

CHAPTER III

RESEARCH METHOD

A. Research design

The Methods of this research used a quantitative method. According to John W Creswell, "Quantitative research is a means for testing objectives theories by examining the relationship among variables" (Creswell & Creswell, 2017). Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques.

This type of research used quasi-experimental, according to Sugiyono (2010: 75), quasi-experimental design consists of two forms: time series design and nonequivalent control group design. The design used in this research is quasi-experimental design, specifically using the nonequivalent control group design model. Before being given treatment, both the experimental group and the control group are given a test, known as a pretest, with the intention of understanding the condition of the groups before the treatment. After the treatment is administered, both the experimental group and the control group are given a test, known as a posttest, to determine the condition of the groups after the treatment.

According to Sugiyono (2011: p.116) the scheme of nonequivalent control group design can be described as Table 3

Table 3.1 Scheme Non equivalent Control group design

Class	Pretest	Treatment	Posttest
Experimental	O_1	X	O_2
Control	O_3	-	O_4

Note :

Experimental : Group of students who get teach with local culture material

Control : Group of students who get conventional teaching or no given

O_1 : Experimental group pretest result before given treatment

O_2 : Experimental group pretest result after given treatment

O_3 : Experimental group post test result before given treatment

O_4 : Experimental group post test result after given treatment

B. Population and sample

1. Population

According to Creswell (2012: 39) population is a group of individuals who have one characteristic that distinguishes them from other groups. According to Sugiyono in Supardi, population is a generalisation area consisting of objects or subjects that have certain quantities and characteristics set by researchers to study and then draw conclusions.

From some of the above opinions, it can be concluded that population is an object or subject that is in an area and fulfils certain conditions related to the problem or object of research. Researchers took the population of eighth grade students of SMP Negeri 18 Bengkulu City.

The population of this study were 10 eighth grade classes of SMP 18 Bengkulu City totalling 302, 170 male students and 132 female students.

3.2 Population of the research

No.	Class	Male	Female
1.	8.1	19	12
2.	8.2	22	9
3.	8.3	13	19
4.	8.4	14	17
5.	8.5	12	19
6.	8.6	15	16

7.	8.7	20	12
8.	8.8	20	10
9.	8.9	18	9
10.	8.10	17	9
	Total	170	132

2. Sample

Samples are part of the population. The sample is part of the population taken as a source of data and can represent the entire population. According to Creswell (2012:142), a sample is a subgroup of the target population studied by researchers to generalise about the target population. In determining the sample, the researcher used purposive sampling technique. Sampling is a technique of taking samples from the population. There are several criteria for selecting samples. They are the members of the selected group have the same characteristics such as the same number of students, ability, age, grade point average and English teacher. The sample taken by researchers in this study consisted of two classes from SMP Negeri 18 Bengkulu City.

The sampling technique used in this study is purposive sampling. According to Sugiyono (2013:218), purposive sampling is a technique for selecting data source samples based on certain considerations. The purposive

sampling technique selects a group of subjects based on specific characteristics that are assessed to have a relation to the traits or characteristics of the population to be studied. These characteristics are already known to the researcher. Thus, they only need to connect the sample units based on specific criteria.

In sampling, the researcher chose class 8.9 as the control class with 31 students, and class 8.3 as the experimental class with 32 students.

Table 3.3 sample of the research

No.	Class	Male	Female
1.	8.3	13	19
2.	8.9	18	9
	Total	31	28

C. Place and time of the research

This research was conducted on eighth grade students of SMP Negeri 18 Bengkulu City which is located at Jalan KS. Tubun, Bengkulu City. While the subjects of this study were two eighth grade classes of SMP 18 Bengkulu City.

D. Operational definition of variables

According to Sugiyono (2010:38), the operational definition of research variables is the elements or values that come from objects or activities that have certain variations,

which will then be established by the researcher to be studied and drawn conclusions from.

1. Tiktok education

TikTok education refers to the use of TikTok as a platform for creating and sharing educational content in short video format, typically between 15 seconds to 3 minutes. Educators, experts, and content creators leverage TikTok's engaging format to teach various topics, including academic subjects, practical skills, tips for personal growth, and professional development.

2. Reading ability

Reading ability is the ability to read and understand written material, which includes the ability to: Recognize letters and words, Connect letters and words with sounds, Understand the meaning of written text, and Read fluently.

