

CHAPTER III

METHODOLOGY

This chapter focuses on the discussion of the aspects of research methodology that cover research design, sample and population selection stage, data collection technique, instrument that researcher used and data analysis.

3.1 Research Design

This study uses Quantitative design to conduct this research. Actually, quantitative design divides into three models. Those are experiment, correlation, and comparison. According to Creswell (2003, p.18) a quantitative approach is one in which the examiner primarily uses post positivist claim for increasing knowledge (i.e., cause and consequence thinking, decline to definite variables and hypotheses and questions, employ of extent and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data. This study uses experimental design to test the theory whether give significant effect or not with their ability.

An experimental study also divides into two models. First is *true experiment* and the second is *quasi experiment*. In this study, researcher uses quasi experiment, because researcher cannot organize the sample and population. It means for the sample and population has been organized or chosen by the school or teacher. This study also uses quasi experiment which is related to number and statistical data. Researcher has three reasons for choosing quasi experiment. First is about researcher cannot assign the students become a groups randomly; it will

choose directly using cluster sampling technique. Second is because in this study has an intervention of other thing in real-life setting. Here, English teacher or school is intervention about the sample to be groups in the classroom. Third is about collect the data. Researcher should collect more data than in real experimental studies to make sure that the data can come to reasonably clear conclusions. In quasi experiment, rather than randomly assigning students to the experimental and control groups, researcher tries to match the experimental group (typically a class in which an intervention is taking place) with a comparison group. The comparison is control group in which the control group is not given treatment.

There are two variables in this study. The first is running dictation method and the second is spelling in writing short functional text. The dependent variable is spelling in writing short functional text and the independent variable is running dictation. There will be two groups. Those are the control group becomes group which has a treatment of two stray two stay method. In addition, for the experimental group is a group which has a treatment about running dictation. To get the data, the researcher uses test in this research. There are two tests, the first is pre-test and the second is post test. So that, the researcher tries to find out the result between pre-test and post test of students in control group and experimental group.

The researcher divides this research into two groups, they are experimental group and control group. Both of them gives a pre-test, and then the treatment of running dictation method apply to the experiment group while the control group will be though by a teacher method that is two stray two stay because two stray

two stay in the technique is same, and students have to deliver the information from their friends.

In this study, design chart can be seen in the figure below:

Group	Pre-Test	Treatment	Post test
C	O	X ₁	Y
E	O	X ₂	Y

Table (a). *Quasi experimental design*

Note:

E : Experimental group

C : Control group

O : Pre-test

X₁ : Two Stay Two Stray method treatment (Teacher's method)

X₂ : Running Dictation method treatment

Y : Post test

From the table above, it could be seen that both of the classes will give pre-test in the beginning of the research. Next, the researcher gives a treatment “running dictation method” for the experimental group and teaches use teacher’s method (two stray two stay in the control group. After giving treatments, the researcher will give them a post test. The last, the researcher tries to find out the mean different between pre-test and post-test score. The researcher analyzes the data using t-test formula to prove the hypothesis.

3.2 Population and Sample

The population of this study is seven grades of SMP Islamic Qon consist of 68 students from 7A, 7B and 7C classes in first semester. Determine the sample, the researcher uses *cluster sampling*. Here, researcher chooses 7B class become experimental group, because this is related with the reason of using quasi experiment that intervention takes place in this study. And also based on interviewed with English teacher about attitude of students, and their capability, 7B is reflect to be experimental group. Based on English teacher’s explanation,

students of 7B class are active students, it means they can work together in a group and also for situation of classroom is almost conducive. This class also almost same with other class because they can understand enough when English teacher giving the materials. Researcher is also should determine the other class which is has similar criteria, that is 7C as control group which is the researcher will be teach this class using Two Stay Two Stray (teacher's method).

In this case, the students of 7B class and 7C class did not understand the short functional text yet and it can be influences the implementation. In the beginning, students perhaps feel less understand because they are never get the material or students unfamiliar about short functional text, but short functional text is a simple material which is students or people can see the text in daily activities. From the explanation before, running dictation can be suitable in teaching learning activity in which students will know new text especially in their spelling.

