

CHAPTER III

RESEACH METHOD

In this chapter, the researcher presents the design and data that need to complete this research. This chapter consists of (a) research design, (b) the place and time of research (c) population and sample (d) research instrument (e) validity and reliability testing (f) hypothesis testing (g) technique of data collection (h) technique of data analysis.

A. Research Design

This research is experimental research. Experimental research with the purpose of examining the cause and the effect after the treatment will be done in an experimental group. The research design aims to give the responsibility for setting the next steps to make the result more accurate and objective. The subject of this research is the second-grade students of SMPN 2 Kademangan, which consist of 1 class. In this study, there are two variables, namely:

1. Independent Variable is (X) : 3-2-1 Strategy
2. Dependent Variable is (Y) : Reading Comprehension

The experiment research used one group pre-test and post-test design because it was done in one group only without a control group. Therefore this experiment is called pre-experimental design (simple experiment). There are three stages in one group pretest-posttest design.

1. Pretest

The researcher administers a pre-test to find out the student's reading comprehension before being taught using 3-2-1 Strategy. The pre-test is formulated as T1.

Using the test, the researcher gave twenty-five questions in the form by multiple choice.

2. Treatment

The researcher applied the experimental treatment to the subjects. The students were taught using 3-2-1 Strategy. The experimental treatment is formulated as X.

The researcher conducted a post-test to measure the student's reading comprehension after being taught by 3-2-1 Strategy. It is formulated as T2. Using this test the researcher gave twenty-five questions in the form by multiple choice.

To find out how effective the method was, the researcher used a way to calculate it by way of reduced $T2-T1$. The experimental research was used for the second-grade students of SMPN 2 Kademangan. They were, pre-test to the rudimentary ability of the

students in term of 3-2-1 Strategy before being treated by 3-2-1 Strategy, treatments and post-test to know how far the students progress concerning reading comprehension after treated by 3-2-1 Strategy. The one-group pretest and posttest design usually involves three steps:

1. Administering a pretest measuring the dependent variable.
2. Applying the experimental treatment X to the subjects.
3. Administering a posttest (Y_2) which proposed to measure students' reading comprehension after given a treatment.

3. Post test

Administering a post-test, again measuring the dependent variable. Differences attributed to the Strategy of the experimental treatment are then evaluated by comparing the pretest and post-test scores (Ary et al, 2010: 303)

Table 3.1 A Diagram One Group Pretest-Posttest Design

Pre-test	Independent Variable	Post-test
Y_1	X	Y_2

The procedures of the pre-experimental research with one-group pretest-posttest design in this research were described as follows:

1. Administering a pretest (Y_1) which proposed to measure students' reading comprehension before given a treatment.
2. Applying an experimental that was using an 3-2-1 Strategy (X) to teach reading.
3. Administering a posttest (Y_2) which proposed to measure students' reading comprehension after given a treatment.

Applying one group pretest-posttest, the researcher wanted to find out whether there is any significant difference in students' reading comprehension before and after being taught using 3-2-1 Strategy at SMPN 2 Kademangan.

This research intended to investigate the effectiveness of using *3-2-1 strategy* in teaching reading skill at SMPN 2 Kademangan in academic 2018/2019. The uses of the treatment is aimed at proving whether the increase scores possibly got by the researcher. Thus, the effectiveness of treatment will be known the significant score when the students taught using *3-2-1 strategy* in reading comprehension

B. The Place And Time Of Research

The research was held in SMPN 2 Kademangan which is located in Kademangan, BLitar, Jawa Timur. This research was carried out for a month, start from February 12th, 2019 to February 28th, 2019.

C. Population And Sample

The population is the large group about the generalization. Gay (1992: 124) stated population is the group of interest to the researcher, the group to which she or he would like the result of the study to be generalizable. On the other hand, the population is defined as all members of any well-defined class of people, events, or objects (Ary, et. Al, 2010: 148). So that why, Population of this research was second grade in SMPN 2 Kademangan, which consists of five classes from A until F classes. And every class contains 34 students.

