CHAPTER III
RESEARCH METHOD

This chapter presents the method which had been used in the research. It consists of the research design, setting of the research, subjects of the research, research data, data analysis techniques, validity, reliability, and procedure of the research.

3.1. **Design of the Study**

This research uses CAR (Classroom Action Research) as a research design categorized so because of its problem-solving nature. This aims to improve students' learning and abilities, especially in improving English pronunciation skills among grade 9th students of SMP N 3 Kubutambahan.

Classroom action research includes a variety of models, one of which is the Kemmis and McTaggart model, as outlined in Burns (2013: 7), adopted in this study. The data collection process in this study can be carried out progressively through several cycles of action. For the first cycle, researchers identified problems of 9th graders, especially in their English speaking and pronunciation skills. After analyzing this issue, actions are planned and executed. The researcher also evaluates whether any problems or failures of the plan occurred during the implementation of the action. If so, the researcher revises the planned action and reimplements it.

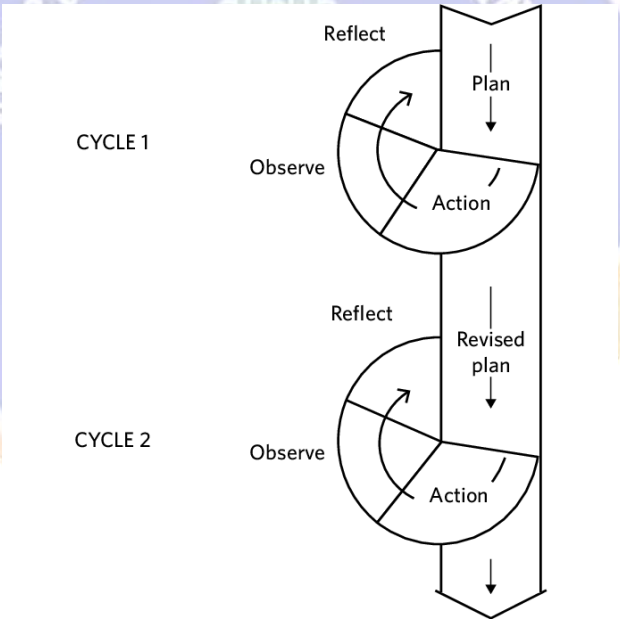
This action plan, developed by researchers in collaboration with collaborators, aims to address the understanding of speaking and pronunciation problems among 9th graders at SMP N 3 Kubutambahan. The plan is effective and flexible rather than unexpected field situations and obstacles that were previously unnoticed. Next, researchers implemented this plan to teach speaking skills in nine grades. Utilizing CAKE applications, researchers observe the effects of important information actions in the context in which they occur. Once observations have been made, reflections on these impacts are made to address weaknesses as a basis for further planning. Researchers continue these stages until a given intervention proves effective. Reflection is carried out after each meeting during the research process, and evaluation is carried out at the end of each action cycle. The author participated directly in the research to overcome problems in the teaching and learning process

of speech comprehension and to bring improvements to the English pronunciation of grade 9th grade students at SMP N 3 Kubutambahan.

Research methods belong to the category of field studies or studies conducted in the natural environment without environmental manipulation, because it observes the behaviour that occurs in everyday situations. From this research, effective solutions can be found to improve the speaking and pronunciation skills of sixth graders in English. The findings of this research will benefit the field of education by developing innovative teaching methods, especially by utilizing the application of CAKE technology as a means to improve students' recognized language skills as effective. The concept of action research is set out by Kemmis and McTaggart (1988) in Burns (1999) in Figure 3.1:

Figure 3. 1

Cyclical AR model based on Kemmis and McTaggart (1988)