3.3 Data Collection Technique

The researcher collects the data from the result of the tests. The researcher makes a pre-test and pos-test to experimental group and control group as a data collection. The first data is pre-test that conducts to both classes to measure spelling in writing ability before giving treatment.

3.3.1 Instrument

In completing the data, the researcher uses data collection technique or uses instrument in this research to collect the data. The function of data collecting is to determine the result of the research. In collecting data, the researcher uses

techniques or instrument that is test. There are three steps to completing the data; 1) conducting a pre-test; 2) a treatment; 3) conducting a post-test.

3.3.1.1 Test

The test is a set of questions to measure the skill, ability of an individual of the group. The test that use in this study is written test. The tests are focus in spelling in writing short functional text. There are two tests in this study pre-test and post-test. The pre-test will give to students before the treatment. It is to gain the data of students' entry in mastering spelling in writing ability. Researcher makes three tests for conducting pre test. First is about instruction material. Researcher is provides the situation in public place, then the test is students have to make three instructions based on three situations. Second is about short notice. Here, researcher is provides two picture as a clue, then student have to guess and write down the short notice based on those picture. Researcher is provides three point for second task. The last test is about warning/caution. Here, researcher is provides two pictures as a clue and then student have to guess and write down the warning related to those pictures. Here, researcher is provides three points in the last task. So, total of test in pre test is three questions which in each question consist of three items.

Besides, the post-test given to students after the researcher gives the treatment "running dictation" for experiment group and "two stay two stray" for the control group. Researcher makes three tests for conducting post test. First is about instruction material. Researcher is provides the situation in school area, then the test is students have to make three

instructions based on three situations in school area. Second is about short notice. Here, researcher is provides two picture as a clue, then student have to guess and write down the short notice based on those picture.

Researcher is provides three point for second task. The last test is about warning/caution. Here, researcher is provides two pictures as a clue and then student have to guess and write down the warning related to those pictures. Here, researcher is provides three points in the last task. So, total of test in post test is three questions which in each question consist of three items and uses school as a location. The test checks the content validity. The content of the item is based on the standard of competence in the syllabus (Curriculum 2013) of seven grade of Junior High School.

3.3.1.2 Pre test

The pre-test will give before the students get the treatment. The form of the pre-test is written test to measure students' spelling in writing ability in short functional text. The researcher asks to the students to write down the instruction text based on situation that researcher given in the test. For short notice, and warning, students have to write down the short notice and warning/caution based on picture that researcher given before. From the result of the pre-test, the researcher will get the score of students' spelling writing ability

3.3.1.3 Post test

Post-test is to find out whether the students make progress in their spelling in writing ability or not. Post-test will be given after the students get the treatment. The test in this research is written form, especially in

instructions text, short notice, warning text. Post-test is to measure the student's spelling in writing short functional text after giving the treatment and as the comparator between experimental group and control group.

3.3.2 The Procedures of Collecting Data

In collecting data, the researcher uses such procedure; the first step is asking permission to school where the researcher will be conducted. The second step is the researcher makes English spelling test for pre-test and post-test which of them consist of making instructions text, short notice, warning text. The third, the researcher makes a subject into two group as experimental and control group. The fourth, the researcher gives the treatment to the experimental group by using running dictation method while for control group the researcher teach them using their teacher method (Two Stay Two Stray). The treatment will be done four times using same topic but different location. In the first meeting, the researcher will discuss the topic with location in "School", a second meeting will discuss the topic with location in "Hospital", a third meeting will discuss the topic with location in "Park", and the last meeting will discuss the topic with location in "House". In each meeting, the researcher will discuss with the English teacher about the meeting. The fifth, researcher gives the post-test to control and experimental group. The last is analyzing the data from pre-test and post test by using SPSS 16.0 program.