Meanwhile, sampling is the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected (Gay, 1992: 123). This sampling has a function to get information about the population. So that sampling is the technique to take a sample. In this research, random sampling was chosen as a technique of choosing a sample, because random sampling is the best single way to obtain a representative sample. Besides, the researcher also admits that all subjects were homogenous in their skills especially in their vocabulary.

Gay (1992: 126) stated random sampling is the process of selecting a sample in such a way that all individuals in the defined population have an equal and independent chance of being selected

for the sample. It means that every individual has the same probability of being selected and the selection of one individual in no way affect the selection of another individual. Therefore, all members of the population have an equal and independent chance of being included in the selection of the sample.

Selection sample is a very important step in conducting a research study. Because, the sample is the small group that is observed (Ary, et, al, 2010: 148). Besides, the sample is one that is representative of the population from which is selected (Gay, 1992: 126). It means that a good sample must be representative of the entire as possible so that the generalization of the sample as true as the population.

According to the analysis above, the researcher used the first-grade students at SMPN 2 Kademangan as population and A class students who consisted of 34 students as a sample based on the purposive sampling.

Table 3.2 Sample of Research

Sample VIII C		Total Participants
Male	Female	
16 students	18 students	34 participants

D. Research Instrument

The instrument is a tool model used in the study. Need to get data in research. The main instrument of this research is the test. The test is focused on reading comprehension.

The purpose of this study was to implement reading learning by applying the 3-2-1 Strategy and to find out the English language skills of students. The purpose of the reading test is to measure students' reading comprehension in English. The researcher tests the reading so that students can get feedback, motivation, recycling.

The researcher used several forms of tests in making reading questions namely multiple-choice specify factual questions, determining a title, determining the main idea and vocabulary (synonym/antonym) with twenty-five questions.

The test is the means of measuring the knowledge, skill, feeling, intelligence, or aptitude of an individual or group (Gay, 1992: 154). Further, (Ary, et. al, 2010: 201) stated test is a set of stimuli presented to an individual in order to elicit responses on the basis of which a numerical score can be assigned. Therefore, the test produces numerical scores that can be used to evaluate test takers and it will be a representative sample of the individual behavior.

To obtain the required scores of the student's achievement in reading comprehension in this research, the researcher used two kinds of tests. They were pretest and posttest.

1. Pretest

The pretest was done before the treatment process (teaching reading with 3-2-1 Strategy).

2. Posttest

The numbers of the test given the 25 questions for each students. The posttest was done after the treatment process (teaching reading with 3-2-1 Strategy) it was done to know the final score and to know the students' difference before and after they getting treatment. Thus, in measuring the students' comprehension achievement, the test were considered quite representative in the class.