Qualitative and quantitative are also used to collect data on the use of CAKE applications to improve students' pronunciation skills. In this study there are several learning cycles, namely planning, action and observation, and finally reflection. Researchers plan to use the CAKE application in the design of managing lesson plans and teaching methods. For data collection, researchers used instruments such as speaking tests and observations using the Triple E framework. To determine the

pronunciation ability of students, test techniques are applied by giving word spelling tests. As for the non-test, namely observation using the triple E framework some students about to evaluate how effectively technology contributes to achieving student learning goals towards the use of CAKE applications. The framework is based on three main components: Engagement, Improvement, and Expansion of learning objectives. To determine students' pronunciation ability, researchers provided pre-test and post-test as well. The same test is used to compare pre-test and post-test scores. To analyse the data and check the correctness and information obtained in the study, researchers used triangulation analysis.

3.2. **Research Setting**

This research conducted at SMP N 3 Kubutambahan, located at Tajun village, Kubutambahan, Buleleng Regency. Previously, the researcher had conducted field observations in all of class IX in SMP N 3 Kubutambahan. In the end, the author chose to conduct the research at SMP N 3 Kubutambahan because the implementation of the cake application is much possible at this school, as seen from the supporting facilities owned by all students.

3.3. **Object of the study**

The object the study to see the implementation of using the CAKE Application as a learning media to improve student pronunciation skill viewed from Triple E framework At SMP N 3 Kubutambahan.

3.4. **Subject of the study**

In the implementation of this research, the author chose IX grade class as the sample, especially IX B. The author chooses this class as the sample because based on preliminary observations and interviews with teachers that this class has the lowest English score than other IX classes. And it is possible to do research because all students have smartphones.

Table 3. 1

Research Subject

SCHOOL	CLASS	STUDENT	FEMALE	MALE

SMP N 3 KUBUTAMBAHAN	IX B	32	18	14

3.5. **Research Procedure**

3.5.1. Planning

In this phase, researchers develop several plans to select appropriate actions to be implemented in the field. Such as preparing classes that will be used during research, preparing learning plans, preparing material that will be taught later when collecting data, cameras for taking documentation, preparing conversation tests that will be used in tests. Apart from that, in this phase, researchers analyse and formulate issues that occur in the classroom, engage in discussions with teachers during action planning, and prepare plans to implement English speaking skills learning using the CAKE Application as a learning medium. After all preparations have been made, we will proceed to the acting and observing the action phase.

3.5.2. Acting and Observing the Action

After assessing students' abilities in the pre-test, the researcher proceeds to the next step. The second action phase involves the execution or implementation of the plan developed during the planning phase, which includes taking action inside the classroom. It is crucial to note that during the action implementation phase, teachers must adhere to and try to follow what has been formulated in the plan. The learning process takes place over several sessions for each cycle, with the allocated time adjusted according to the school schedule.

3.5.3. Observation and evaluation

Observation is the process of recording and collecting data on all aspects that occur during the implementation of actions. The observation stage is carried out by researchers. Observations were carried out to monitor the conditions of English language learning and learning classes in class 9B of SMPN 3 Kubucepatn. These observations identified

problems, particularly with English language skills (the focal point of this study). Observers record observations to document the learning process during the lesson. Apart from that, researchers also assessed student responses during the learning process. To assess student responses at this stage, researchers used a linker scale. The Likert scale is a research scale used to measure attitudes and opinions. The name Likert scale is taken from the name of its creator, namely Rensis Likert, who is a social psychologist from the United States. The level of agreement referred to is a Likert scale of 1-5 choices. The following is a linker scale table that researchers will use:

Table 3. 2 Likert Scale

Score	Description
5	Very good / Totally agree
4	Good / Agree
3	Good enough
2	Unkind / Disagree
1	Very unkind/strongly disagree