No	Date	Activities
1	June, 19 th 2017	Sending approval letter in the school
2	June, 20 th 2017	Asking approval to head master in order to conduct primary observation
3	July, 18 th 2017	Giving pre-test for experimental and control group
4	July, 19 th 2017	Giving first treatment "School" location for experiment and control group
5	July, 20 th 2017	Giving second treatment "Hospital" location for experiment and control group
6	July, 21 th 2017	Giving third treatment "Park" location for experiment and

		control group
7	July, 22 nd 2017	Giving fourth treatment “House” location for experiment and control group
8	July, 22 nd 2017	Giving a post-test for experimental and control group

Table (b). Schedule of Research

3.3.3 Scoring Guide

The scoring guide is used to guide the teacher to correct the students’ test. To correct the test of this research, the researcher will use three correctors. They are researcher, and two teachers in different school. The first corrector is researcher, second corrector is English teacher in SMP Islamic Qon, that is Ms. Airin and third corrector is English teacher from other school (SMA NU 1 Gresik) which she has been taught English almost twenty years and had ability in spelling in writing. The researcher adapts the rubric from Taylor and James then modifies the rubric by researcher. According to Taylor (1986) spelling error may be because psycholinguistic, epistemic, and resid in the discourse structure. In other hand, according to James et. al (1993) divide spelling aspect into two categories. First is interlingual and second is intralingual. In interlingual consist of three criteria that is miss pronunciation, misrepresentation, and lexical cognate miss spelling. For intralingual consist of three criteria that is overgeneralization, homophone confusion, and letter naming.

Here, researcher determines the rubric with consideration related those aspects and our mother tongue (Indonesia language). The table of rubric can be seen in the figure below:

No	Criteria	Score	Level Description	Score
1	Phonological interference (example: than – zan; watch – vatch)	20 – 16 15 – 11	<ul style="list-style-type: none"> • Excellent: no mistake in phonological interference • Good: do 1 until 2 times spelling mistakes 	

		10 – 6	<ul style="list-style-type: none"> • Fair: do 3 until 4 times spelling mistakes
		5 – 0	<ul style="list-style-type: none"> • Poor: do more than 4 times spelling mistakes
2	Syllable structure interference (example: bread – beread)	20 – 16	<ul style="list-style-type: none"> • Excellent: no mistake in syllable structure
		15 – 11	<ul style="list-style-type: none"> • Good: do 1 until 2 times spelling mistakes
		10 – 6	<ul style="list-style-type: none"> • Fair: do 3 until 4 times spelling mistakes
		5 – 0	<ul style="list-style-type: none"> • Poor: do more than 4 times spelling mistakes
3	Overgeneralization (English consonant and vowel representation) (example: practice – praktice; many – meny)	20 – 16	<ul style="list-style-type: none"> • Excellent: no mistake in overgeneralization
		15 – 11	<ul style="list-style-type: none"> • Good: do 1 until 2 times spelling mistakes
		10 – 6	<ul style="list-style-type: none"> • Fair: do 3 until 4 times spelling mistakes
		5 – 0	<ul style="list-style-type: none"> • Poor: do more than 4 times spelling mistakes
4	Homophone confusion (example: sit – seat; live – leave)	20 – 16	<ul style="list-style-type: none"> • Excellent: no mistake in homophone confusion
		15 – 11	<ul style="list-style-type: none"> • Good: do 1 until 2 times spelling mistakes
		10 – 6	<ul style="list-style-type: none"> • Fair: do 3 until 4 times spelling mistakes
		5 – 0	<ul style="list-style-type: none"> • Poor: do more than 4 times spelling mistakes
5	Letter naming (example: easily – easily; sitting – siting)	20 – 16	<ul style="list-style-type: none"> • Excellent: no mistake in letter naming
		15 – 11	<ul style="list-style-type: none"> • Good: do 1 until 2 times spelling mistakes
		10 – 6	<ul style="list-style-type: none"> • Fair: do 3 until 4 times spelling mistakes
		5 – 0	<ul style="list-style-type: none"> • Poor: do more than 4 times spelling mistakes
TOTAL			

Total of Scores:

- 85 – 100 : Excellent
- 70 – 84 : Good
- 55 – 69 : Fair
- 25 – 54 : Poor

Table (c). Scoring Guide

3.3.4 Validity

Before conducting pre test and post test as instrument of this research, the researcher will test the validity of the item. The instrument called valid if it has

validity. Validity is compatibility test with the main targets that need to be measured as Kimberlin and Winterstein (2008) state is like degree of measuring instrument which needs to be measured. There are three kinds of validity; those are construct, criterion, and content validity. According to Trochim (2006) in Drost (2011) construct validity is about the way to interpret or transform a concept, idea, or behavior into an implementation reality. Beside that criterion-related validity is the degree of correlation between assessment test and one or more external criteria. For the content validity according to Yaghmaie (2003) is the essential aspect in discovering assessment concept that is used to measure the significance variable.