E. Data collection technique

1. Test

This study conducted pre-test and post-test for all samples. The pretest was given to the control class and the experimental class. Data was collected by giving tests to students. One of the most important steps in conducting research is collecting data to determine the results of the study. The data collection procedure was carried out in several steps. The data for this study were collected from the pre-test and post-test scores. To find out whether using

educational tiktok videos in teaching reading comprehension at SMP Negeri 18 Bengkulu City. And the scores from the pre-test and post-test were compared. Researchers analysed students, and how to read. Before the test was given to the students.

a. Pre-Test

Creswell (2012: 297) states that a pretest provides a measure of some attributes or characteristics that are assessed to participants in an experiment before they receive treatment. The pretest was conducted to determine students' reading comprehension and was given once before the experimental group and control group received treatment. There were 30 items in the form of multiple choice questions.

b. Treatment

In experimental research, treatments are given to the experimental class to determine their impact on the variables being studied. Sugiyono explains that treatments are given within a certain period of time according to the needs of the research so that the expected results can be measured accurately. Based on this, the researchers gave the treatment four times. Here, two class were given material, namely the experimental class and the control class. The experimental class was taught using educational TikTok videos. Meanwhile, the

control class was taught using conventional methods. This number of sessions was considered sufficient because it provided ample opportunity for students to receive intensive treatment and allowed researchers to observe changes in students' abilities after receiving treatment. (Sugiyono (2015:112))

Table 3.4 Experimental Class Activities

Meeting	Material/Focus	Learning Activities
1	Skimming & Scanning (Finding main ideas quickly)	- Watch a short TikTok educational video (1 minute) - Discuss the video content - Practice identifying main ideas from a short related text
2	Vocabulary Building (Learning new words from the text)	- Watch a TikTok Educational video - Write down new vocabulary - Practice understanding meaning through context
3	Reading for Detail (Understanding specific information)	- Watch a TikTok Educational video - Teacher provides a short text (video transcript) - Students answer detail

		questions (who, what, when, where, why)
4	Critical Reading (Evaluating text/video content)	- Watch a TikTok Educational video - Discuss meaning and students' opinions - Practice writing a conclusion based on the text

Table 3.5 Control class activities

Meeting	Material/Focus	Learning Activities
1	Skimming & Scanning (Finding main ideas and general information)	- Teacher provides a short reading text (article/narrative text) - Students read quickly to identify main ideas and important information - Class discussion
2	Vocabulary Building (Enriching vocabulary from reading)	- Teacher gives a text containing new vocabulary - Students highlight difficult words - Discuss meanings using context and dictionary
3		- Teacher provides an

	Reading for Detail (Understanding specific information)	informative text (e.g., science article or news) - Students read and answer detail questions (who, what, when, where, why) - Discuss answers together
4	Critical Reading (Analyzing and concluding a text)	- Teacher gives a reading text (opinion article/motivational story) - Students read and discuss the meaning - Students write a summary and give personal opinion

c. Post-Test

Creswell (2012: 297) states that the post-test is a measure of some attributes or characteristics that are assessed to participants in an experiment after being given treatment. The function of the post test is to determine the extent of students' reading comprehension after being given treatment. Then the post test questions have the same points as the pre test. The purpose of giving a post test is to measure students' ability to develop their academic reading comprehension after they receive treatment. By

analysing the students' post test scores, the researcher can measure the significant difference in students' achievement between the experimental group and the control group. In addition, the test items in the post test and pre test are the same.

After conducting pre-test and post-test for the two groups, the researcher scored the students' pre-test and post-test and arranged the scores into the rank order. There were 30 items in the test and the score of each item for the right answer was 1 and 0 for the wrong answer. The students would get score 100 if all questions were answered correctly. The researcher used the following formula to give students' score:

$$\frac{\text{Correct Answer} \times 100}{\text{Maximal Score}}$$

Table 3.6 scores of the research

The range of score	Scores category	
85-100	Excellent	A
75-84	Good	B
56-74	Fair	C
<55	Poor	D

2. Try out

The trial was given to the try out class to evaluate the test items to determine whether the test was valid or not before being used for the pre-test and post-test. The trial was given to VIII grade students of SMPN 5 Bengkulu City. The reason the researchers chose class VIII of SMPN

5 Bengkulu City as the location of the trial was because the class was at the same level as class VIII of SMPN 18 Bengkulu City.

3. Reading test

a. Multiple choice test

The instrument used to collect data in this This research is a multiple choice test because multiple choice tests have several advantages such as scoring is easy, fast, objective and can cover a wide range of material in one test, as well as higher reliability compared to description tests. the content of the test amounts to 30 multiple choice questions.

F. Research instruments

The validity and reliability of the questionnaire were already determined by the aforementioned researcher.