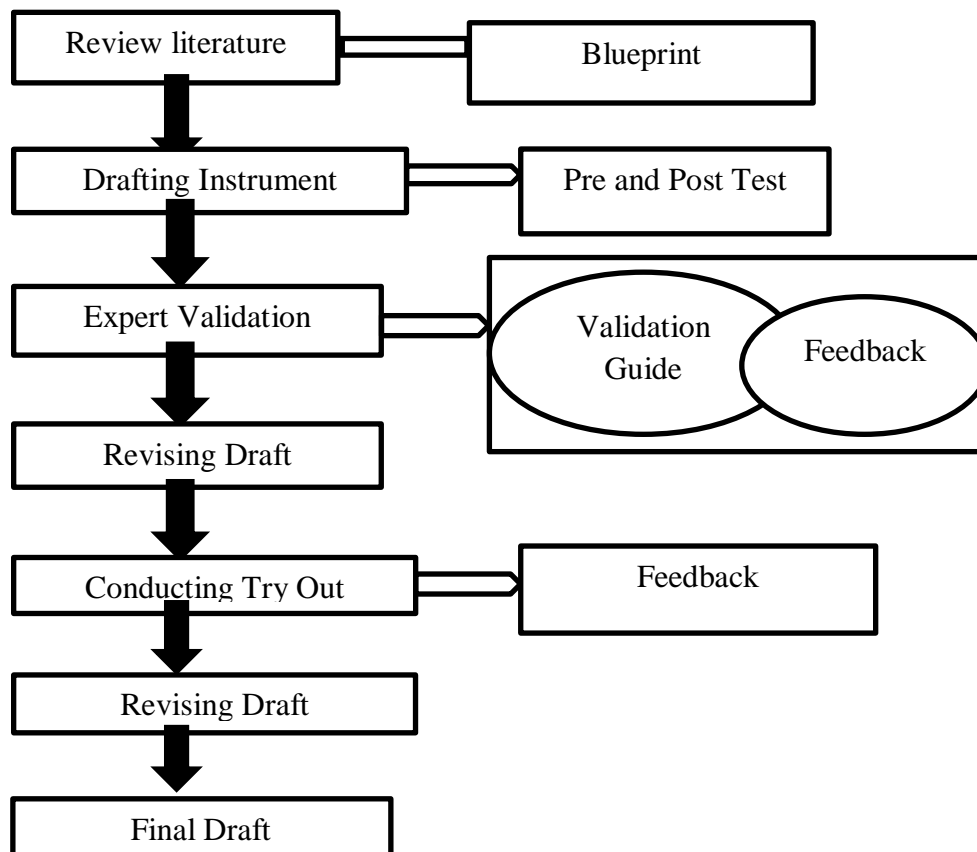
The instrument in the test of reading were stated clearly that the students had to work on twenty-five question in the form by multiple choice, specify factual questions, determining a title, determining the main idea and vocabulary (synonym/antonym).

Test was administered to a large number of appropriately defined individuals and resulting test scores were analyzed. Then, these scores as indicators of the construct of the interest were in large part a function of the validity and reliability of tests.

E. Validity and Reliability Testing

Validity and reliability of instrument are integral parts in conducting a study since the instrument which will be used must be valid and reliable before using it to collect the data. In this research the researcher ensured that the instrument (test) was valid and reliable by doing validity and reliability testing. The way to make valid and reliable instrument can be figured as the table 3.3 below:

Figure 3.3 Process in making valid and reliable instrument



Based on figure 3.1, the first step to get validity and reliability of the instrument is the researcher review the book and syllabus to draft the test. After drafting the test (pre and posttest), the researcher shows both of

the tests to expert validator to get feedback by considering with the validation guide. Then, the researcher revises the draft of the tests agree with the feedback given. Next, the researcher conduct the Try Out to test to students in different class as the simple to get feedback from students. The class is conducted in VIII B. The last, the researcher revises the test again getting input or feedback from the Try Out and based on that term the researcher get final draft to test to VIII C as sample of population of this research.

Validity

Heaton (1989:159) defines the validity of the test as extent to which it measuring what it is supposed measures and nothing else. To measure whether the test has a good validity, the researcher analyzed the test from content validity and construct validity

a. Content Validity

A test is said to have content validity if its contents constitute a representative sample of language skills, structures, being tested. A comparison of test specification and test content is the basis or judgment for content validity. The researcher made this test based on the course objectives in the syllabus of the second years of SMPN Kademangan 2. Therefore, this is valid in term of content validity.

Table 3.4: Content Validity of Test

Competence indicators	Test items	
	Pre-test	Post-test
Students are able to understand about recount text	Reading Recount text - Orientation - Event - Complication	Reading Recount text

b. Construct Validity

Construct validity is a slightly more complex issue relating to the internal structure of an instrument and the concept it is measuring. Based on the theory above the researcher creates the test based on the material that is suitable for the students at second grade of SMPN 2 Kademangan. The test is about Reading Comprehension of Recount text. This is to measure the students' comprehension in Recount Text.

Construct validity shows how far the tests are suitable with the theory in composing those tests. According to Mujis (2004: 68) construct validity is a slightly more complex issue relating to the interval. The instrument is constructed concerning aspects that will be measured. In other word, the form of the test must be suitable with the theory of reading mastery especially on recount text. To measure to construct validity, the researcher made a blueprint..