From those types of validity, this study will use content validity to verify the validity of pre test and post test that will be given to the participants. Here, the researcher also conducts a test to measure the capability of student's spelling in writing short functional text. The researcher adjusts the content validity with the curriculum and syllabus of Junior High School.

Basic Competence	Point of Basic Competence	Questions	
		Pre-test	Post-test
Mencoba, mengolah, dan menyaji dalam ranah kongkret (menggunakan, mengurai, merangkai, memodifikasi, dan membuat) dan ranah abstrak (menulis, membaca, menghitung, menggambar, dan mengarang) sesuai	Menyusun teks instruksi (<i>instruction</i>), tanda atau rambu (<i>short notice</i>), tanda peringatan (<i>warning/caution</i>), lisan dan tulis, sangat pendek dan sederhana, dengan memperhatikan fungsi sosial, struktur teks, dan unsur kebahasaan	<ul style="list-style-type: none"> Write down the Short functional text about <i>Instructions</i> based on situation below! Write down the Short functional text about Short Notice and Warning based on picture below! 	<ul style="list-style-type: none"> Write down the Short functional text about <i>Instructions</i> based on situation below! Write down the Short functional text about Short Notice and Warning based on picture below!

dengan yang dipelajari yang benar sesuai
di sekolah dan sumber konteks.
lain yang sama dalam
sudut pandang/teori.

Table (d). Content of Validity

3.4 Data Analysis

After conducting pre and post test, the next step is analyzing the data. In conducting a research, it is necessity to analyze the data in order to interpret the data obtained from the field. The data analysis is carried out in order to answer the research problem with the data obtained through pre and post test. The researcher analyzes the data by using independent sample t-test. Since the samples are small and the groups are independent, the t-test for independent samples is carried out to determine whether there is any difference between experiment and control group.

The researcher used SPSS version 16.0 to compute statistics of students spelling in writing short functional text. This study is conducted in order to find the effect of the treatment whether there is significant or not using running dictation strategy. Assumption for the independent t-test where: (1) Independence: observation within each sample must be independent (they do not influence each other); (2) Normal distribution: the scores in each population must be normally distributed; (3) Homogeneity of variance: two populations must have equal variances (the degree which the distribution are spread out is approximately equal).

3.4.1 Normality Distribution Test

To analyze the normal distribution, this study uses Kolmogorov Smirnov Sample in SPSS version 16.0. It is aim to find out the distributions of pretest score

in two groups are normally distributed or not. In this case the result of the normality distribution is also used to find out the normality distribution between two groups (experimental group and control group) in pre test score are normal or not. The first step in calculating the normality distribution test state that the hypothesis:

H_0 : the score of the experimental and control group are normality distributed.

The second step is calculating the normality distribution test tried to compare the Sig. with the level of significance for testing the hypothesis. If the Sig. is more than the level significance (0,05) the null hypothesis is accepted, the score normally distributed. On the other hand, if the Sig. is less than the level of significance (0,05) the null hypothesis is rejected. The procedure analyze is press menu, click Analyze, click Descriptive Statistic, click Explore and move all variable to Dependent List box, click Plots and tick Normality Plots with test then Continue.