1. Instrument Validity

Validity is defined as the extent to which a concept is measured accurately in a quantitative study (Roberts & Priest, 2006, p. 43). One criteria of a good test is validity, this kind of test checked wether the instrument of the research is valid or not. According (Sugiyono, 2019, p. 121) valid means the instrument of the research can be used to measure what should be measured.

In this research, the researcher used content validity and construct validity with used Pearson Product Moment

method to get the validity of the instrument. instruments and processed by rational analysis. The validity of the content is assessed by experts, experts are free to declare an instrument valid or not (Yusup, 2017, p. 13). In construct validity with Pearson Product Moment get the result :

Table 3.7 Gird of Reading Test Instrument Validity

Variable	Aspect of Variabel	Indicator	Number of items	Items
Literal comprehension	1. Identify word meaning	Identifying word meaning during reading involves using various strategies to understand the meaning of unfamiliar words in context.	1	1
	2. Meaning context	questions that ask you to determine the meaning of a word or phrase based on how it is used in the sentence or paragraph you are reading.	2,3,4	3
Inferential comprehension	3. Identify the main idea	read each sentence carefully, identify the dominating word or subject, determine the most relevant main sentence, and find the main idea in the main sentence.	5,6,7,8,9, 10,11,12, 13	9
	4. Identify relation in the text	refers to the ability to recognize and understand connections between ideas,	14,15,16, 17,18,19, 20,21,22, 23,24,25, 26	13

		words, and concepts within a text.		
Critical comprehension	5. Analyzing process of text	includes the ability to identify the main idea, key points, and important information or difficult words in the text.	27	1
		Find explicit/implicit information contained in a narrative text read	28,29,30	3
				30

2. Instrument Reliability

Reliability in terms is about the consistence, regularity, accuracy, and also stability on the instrument used in continually (Widoyoko, 2012). Perhaps the most widely used method for estimating internal consistency reliability is Cronbach's alpha (Kimberlin & Winterstein, 2008). In the original instrument of the previous study on Cantwell & Andrews (2002) shows the Cronbach Alpha into three scales, preference for individual learning was 0.78, preference for group learning was 0.71, and discomfort in group learning was 0.60. This is the table of the Cronbach's Alpha coefficient that can be used according to Cohen, Manion, & Marison (2007).

The researcher took the reliability score using the Statistical Package for Social Science (SPSS) 25 program.

After that the researcher collected the answer sheets and gave a score based on the correct answers. Then the researcher analyzed all the items using SPSS to look for valid items that could be used in the research sample at SMP Negeri 18 Bengkulu city.

Table 3.8 Instrumen reliability

Reliability Statistics	
Cronbach's Alpha	N of Items
.963	60

Reliability on instruments is a trustworthy instrument to be used as a data collection tool. In this study, after knowing the results of the research instrument validity test, it was continued with data reliability testing using IBM SPSS Statistics 25 with the Cronbach's Alpha formula with the criteria of a research instrument said to be reliable or consistent if the value of Cronbach's Alpha > 0.60 (Herlawan, 2021).

G. Data analysis technique

1. Normality Test

The researcher used the Shapiro Wilk normality test which was a test conducted to know whether the distribution of the experimental class and control class have normal distribution or not. According to (Susetyo, 2010, p. 137) normality test was to determine whether the data from population normally or not. The Researcher used

SPSS version 24.0 to conduct the normality test. The criteria of the normality test are as follows:

If $Sig > \alpha = 0,05$ (H_0 accepted/normal distribution)

If $Sig > \alpha = 0,05$ (H_a accepted/abnormal distribution).

2. Homogeneity Test

The homogeneity test was used in quantitative research to determine whether two groups (experimental and control class) selected from a population are homogeneous or not. A homogeneity test was done as a requirement in an analysis of independent sample t-test. In this research, the researcher used statistical computation by using SPSS V26. Homogeneity test results can be seen through the following criteria:

- a. If the Significance value (p) > 0.05 indicates that the groups from the population have the same variance (homogeneous).
- b. If the Significance value (p) < 0.05 indicates that the groups from the population have different variances (not homogeneous).

3. Statistical hypothesis

The writer intends to find out whether there is an influence of local culture on students' speaking ability. In addition, the author calculated the data from the experimental and control classes using the T-test formula as follows: 1) The null hypothesis (H_0) is rejected and the

alternative hypothesis (H_a) is accepted, which means that there is a significant effect of local cultural content on students' speaking ability. 2) The null hypothesis (H_o) is accepted and the alternative hypothesis (H_a) is rejected which means that there is no significant effect of Local Cultural Content on Students' Speaking Proficiency.