3.5.4. Reflection

The reflection phase serves as the final step in each cycle, where the activities of teachers and researchers are critically evaluated. The essence of this phase lies in analyzing the strengths and weaknesses of the learning process carried out as a class action. Researchers and observers gather to deliberate, analyze and evaluate achievements, discuss goals that have been achieved, steps that still need to be taken, and plan the next cycle if the results do not meet expectations. After collecting data from observations, researchers engage in a reflective process to evaluate the effectiveness of actions. This reflective process includes interviews with students to gather responses and feedback regarding actions taken. Reflecting on these findings, researchers assessed whether these actions

had succeeded in improving students' speaking skills. If actions do not achieve the desired results, a new cycle begins by integrating fresh ideas and innovations to improve the approach and increase student understanding. Conversely, if the actions are proven successful, they are reapplied in the next cycle for continuous improvement until they achieve the desired results or reach cycle N. In this research the reflection process is carried out after the first cycle is completed to find out whether the action will continue to the next cycle or stop at cycle one.

3.6. Research Instrument

To gather the data, the researcher used some instruments, speaking test, observation and interview through triple E framework:

3.6.1. Speaking Test

A test is a series of questions and exercises used to measure student achievement, individual or group abilities of cognitive aspects. For example, measuring students' competence, knowledge, intelligence, and ability in pronunciation through tongue twisters. A very useful test to find out student achievement in understanding the material given by the teacher. In this study, researchers used an oral test to determine the pronunciation ability of grade 9B students of SMP N 3 Kubutambahan.

In this study will use two types of tests, namely pre-test and post-test. A pre-test is given before researchers teach students about pronunciation using the CAKE app. This aims to find out the value obtained by students in learning English pronunciation before the teaching and learning process begins. To find out how well students are obtained in pronouncing English words while post-test is an activity to test students' abilities at the end of the learning process after using the CAKE application. This would describe student outcomes during the learning process whether there are improved student scores between before using CAKE and after using. This post-test would be carried out until students reach the KKM success target, which is with a score of 75.

Figure 3. 2

Instrument Speaking Test - Pretest and Post-test Pronunciation

"greetings"
Q: "Hello, what is your name?"
A: "Hello, my name is ……., and you?"
Q: "My name is ……"
A: "How are you …….?"
Q: "I'm good, thank you, and how about you?"
A: "Great, thanks!"
Q : What are you doing?
A : I am reading
Q : What are you reading?
A : I am reading a story book

The test will involve a short conversation between two individuals in front of the class, which includes simple questions and answers about simple present continuous material. Each question and answer will be spoken alternately by the student orally. The test indicators will assess several aspects, including the student's ability to articulate words clearly, such as saying "hello" and understanding of the simple present continuous material.

Table 3. 3
Pronunciation Assessment Rubric with CAKE Learning Media Application for Students of SMP N 3 Kubutambahan

Category	Score 1	Score 2	Score 3	Score 4	Score 5
Vowel (Vokal)	Pronounces vowels with frequent errors	Makes inconsistent vowel errors	Pronounces vowels correctly most of the time	Pronounces vowels correctly all the time	Pronounces vowels correctly all the time
Consonant (Konsonan)	Pronounces consonants with frequent errors	Makes inconsistent consonant errors	Pronounces consonants correctly most of the time	Pronounces consonants correctly all the time	Pronounces consonants correctly all the time
Word Stress (Penekanan Kata)	Places stress on the right syllable of multisyllabic words, but	Places stress on the right syllable of multisyllabic words, but misplaces it on	Places stress on the right syllable of multisyllabic words, but misplaces	Places stress on the right syllable of multisyllabic words all the time	Places stress on the right syllable of multisyllabic words all the time

	misplaces it on a large number of words	certain words	it on a few words		
Sentence Stress (Stres Kalimat)	Places stress on focus words and other key words sometimes	Places stress on focus words and other key words sometimes	Places stress on focus words and other key words most of the time	Places stress on focus words and other key words most of the time	Places stress on focus words and other key words all the time
Fluency (Kelancaran)	Can discuss particular interests with reasonable ease	Able to use the language fluently on all levels normally pertinent to the profession	Able to use the language fluently on all levels normally pertinent to the profession	Able to use the language fluently on all levels normally pertinent to the profession	Has complete fluency in the language such that this speech is fully accepted by educated native speakers