3.4.2 Homogeneity Test of Variance

The researcher uses one Laven's test of homogeneity test for homogeneity test. This test is used to find out the homogeneity of two groups in pre test score are homogeneous in writing skill or not. The test statistic of Laven's test (W) is defined as follows:

$$W = \frac{(N - k) \sum_i^k = 1 N_i (Z_i - Z)^2}{(k - 1) \sum_i^k = 1 \sum_j^{N_i} = 1 (Z_{ij} - Z_i)^2}$$

Where:

- W : The result of the test
- K : The number of different groups to which the sampled cases belong
- N : The total number of cases in all groups
- N_i : The number of cases in the i group
- Y_{ij} : The value of the measured variable for the j^{th} case from i^{th} group

$$Z_{ij} = \begin{cases} |Y_{ij} - \bar{Y}_i|, \bar{Y}_i \text{ is a mean of } i\text{-th group} \\ |Y_{ij} - \hat{Y}_i|, \hat{Y}_i \text{ is a median of } i\text{-th group} \end{cases}$$

The significance of W is tested against F (α , K- 1, N-K) where F is a quintile of F test distribution, with K – 1 and N – K its degrees of freedom, and α is the chosen level of significance (usually 0.05 or 0.01). Here the following procedures in analyzing the homogeneity by using SPSS version 16.0: first, make two columns. The first column is a group and the second column is a score after pre test data from both experimental and control group are input, then click analyze, compare means, and then independent sample t-test, input the score into test variable and the grouping variable, then click define groups to determine group 1 (for experimental) and group 2 (for control) click continue and the last click OK.

3.4.3 Hypothesis Testing

The aim of hypothesis testing is used to find out whether any significance progression in running dictation towards students' spelling in writing or not. The result of hypothesis testing is used to know the significant difference between experimental group and control group had to be accepted or rejected. The first step is about stating hypothesis and setting alpha level at 0.05 (two tailed test). In this research, the hypothesis used alternative hypothesis that said "There is any significant effect on students spelling in writing skill at first semester students of SMP Islamic Qon in short functional text". The hypothesis can be formulated as follow:

Null hypothesis is $\mu_1 - \mu_2 = 0$ ($\mu_1 = \mu_2$)
 Alternative hypothesis is $\mu_1 - \mu_2 \neq 0$ ($\mu_1 \neq \mu_2$)

Hypothesis testing in this research as follows:

Ho: There is no significant effect on students spelling in writing skill at first semester students of SMP Islamic Qon in short functional text.

H1: There is any significant effect on students spelling in writing skill at first semester students of SMP Islamic Qon in short functional text.

The second step is finding t-value using independent t-test formula and comparing the probability with the level of significance for testing the hypothesis. Determining t-critical in table $t = (0.05)$ df, the researcher compared t-observed and t-critical. If $t\text{-obs} < t\text{-critical}$, the researcher should accept the null hypothesis and if $t\text{-obs} > t\text{-critical}$, it means the researcher can accept the alternative hypothesis.

T test is calculated to find out the comparison of two means between experimental and control group in post test score, in analyzing the data, the researcher used independent t test formula. The formula is:

$$t = \frac{(x_1 - x_2) - (\mu_1 - \mu_2)}{Sx_1 - x_2}$$

Where:

t : t value
 x_1 : Average group 1
 x_2 : Average group 2
 S : Standard error of two groups
 $\mu_1 - \mu_2$: Always a default to 0

Where:

$$Sx_1 - x_2 = \sqrt{\frac{S^2_{pooled}}{n_1} + \frac{S^2_{pooled}}{n_2}}$$

$Sx_1 - x_2$: Standard error of two groups
 S^2_{pooled} : Variants of two groups
 n_1 : Number of sample group 1
 n_2 : Number of sample group 2
Pooled variance : The average of two sample variances, allowing the larger sample to weight more heavily.

Formula of estimated standard error of the difference:

$$Sx_1 - x_2 = \sqrt{\left(\frac{SS^2_{pooled}}{n_1}\right)\left(\frac{S^2_{pooled}}{n_1}\right)}$$

Therefore, the results of the test were subjected for the following statistical procedures. To calculate t-test, the researcher uses SPSS (Statistical product and service solution) version 16.0 and the post test score of experimental and control group were also analyzed by using SPSS version 16.0 with the following procedures. The first procedure was inserting the post test data both experimental and control group using the data view. The second procedures were going to the analyze menu, selecting compare means, then choosing independent sample t test output, automatically it could answer to the research question about the comparison between two groups. The final result was collected by means of pre and post tests score. It is aimed to find out the significant effect on students spelling in writing skill at first semester students of SMP Islamic Qon in short functional text.