Table 3.5: Construct Validity

Kompetensi Inti	Kompetensi Dasar
3. Memahami dan menerapkan pengetahuan (factual, konseptual, dan procedural) berdasarkan rasa ingin tahunya tentang ilmu pengetahuan teknologi, seni, budaya, terkait fenomena dan kejadian tampak mata.	3.4 Memahami tujuan struktur teks, dan unsur kebahasaan dari teks recount tulis tentang pengalaman/ kegiatan/ kejadian/ peristiwa, sangat pendek dan sederhana.

c. Face Validity

Face validity is a term sometimes used in connection with a test's content (Ary, 2010 228). Face validity refers to a test can looks measure what is supposed to be measured. It means that the test should look clear or the instruction must be understandable for the students. In this researcher, the test was designed to measure students' understanding on recount text. Thus, to achieve face validity, the researcher provides the instructions on the paper test to ask students to answer it. In this study, the the face validity was done through validator by the expert. The purpose of face validity which is used in this researcher is it check some aspects that are consideration in the test, they are

- 1). The instruction must be clear for the students
- 2). In this test, the students can answer an essay after read the text

3). Time allocation must be given clearly

F. Reliability

After having tested the validity of the instrument, the next step is to examine the reliability. A test is considered reliable if the same test is given to the same subjects or matched subjects on two different occasions, the test should yield a similar result (Brown, 2004: 20). Wiesman and Jurs (2009: 255) added that reliability is the consistency of the instrument in measuring whatever it measures. It means that if the instrument has a consistent result in the second chances or more, the instrument is reliable. To know how far the reliability of the instrument, The researcher made test to be tried out to students before giving pre-test and post-test.

In this case, before the researcher conduct try-out in the class, the researcher made a test consist of 30 question that consists of 25 multiple choices and 5 completion tests. Then, the researcher asked the three experts to give correction about the test that the researcher has done before. They were two lecturers of English subject and an English teacher of SMP Negeri 2 Kademangan. After that, the researcher revises the test. Then, the researcher conducted a try-out for the test to the different subject before it is the pre-test and post-test for the subject of research, to know how far the reliability of the instrument.

The try-out was tested to VIII-B class which consist of 34 students. It was done on February 12th, 2019. The try-out was held

to know how far the reliable of the test. After the researcher got the score from try-out, to find out the reliability of the score obtained either from the pre-test and post-test, the researcher will calculate two scores of the students to calculate the correlation between them. The formula to find the correlation coefficient is Pearson Product-Moment. Finally, SPSS 16.0 for windows program is used to compute the reliability of instruments. Here the researcher got the result as follows:

Table 3.6 and 3.7: the Statistical Correlation of *Pearson Product*

***Moment* from IBM SPSS Statistical 16.0**

Table 3.7: Reliability Pre-Test

Correlations

		RATER_1	RATER_2
RATER_1	Pearson Correlation	1	.690**
	Sig. (2-tailed)		.000
	N	34	34
RATER_2	Pearson Correlation	.690**	1
	Sig. (2-tailed)	.000	
	N	34	34

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3.8: Reliability Post-Test

		Rater 1	Rater 2
Rater_1	Pearson Correlation	1	.747**
	Sig. (2-tailed)		.000
	N	34	34
Rater_2	Pearson Correlation	.747**	1
	Sig. (2-tailed)	.000	
	N	34	34

** . Correlation is significant at the 0.01 level (2-tailed).

Table 3.7 showed that Pearson Correlation of both rater 1 and rater 2 were 0.690. Meanwhile, table 3.8 showed that Pearson Correlation of both rater 1 and 2 were 0.747. In this case, if the Pearson Correlation was closer to 1, it can be said has strong correlation. Based on the both of table above, the result is closer to 1. Those mean that the instrument is reliable to be tested.

G. Hypothesis Testing

The statistical test was intended for comparing two means, which is the means of before and after treatment. According to Balnaves and Caputi (2001: 40), the way to test whether the null hypothesis can be rejected is by comparing T-value of the obtained statistics is less than 0, 05. The hypothesis testing of this study is as follow:

1. If the significant level is less than 0, 05 the alternative hypothesis is rejected and the null hypothesis is cannot be rejected. It means that

there is no different score on students' reading comprehension after and before being taught by using 3-2-1 Strategy.