Descriptive analysed data of mean scores or the result in every cycle of pre-test, post-test one and post-test two were analysing by SPSS 26. The function of mean score is to show the improvement of the students. If the mean score of students is 75, the students had gotten the criteria of success. Furthermore, the researcher will stop doing the research. Then, classical achievement could be considered to be successful if it requires achievement more than 65% from students in the class. After the researcher knowing the students average score, the researcher tried to get class percentage which pass the minimum score standard (KKM). The formula as follow:

- $P = \frac{f}{n} 100\%$
- Where:

- P = The class percentage
- F = The number of students who passed KKM
- N = The number of the students

From the criteria above, the researcher conclude that CAKE can improve students' pronunciation with 75 score minimally and 86% classically. The success of students in learning pronunciation can be explaining with table under this following text:

Table 3. 4
Score of Students' Classical Achievement in Pronunciation

Achievement %	Category
>85%	Excellent
66-75%	Very good
56-65%	Good
46-55%	Average
<45%	Poor

3.6.2. Observation through Triple E Framework

Triple his study utilizes the Triple E Framework to assess the effectiveness of technology, specifically the CAKE application, in achieving learning objectives. The framework comprises three dimensions: engagement, enhancement, and extension. To evaluate the effectiveness of CAKE as a learning tool, the researcher will conduct observations using the Triple E Framework rubric to gather relevant data. The engagement dimension will be evaluated to determine the extent to which CAKE helps students participate in the learning process. Observations will focus on the interaction between teachers and students using the CAKE application in the classroom. The enhancement dimension will be examined to assess the role of the technology in aiding students and teachers in the learning process. Observations will be concentrated on the learning process involving students and teachers using the CAKE

application. The extension dimension will be assessed to determine whether the technology can support learning outside the classroom or in everyday life. Data will be obtained through observations of students' activities outside the classroom to determine if they use the CAKE application for learning in their surroundings or in their daily lives.

Table 3. 5
Triple E Framework Rubric

Engagement in the learning	**0=No**	**1=Somewhat**	**2=Yes**
The technology allows students to focus on the assignment/activity/goals with less distraction (Time on Task)			
The technology motivates students to start the learning process			
The technology causes a shift in the behavior of the students, where they move from passive to active social learners (Through co-use or co-engagement)			
Enhancement of the learning goals	**0=No**	**1=Somewhat**	**2=Yes**
The technology tool allows students to develop or demonstrate a more sophisticated understanding of the learning goals or content (using higher - order thinking skills)			
The technology creates supports (scaffolds) to make easier to understand concepts or ideas (e.g. differentiate, personalize or scaffold learning)			
the technology creates path for students to demonstrate their understanding of the			

learning goals in a way that they could not do with traditional tools			
Extending the learning goals	**0=No**	**1=Somewhat**	**2=Yes**
the technology creates opportunities for students to learn outside of their typical school day. (24/7 connection)			
the technology creates a bridge between school learning and their everyday life experience (connects learning goals with real life experiences)			
the technology allows students to build authentic life soft skills, which they can use in their everyday lives			
READING THE RESULTS a) 13-18 Points: Exceptional alignment between learning goals and technology. b) 7-12 Points: Some alignment between learning goals and technology. a) 6 Points or below Limited alignment between learning goals and technology.		**TOTALS ____/18**	

3.6.3 Interview through triple E Framework

After the researcher made observations using the triple E framework rubric, the researcher also conducted an interview. Interviews were conducted to corroborate data on observations using the rubric Triple E framework,

namely in the extends section. according to Sugiyono (2016: 194) states that "Interviews are used as a data collection technique if researchers want to conduct preliminary studies to find problems that must be researched, and also if researchers want to know something from respondents in more depth". Here interviews are conducted to find out more about how well the technology is used both widely and outside of schools.

