

CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the researcher will discuss about the design of the research, variable, population and sample, and the technique to collect the data.

3.1. Research Design

In this research, the researcher uses quasi-experimental design. Quasi-experiments include assignment, but not random assignment of participants to groups. This is because the researcher cannot artificially create groups for the experiment. It is awkward to create a new class in learning by random the participants. Thus, it is more efficient if the researcher uses quasi-experimental design because it is not random participants. Further, the varieties of quasi experimental designs, which can be divided into two main categories, there are pre-test and post test.²² It describes that quasi-experimental design do not have random assignment, then quasi-experimental divided into categories pre-test and post test. Then, the researcher selectes two classes, first class as a control class and second class as an experimental class. The research design is presented in Table 3.1

Table 3.1. Research Design

GROUP	Pre-test	Treatment	Post-test
Experiment	X1	CDM	X2
Control	Y1	KWL	Y2

Notes :

G : Group

X1 : Pre-test for experimental class

Y2 : Pre-test for control class

X1 : Post-test for experimental class

²² Creswell, John W. *Educational Research: Planning, Conducting and Evaluating Quantitative and Qualitative Research* (4th ed). Boston: Pearson Education. 2012

X2 : Post-test for control class

In this research, the students are given pre-test to know their narrative text writing ability before treatment and post-test after the treatment Competition Discussion Method (CDM) and Know-wanted to know-learned (KWL). The pre-test and post-test conduct for control and experimental class. In the control class, the treatment used lecture method that was usually used by the teacher in teaching learning process. In the experimental class, the researcher uses Competition Discussion Method (CDM) as the experimental treatment while in control class, the researcher uses Know-wanted to know-learned (KWL).

3.2. Variables of the Research

Variable is a characteristic of people group that the attitude or environment which has a variation between one person to another.²³ There are two variables of this research, they are independent variable and dependent variable.

1. Independent variable

Independent variable is teaching techniques. Those are Competition Discussion Method (CDM) and KWL.

2. Dependent variable

Dependent variable is the students' reading ability on narrative text.

3.3. Population and Sample

3.3.1. Population

Population consists of all possible people who fall into a particular category. All individuals who can be the target in research are called population.²⁴ Population in this research are the students of the eleventh grade

²³ Setiyadi, Ag. Bambang. *Metode Penelitian Untuk Pengajaran Bahasa Asing: Pendekatan Kuantitatif dan Kualitatif* (Edisi Pertama). Yogyakarta: Graha Ilmu. 2006

²⁴ Setiyadi, Ag. Bambang. *Metode Penelitian Untuk Pengajaran Bahasa Asing: Pendekatan Kuantitatif dan Kualitatif* (Edisi Pertama). Yogyakarta: Graha Ilmu. 2006

of MAN 2 Nganjuk in the academic year of 2021/2022 which consists of 8 classes, one class consist of 36 students.

3.3.2. Sample

Sample is a smaller number of individuals drawn from the total population which can be taken as representative of that population. the researcher chooses two classes, they are the second as the experimental class and the first as the control class. Sample is a part of the population.²⁵ In this research, the researcher uses cluster random sampling to choose the sample. Then, the sample of this research are the students of XI MIPA 1 that will be treated by using CDM and the students of XI MIPA 2 that will be treated by using KWL. The reason for choosing the students of XI MIPA 1 and XI MIPA 2 as the sample of this research is because both classes have the similar distribution material, therefore the research can be done effectively and efficiently. Therefore, the sample have the similar situation before they are treated by using different learning models.

3.4. Instrument of the Research

The instrument used in this research is reading test. This test has a purpose to measure the students' reading ability. The researcher makes two instruments, they are pre-test and post-test. The instruments of pre-test and post-test are reading tests of narrative text that consists of 75-100 words and 10 questions. And 30 minutes for time allocation. (see appendix 1)

3.5. Treatment Procedure

Treatment procedure is the activities that used by the researcher to the students to know the effectiveness of using the strategy in reading. There are two classes observed, experimental group and control group. The treatment of CDM is given to experimental group. Moreover, control group is treated by using KWL. For activities, on the treatment are given for 3 (three)

²⁵ Arikunto, Suharsimi. *Prosedur Penelitian*. Jakarta: Rineka Cipta.____ 2006

meetings in each class. The activities given for the treatment to both groups is illustrated in this table 3.2.

