stores historical objects that are in the museum inside the Monas.	4

		Monas was built in the Soekarno era. The building made by the marble and has a history in inside the room. This building is open to the public.	3
		Monas is a monument with a history of the building and this monument is open to public.	2
		Out of text/not answered	1
6.	What does the text tell us about? (give your explanation)	A description of the overall building of the Borobudur temple located in Magelang, Central Java, Indonesia.	4
		A description of the Borobudur temple that located in Magelang.	3
		The Borobudur temple that located in magelang.	2
		Out of text/not answered.	1
7.	Find out the supporting idea in each paragraph of the text!	P 1: It was built in the ninth century under the sailendra dynasty of ancient Mataram kingdom. P 2: The temple is constructed on a hill 46 meter high and consist of eight steps like stone terrace. P 3: It is believed that the universe is divided into three spiritual spheres.	4
		P 1: It was built in the ninth century under the saillendra dynasty. P 2: The temple constructed on hill 46 meter high and consistof eigh steps. P 3: It is believed the universe is devided into three spritual spheres.	3
		P 1: Borobudur is a Buddisht temple. P2 : The temple conscructed on hill 46 meter high. P 3: Borobudur is devided into three spiritual speheres.	2
		Out of text/not answered	1
8.	Find out the unfamiliar words and write down the meaning! (10 words)	Consist of at least ten words. (vocabularies) with meaning based on student's understanding.	4
		Consist of ten words. (vocabularies) without meaning based on student's understanding.	3
		Consist of five words without meaning based on student understanding.	2
		Just write 1 until 3 words/not answered.	1

9.	What does the last paragraph discussed about? (give your explanation)	The design of the Borobudur temple was built based on three spiritual symbols in each area. In addition, Borobudur temple is a magnificent monument that included in the 7 wonders of the world.	4
		The Borobudur temple was built based on symbols in each area. The building is included in the 7 wonders of the world.	3
		The building was built based on three spiritual spheres.	2
		Out of text/not answered.	1
10.	Make a brief conclusion about the text using your own words!	Borobudur temple is a Buddhist temple in Indonesia and also famous throughout the world. This temple has a height of 46 meters consisting of 8 levels like a stone terrace. The design of the Borobudur temple is divided into three spiritual areas with each meaning. It has a magnificent size and architecture.	4
		Borobudur is the Buddhist temple that famous in world. It has eight steps of the building and each step has own meaning and divided into three spiritual spheres. It has a magnificent size.	3
		Borobudur is a temple in Indonesia and it has a three spiritual spheres of the bulding and famous in world.	2
		Out of context/not answered	1

Based on the course grid of reading comprehension that has been presented, and to make it easier for the researcher in the process of assessing the test given, the answer key has also been provided. This answer key has been adjusted by the researcher appropriate to this research. There are 10 essay questions with two descriptive texts on the theme of "historical places." In the answer key table above, there is a scale for each test number of reading comprehension, where for scales

4 and 3, students have answered according to the text, and for scales 2 and 1, students are considered less thorough in giving answers.

In addition, the answer key table above can make it easier for the researcher to see student improvement, especially in residual performance in reading comprehension.

Table 3.3 The Scale of Scoring Reading Comprehension

No	Criteria	Score
1.	Students are able to answer questions completely and clearly appropriate to the key answer and the details related to the reading text displayed.	4
2.	Students are able to answer the questions completely and clearly almost appropriate to the key answer and the details also almost related to the reading text displayed.	3
3.	Students are able to answer the questions but incompletely and inclearly and almost appropriate to the key answer also the details related to the reading text displayed.	2
4.	Students are not able to answer the questions completely and clearly appropriate to the key answer and the details are not related to the reading text displayed.	1

The formula :

$$students' score = \frac{\text{obtain score}}{\text{total score}} \times 100$$

In this research, to know the average of the students score the researcher used formula below:

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

Mx= Mean

$\sum x$ = Total score all of students

N= Number of students

Meanwhile, this research needs an improvement of students as a learning outcomes after using the technique in teaching. To know the improvement of students' score in cycle 1 and 2, the researcher used the formula below:

$$P = \frac{y1-y}{y} \times 100\%$$

P: Percentage of students' improvement

y: Cycle 1

y1: Cycle 2

In the table above, the researcher has presented a calculation scale for the assessment of students' reading comprehension abilities. To see how far students understood the text by answering the questions given, the researcher used a counting scale starting at 4-1 with each of the scale criteria. This is done by the researcher to facilitate the assessment of students' abilities in reading comprehension.

Table 3.4 Criteria of Means Score

Score	Classification
86-100	Excellent
66-85	Good
46-65	Fair
≤ 45	Poor

Adopted from Suwarni et al (2007)

Based on the instrument used by the researcher in carrying out this research, namely a test in the form of essay questions about reading comprehension, a mean score table has been presented. The purpose of table 3.4 above was to see whether the average student score has reached the target criteria in this research as well as to see a comparison of students' performance between Cycle I and Cycle II.

d. Documentation

The documentation technique that researcher used is to get data about student learning outcomes. The documentation has been in the form of audiovisual, text, images, and other documents. The documentation technique is also used to record all the activities of students and teacher during the study. Based on Hopkins (2008, p. 123), documentation is one of the techniques used to collect data about curriculum or other educational issues. With sources gleaned from these documents, one can prove the existence of background information and an understanding of the issues that would not have been available.