1. Do you use CAKE app outside of the class?
2. Are you using CAKE app at home?
3. Does the CAKE app make you learn new things outside of lessons?
4. Does the CAKE app help you learn new skills that are useful on a daily life?

Interview Indicators:

- Usage of the Application Outside of Class Hours:
  1) Students can mention the time and frequency of CAKE application usage outside of the class.
  2) Students can explain the activities or materials they have learned using the CAKE application outside of the class.
- Connection to School Learning:
  1) Students can explain how the CAKE application usage helps them connect with school subjects.
  2) Students can provide concrete examples of how the materials learned through the CAKE application relate to classroom learning.
- Benefits in Everyday Life:
  1) Students can mention new skills or knowledge gained through the CAKE application and their relevance to everyday life.
  2) Students can describe how the CAKE application helps them deal with real-life situations outside of the school environment.

3.7. **Research Validity and Reliability**

Likewise, with the English-speaking learning test to see whether the use of the cake application affects students' English-speaking ability. This assessment was carried out in the form of a post-test at the end of the treatment. The post-test is given in the form of practice speaking directly with a predetermined subject using

a cake application. The test given to the sample was first carried out with a test by the teacher. Validity and normality were carried out after the trial to determine whether the test used was considered valid and reliable. Validation test to determine the effectiveness of the post-test used, namely content validity and empirical validity. The speaking test was reviewed by experts for content validity. The author then uses the Gregory Formula to measure the results of the decision. An expert jury has evaluated these projects to see if they are relevant and suitable for experimentation.

3.7.1. Test validity

Validity is a measure that shows the level of validity of an instrument. An instrument valid one has a high validity value (Arikunto, 2010). In addition, before carrying out the try-out test, expert judges are carried out in order to assess the feasibility of the questions that used to screen students' score.

The author used Gregory 's formula to measure the result of the decision. Also, the expert judges evaluated these projects to find out whether they are relevant and suitable for experimentation. The Formula of Gregory formula can be written as below:

Figure 3. 3

Gregory's Formula for Content Validity

$$\text{Content Validity} = \frac{D}{A+B+C+D}$$

A : Disagreement between the expert judges

B and C : Different agreement between the expert judges

D : Agreement between the expert judges

3.7.2. Test Reliability

Reliability refers to consistency of score obtained by the same persons when they are re-examined with the same test on the different occasion or with different sets of equivalent items.

Table 3. 6

Ratio Used Measuring Reliability

Range of Cronbach's Coefficient	Qualification
>0.90	Very high
0.80 – 0.90	High
0.70 – 0.79	Sufficient
0.60 – 0.69	Low
<0.60	Very low

Validation in this research as the result was taken from SPSS 23.0 as follow:

Table 3. 7

Result of Test Reliability Analysis

Reliability Statistic	
Cronbach Alpha	N of Items

3.8. Data Collection Technique

This research used qualitative and quantitative data collection techniques. In order to attain the data, the researcher used several data collection techniques.

3.8.1. Observation

Observation is an activity that involves the sense of sight, where researchers observe directly the object of research. The purpose of this technique is to describe the condition, situation, and activities that occur on

the object of research. In this study, observation activities were carried out during student learning activities in the classroom, which included tests, treatments, and teaching-learning sessions followed by students and researchers. Observation is directed at accurately observing and recording emerging phenomena and considering the relationships between aspects of the phenomena.

3.8.2. Interview

The interview is a purposeful conversation conducted between two parties: the interviewer, who asks questions, and the interviewee, who provides answers to those questions (Lexy J. Meleong, 2010: 186). The main characteristic of an interview is direct face-to-face contact between the information seeker and the source of information. Various questions are prepared for the interview, but additional questions may arise during the research process. Through interviews, researchers gather data, information, and frameworks of explanation from research subjects. The interview technique employed is semi-structured interviews, meaning that the interview guidelines do not strictly bind the questions posed and can be further explored or developed according to the situation and field conditions. Interviews are conducted with several student samples at SMP N 3 Kubutambahan.