Table 3.2. Treatment Procedure

Activity	Experimental	Control
Pre-activity	Opening	Opening
	Checking attendance and presentation about the text material	Check attendance and presentation about the text material
	Teacher explains about narrative text	Teacher asks the students about the effect of disobey parents. (know)
	Teacher divides the class into some groups that consist of four or five.	Teacher asks the students to mention the story about any kids who disobey their parent (want to know) and also asks them to write it on the sheet
	Teacher gives narrative text to each group and its questions, then each question should be done by each member of the group.	Teacher and students discuss about difficult vocabulary and its pronunciation.
	Each group discusses about the text then each member of the group compete to submit their answer.	Teacher asks the students to read a passage about Malin Kundang narrative text in group then summarize what they have learned from the reading. (Learned)
Main activity	Teacher and students discuss the answer of the questions.	Teacher asks each group to present the summary
Post-activity	Closing	Closing

3.6. Data Collecting Technique

To collect the data, the researcher uses an instrument that is a test which consists of pre-test and post-test. The test is used to know students' narrative text writing ability.

3.6.1. Pre-test

The researcher gave pre-test for students to know students' narrative text reading ability before giving the treatment. The students are asked to answer task based on reading narrative text.

3.6.2. Post-test

Post-test is used to know the students' narrative text reading ability after they are given treatment. Post-test is used to know whether there is a significant influence of using small group discussion. The pre-test and post-test are given to the control class and experimental class.

Table 3.3 : Guidelines for Providing Interpretation of Research Variables

Category	Interval
Excellent	85-100
Very good	75-84
Good	65-74
Fair	55-64
Poor	0-54

3.7. Data Analysis

In this research the researcher uses the quantitative analysis to know whether there is an influence of using Competition Discussion Method (CDM) and Know-Wanted to know-Learned method (KWL) towards students' narrative text reading ability or not. The data analysis is using SPSS and ANCOVA formula in order to know the significance of the treatment effect.

The hypotheses are:

Ho : There is no significant influence of using Competition Discussion Method (CDM) toward students' narrative text reading ability.

Ha : There is a significant influence of using Competition Discussion Method (CDM) toward students' narrative text reading ability.

3.8. Technique of Data Analysis

The sample testing is done before the treatment. It is done to know whether or not the sample is distributed normally or not. In addition, this test is also used to know whether or not the sample homogeneous. Therefore, the sample testing is using normality and homogeneity test. The source of the data is pre-test score from both experimental and control group.

3.8.1 Test of Normality

Test of normality aims to determine whether the distribution of responses has a normal distribution or not. Test of normality was using *Kolmogorov Smirnov* formula.

The interpretation of the test of normality can be concluded as follows: (a) If the value of Asymp. Sig. (2-tailed) is greater than the rate of 5% Alpha (Asymp. Sig. (2-tailed) > 0.05) it can be concluded that the data derived from populations that are normally distributed. (b) If the value of Asymp. Sig. (2-tailed) is smaller than the Alpha level of 5% (Asymp. Sig. (2-tailed) < 0.05) it can be concluded that the data derived from the population distribution is not normal.

3.8.2 Test of Homogeneity

Test of homogeneity aims to determine whether the sample taken from the population have the same variance or do not show any significant differences from each other. Interpretation of the results of the homogeneity test is by looking at the value of Sig. (2-tailed). The interpretation can be concluded as follows: (a) If the significance is less than 0.05 (Sig. (2-tailed) < 0.05), the variants differ significantly (not homogeneous). (b) If the

significance is greater than 0.05 (Sig. (2-tailed) > 0.05), the variants are significantly similar (homogeneous).

3.8.3 Test of Hypothesis

To analyze the data of pre-test and the data of post-test scores, the researcher employed ANCOVA (analysis of covariance). The purposes of this test are:

1. To increase the precision of comparisons between groups by accounting to variation on important prognostic variables;
2. To "adjust" comparisons between groups for imbalances in important prognostic variables between these groups.

In SPSS Statistics, the researcher entered three variables: (1) the dependent variable (post-test scores); (2) the independent variable (treatment), which has two categories: "CDM" (representing the experimental class), and "KWL" (representing the control class); and (3) the pre-test scores, which represents the covariate. To process the data, the researcher will use SPSS Program.