2. If the significant level more than 0, 05 the alternative hypothesis is not rejected and the null hypothesis is rejected. It means that there is a significant different score on students' reading comprehension after and before being taught by using 3-2-1 Strategy.

H. Technique Of Data Collection

Data collecting method is a method used by the researcher to collect the data. Data collecting is a systematic and standardized procedure to obtain the necessary data. To collect the data, the researcher used the instrument. An instrument is a tool which used to get the data. In this researcher, the instrument was only a test. According to Ary et al. (2010: 201), the tests were valuable measuring instruments for educational research. In addition, he defined that test as a set of stimuli presented to the individual in orde4 to elicit responses on the basis of which a numerical score can be assigned it meant that by conducting the test, the researcher would get the numerical score to collect the data.

In this research, the test consisted of pre-test, treatment, and post-test. The function of pre-test was to know students' understanding of recount text before getting the treatment. Whereas, the function of post-test was to know the result of the experiment after the treatment had given. The following are the step in collecting the data on this research:

1. Pre-test

A pre-test provides a measure on some attribute or characteristic that you assess for participant in an experimental before they receive a treatment, Creswell (2008:301). At the first meeting, the researcher gave a pre-test to the students. It was conducted to know how far the students score in reading. This test is given in order to know how far the students ability in reading comprehension of recount text. The pre-test comprised 25 items, in the form of multiple-choice items.

2. Treatment

After conducting the pre-test, the researcher gave the treatment to the students during 60 minutes. The researcher applied the technique or treatment using strategy 3-2-1.

3. Post-test

The post-test is measure on some attribute or characteristic that is assessed for participants after treatment, Creswell (2008:301). The researcher conducted post-test after conducting the teaching through 3-2-1 Strategy. Post-test comprised also 25 items, in the form of multiple-choice items.

The test of those three aspects of reading comprehension was compiled by the writer herself collecting information the subjects, which are learned at SMPN Kademangan 2. For those reason, the writer has compiled 25 items of multiple-choice question taken from various sources of text which

has been chosen and ready to test for the students is recount text. Total of questions is 25. Those choices from multiple-choice questions are as follows:

- a. Factual questions : 7 items
- b. Determining a title : 5 items
- c. Determining the main idea : 8 items
- d. Vocabulary (synonym-antonym) : 5 items

Total all of questions is 25 items and every questions is valued at 4 points, thus a total of all is 100 points.

I. Technique Of Data Analysis

In this research, the researcher used statistical data analysis technique to know the different score between the student's achievement in reading ability before and after being taught by using 3-2-1 strategy.

Analyzing data is a process of analyzing the acquired from the result of the research. The data which is needed in this research is student's comprehension about the text of the eighth-grade students of SMPN Kademangan 2 in the academic year 2018/2019 before and after taught by using 3-2-1 strategy. To analyze the data, the writer used statistically calculation of the test determines the final calculation which will be done to measure the last score of the research test.

Data analysis is a time – consuming and difficult process because typically the researcher faces massive amounts of filed notes, interview, transcripts, reflections, and information from documents to examine and

interpret Ary (2010). The data obtained from the research result is the result of a student's test that was analyzed quantitatively. Quantitative analysis was done using statistic which is called statistical analysis or inferential statistics. The quantitative data of this research is analyzed using statistical computation. This strategy was used to find the significant difference in the student's reading comprehension after being taught by using small discussion technique.

The researcher used T-test according Ary (2006) with the following formulation:

The researcher chose to use the formula's above because it is suitable with technique and questions which has been tested in Junior High School. The formula above can help the researcher to count the value to get the valid result about the effectiveness of using 3-2-1 strategy in reading comprehension. To find the result, the formula above has a function to help the researcher know which bigger count or table and is H_a will be accepted or rejected. It means that the formula above has a function to find out if there any significant effect before and after being taught using 3-2-1 strategy toward students reading achievement of recount text. The technique of data analysis used by researcher belonged to quantitative data analysis and the data were analyzed statistically by using Paired Samples T-test.