3.8.3. Speaking Test

According to Suharsimi Arikunto (2006: 150), a test is a series of questions, exercises, or other tools used to measure the skills, knowledge, intelligence, abilities, or talents possessed by individuals or groups. In the context of this research, the type of test used is a conversation between two people to assess students' pronunciation skills. Students' language proficiency is evaluated through speaking practice tests. The results of each cycle are analysed descriptively to evaluate the effectiveness of actions by referring back to the predetermined success indicators. From the explanation above, it can be concluded that a test is a tool used to measure students' speaking skills, whereas in this research, speaking practice tests

are conducted with students engaging in conversations in front of the class with their classmates according to sentences provided by the teacher.

3.9. **Data Analysis Technique**

In this study, two types of data were collected: qualitative and quantitative. Qualitative data were gathered through preliminary observations and analyses with Triple E framework, while quantitative data were obtained from students' speaking comprehension tests.

3.9.1. Quantitative Data Analysis

In this research, quantitative data analysis will be used to measure the significancy and effect of the use CAKE Application for student 9th grade of SMP N 3 Kubutambahan. The data obtained will analysed by using statistics analysis both descriptive and interferential statistics as presented below.

3.9.1.1. Descriptive statistical analysis

Descriptive statistical analysis is a statistic that used to evaluate the data by describing it as how it is exist and collected without making generalization or inferences to the public (Sugiyono, 2012:199). In this research the data is represented in form of interval data. In descriptive statistic the researcher will get various data from maximal score (Max), minimum score (Min), mean, median, standard deviation (SD), Mode, range, and Standard error (Kartubi, 50 2017). Data obtained from the research will be analysed in descriptive statistic using SPSS program version 19.0. In this research, researchers will get data through a speaking test and then analyses descriptive statistics using the help of the SPSS application. This descriptive statistic is used to find the mean and standard deviation to see the impact of CAKE applications.

3.9.2. Qualitative Data Analysis

For analysis of observation data using the Triple E Framework, each item uses three scales, namely 0, 1, and 2. There are 18 observation items which are divided into three aspects, namely Engagement in the learning, Enhancement of the learning goals, Extending the learning goals contained 3 items for each aspect. At the end the value of each item will be added up, the description of the value range is as follows:

- 13-18 Points: Exceptional connection between learning goals and
- 7-12 Points: Some connection between learning goals and tools
- 6 Points or below: Low connection between learning goals and tools

To analyses interviews through the Triple E Framework, researchers wrote the answers of each student in the researcher's diary. Then the researchers linked the interview results with observational data. So as to be able to find out whether the interview results support the results of observations or not

3.10. Trustworthiness

3.10.1. Triangulation

Triangulation is essentially a multimethod approach carried out by researchers when collecting and analysing data. The basic idea is that the phenomenon under study can be well understood so that a high level of truth is obtained if approached from different points of view. According to Sugiyono (2011) triangulation is defined as a technique that combines various data collection techniques and existing data sources. Researchers triangulate, of course, there is a certain purpose that wants to be done. In addition to researchers collecting data to be used in research, it also simultaneously tests the credibility of a data through various data collection techniques and various data sources. The purpose of triangulation is to track the inequality between data obtained from one informant (the informer) and another informant. includes four things, namely: (1) method triangulation, (2) inter-researcher triangulations (if the research is done with groups), (3) triangulation of data sources, and (4) theory triangulations.

3.10.2. Data Triangulation

In this study researchers used triangulation data. According to Sugiyono (2015: 83), data triangulation is a data collection technique that combines various existing data and sources. In this study, researchers compared data between observation data using the Triple E framework and data from the speaking test to get accurate results.