To make the data concrete from this research, the researcher also used documentation as a technique in collecting data. There were documentation in the form of students' worksheets during teaching and learning activities in this research; recordings (photos) of student activities in reading comprehension using the REAP technique.

2. Instrumentation

a. Observation Sheet

In using observation as a technique for collecting data, it is necessary to have a guide containing statements related to the research. The observation sheet is used as a guide for conducting observations to obtain the desired data. The observation that will be used in this research is an observation sheet for students as the participants in the classroom. The list of student observation is used to collect the data about student attitudes, situations, and the process of teaching using the technique that the researcher chose DeWALT in Kawulich (2005, p. 5).

b. Fieldnote

In accordance with Leavy (2017, p. 136), a field note is one of the important instruments in collecting data when conducting research. The usefulness of filed notes is as a tool that records all activities in the research process. The form of this process is in the form of notes containing the time, place, and location of the research. In this research, field notes were used by the researcher to summarize all the learning processes by recording the teacher and students' participation and interaction in the class.

c. Interview Guideline

The next instrument used is an interview guideline. This interview guideline was designed by the researcher based on the students' problems experienced. In addition, the use of teaching techniques has been included.

Data collection in the form of an interview was carried out by the researcher directly to obtain information about the learning process using the technique used. The researcher conducted interviews with students after using the REAP technique in teaching reading comprehension to capture the meaning of a predetermined text. This is done to gain an overview of the learning process in order to capture the meaning of a text as well as the situation of students during reading activities.

d. Test

According to Mahmoodi-Shahrehabaki as cited in Adom et al (2020, p. 110–111), In this research, the instrument to measure the students' understanding of the material is a test. It is an important way to see how far students' abilities have improved. A test will be given to students in form of essay. It is made based on learning material about the students' comprehension in capturing the meaning of a text. To see the improvement of students' reading comprehension skills, the researcher uses descriptive text whose material is tested based on the school syllabus.

The researcher prepared the criteria of teaching and learning activity through REAP technique. It is made to see the students' increasing in reading comprehension through the technique that researcher used. The description of criteria of success is explained below:

Table 3.5 Criteria of Success

Aspect	Description
Observation	If 80% of students follow the learning process calmly and actively, enthusiastically and enjoy class during the lesson, it can be said that the cycle is successful.
Test	If 80% of students' abilities improve very well in reading comprehension and their scores are increase, it can be said that the cycle is successful.

D. Data Analysis

Data analysis is an important part of the implementation of Classroom Action Research (CAR). The quality of the results and data analysis determine the significance of the classroom action research conducted. If the analysis is carried out correctly, the results of the research will provide an overview objective of the conditions under which the research was conducted. That matter allows the researcher to find out whether the actions that have been taken have an impact on solving problems in learning. Classroom action research (CAR) data consists of both qualitative data and quantitative data (number data). Both types of data analysis can be used alone or in a combination of the two. Classroom Action Research (CAR) does not require deep inferential statistics for quantitative data. Data analysis in Classroom Action Research (CAR) is carried out as a tool to facilitate the giving of meaning or process and research results.

1. Data Analysis of Qualitative

According to Hopkins (2008, p. 138), qualitative data analysis is commonly used following the technique of Miles and Huberman, as follows:

a. Data Reduction

The data reduction process includes selecting, determining focus, simplify, abstraction, and performing transformation of the data obtained during the observation. During the data collection process carried out, researchers must carry out data reduction, namely by summarizing, coding, classifying data, creating boundaries and writing memos. It should be noted that qualitative data reduction does not make the data numbers, but is a process that reduces data that is quite large for easy reading and displaying and processing.

b. Data Display

The next step in the analysis of the data is data display. It is taken by the researcher after doing the data reduction in the research. Data display means organizing and making digests of interrelated data related to enabling researcher to draw conclusions and subsequent actions. Data display is part of the analysis of the qualitative data needed to draw conclusions according to the research problem. It makes the researcher understand what is happening and how to do something about the research. This activity is done by collecting all the data that has been obtained and reflecting on what can be explained using this data.

c. Conclusion Drawing/Verification

The process of drawing conclusions and verifying qualitative data was conducted by the researcher at the time of data collection, namely in search for patterns, explanations, possible configurations, relationships

between factors and variables, and schemas. In order to draw conclusions according to the research question, the researcher must check whether the data collected is still relevant and related to the formulation of the problem or predefined research questions. Research questions can be revised if they are not supported by valid data.

Qualitative data analysis is the process of searching for and compiling systematic data obtained from interviews, field notes, and other materials so that they are easy to understand and also inform other people. Qualitative data analysis of this research is carried out on data obtained from the results of teacher observation, interview, and documentation (pictures and video) of the learning process with the REAP technique and the results of observation of students in reading comprehension activities.

2. Data Analysis of Quantitative

Using descriptive statistics is a simple quantitative data analysis. According to Singh (2006, p. 224), descriptive statistical analysis used is related to the explanation of numbers from a group (students) to be studied and based on the problem that arises in the research. The data obtained from Classroom Action Research (CAR) is sought to be qualified or appointed and later presented using stasis or graphs to arrive at a quantitative conclusion.

In this research, to measure the improvement in students' reading comprehension skill that was stimulated by the REAP technique, the researcher used quantitative data analysis by collecting all the data from respondents. Quantitative data analysis is an activity after data from all

respondents or other sources is collected. Therefore, in quantitative research, a test is given to students so that researcher found whether or not a goal in this research that was achieved.